ICR The Institute of Cancer Research

Sustainable Discoveries

Sustainability Action Plan 2022-2030

Contents

Foreword

from the Chief Executive and President of The Institute of Cancer Research

Professor Kristian Helin

I am proud to introduce Sustainable Discoveries – our action plan on how we approach environmental, social and economic sustainability challenges at the ICR.

For the ICR, sustainability means developing a work environment that contributes to the wellbeing of our staff and minimises damage to the environment, while delivering our world leading cancer research.

Sustainability has significant consequences for cancer research – for example, the link between poor air quality and certain cancers, as well as the importance of a healthy natural world for our wellbeing and biodiversity for the discovery of new compounds for innovative cancer drugs and treatments.

In Autumn 2020, the ICR committed to the United Nations Sustainable Development Goals (UN SDGs) - an internationally recognised framework of 17 goals to protect our planet, societies and the global economy. As a response to the climate crisis, we also declared a climate emergency in 2020.

The ICR campuses at Sutton and Chelsea provide opportunities and challenges. We have a responsibility to be sustainable in everything we do – whether it's driving sustainable changes in how we work such as adopting lower impact laboratory practices, making more sustainable procurement choices, joining initiatives such as our ActNow group or reducing the waste we make in the lab.

The international reach of our graduates, academic departments and research extends the potential of our impacts to the global stage. We have made a commitment to achieve net zero by 2040 with an interim reduction in carbon emissions of 43% by 2030 (over 2019/20 baseline), but to do so, our sustainability vision needs to be ambitious and incorporate the participation of all – from our scientists and researchers, to support staff and others at the ICR.

Implementing this sustainability plan will mean having a thriving and resilient ICR so that we can carry on our important work – so that both now and in the future, we can continue our mission to make the discoveries that defeat cancer.

About Sustainable Discoveries

About Sustainable Discoveries

Sustainability at the ICR means acting now, in line with the UN Sustainability Development Goals, to manage economic, social and environmental issues within our organisation and globally, so that both now and in the future, we can continue to make the discoveries to defeat cancer.

The climate and biodiversity crisis are the main challenges of the 21st century, bringing pandemics, extreme climatic events and putting life, as we know it, at risk. We believe that the scientific research and education sectors should be leading the way to ensure a livable planet for future generations. In 2020, following many other organisations, we declared a climate emergency which marked our first step in accelerating climate action.

Sustainable Discoveries is the delivery plan for 'A Sustainable Future' which is a theme under the ICR's strategy 'Defeating Cancer'. A Sustainable Future includes environmental, social and financial sustainability.

Sustainable Discoveries reflects how we integrate sustainability principles into our research and teaching practices – aiming to develop lower impact ways of undertaking laboratory science, developing more efficient buildings and facilities, reducing our impact on the planet and ensuring our people have the requisite skills and knowledge to make a difference.

We have mapped our progress and our plans against the UN Sustainable Development Goals (the SDGs) which are referred to throughout this plan.

The SDGs are the global programme for sustainability – 17 goals covering themes from health and wellbeing to climate action and many areas in between. Each of the SDGs is supported by a number of targets running through to 2030 – many of which the ICR can contribute to. For example:

Target **12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

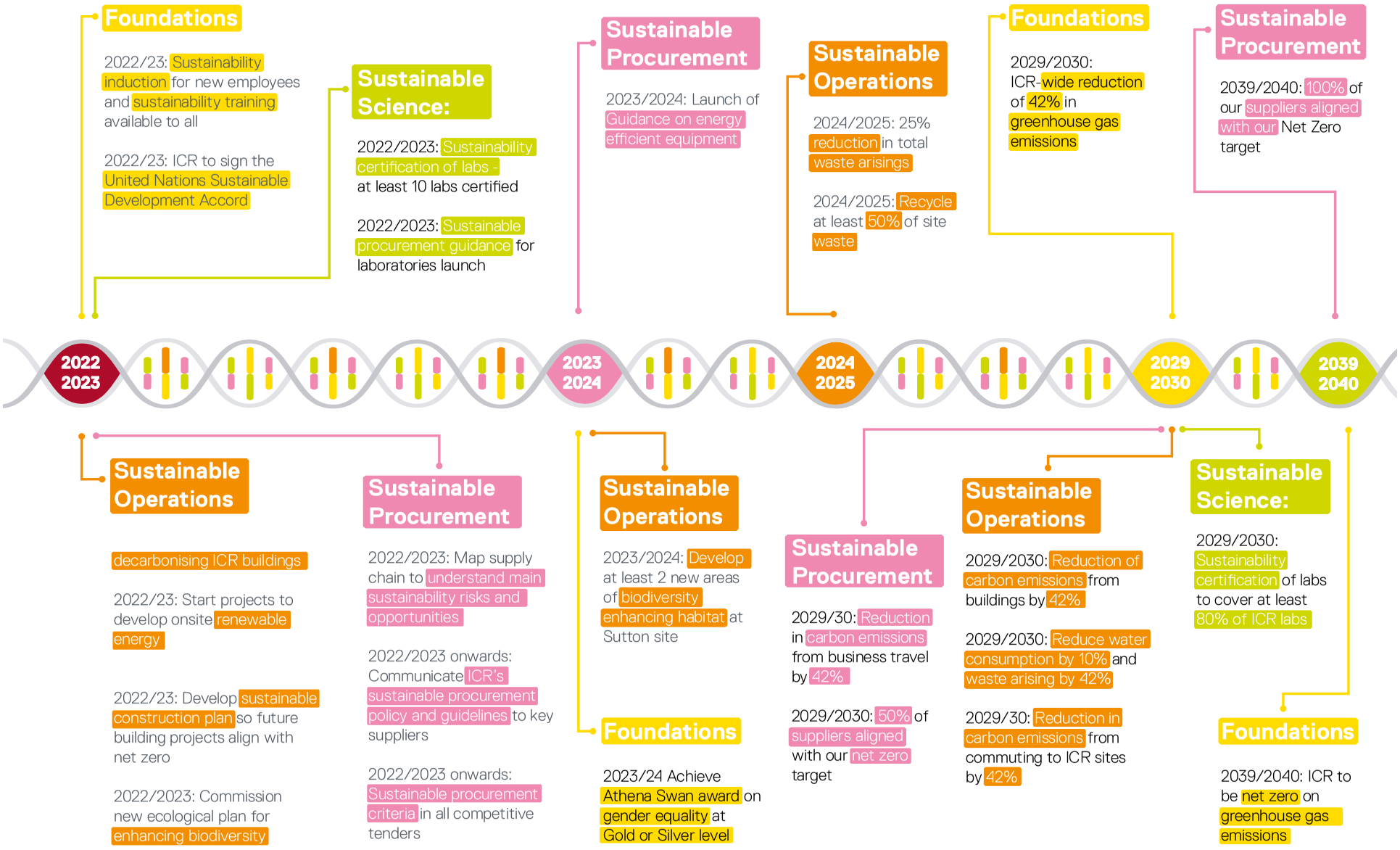
Target **3.4** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

The 4 Pillars

Sustainable Discoveries has 4 pillars:

- **Sustainable Foundations**: governance, accountability, training, awareness and systems to support sustainability
- **Sustainable Operations**: the transformation of our estates, facilities and supporting our people across the ICR
- **Sustainable Science**: how we undertake our research to defeat cancer whilst reducing environmental impacts
- **Sustainable Procurement**: refers to how we improve the environmental and social impacts from our supply chain – the largest share of our carbon footprint

ICR Sustainability Action Plan



Sustainable Foundations

The Sustainable Foundations pillar encompasses supporting governance for sustainability such as accountability for the delivery of this plan. It also means engaging colleagues on sustainability issues and ensuring we are monitoring and reporting on progress. It is important given the wide-ranging and often technical aspects of sustainability that we provide supporting training where necessary.

Responding to the climate crisis: a Net Zero ICR by 2040

The climate crisis is today's most fundamental global challenge and impacts upon almost everything we do. The principal cause is from the direct and indirect burning of fossil fuels for energy, transport, agriculture and the life-cycle of products.

The ICR has higher carbon emissions per unit of floor area than any other UK Higher Education Institution due to the high energy consumption from laboratories and their specialized equipment. The procurement of lab equipment and consumables also contributes to our carbon footprint in this area.

Climate science tells us that we need to limit global warming to as close to 1.5 degrees Celsius as possible and that involves becoming net-zero before mid-century. If global warming exceeds 1.5°C we run significant risk of accelerated climate breakdown and tipping points which would jeopardise our society and the wider global community.

Net zero means to reduce greenhouse gas emissions drastically (at least by 90%) and remove unavoidable emissions from the atmosphere through actions which take carbon dioxide out of the atmosphere. In the UK this is supported by the *Climate Change Act 2008* – which requires national greenhouse gas emissions to be net zero in advance of 2050.

The ICR has made a commitment to achieve net zero by 2040 this means reducing out emissions by at least 90% by this point. We have set an interim science-based target of 42% reduction in carbon footprint across scopes 1,2 and 3 by 2029/30.

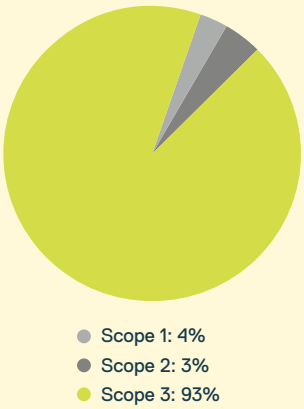
To do so, we will set and implement a decarbonisation plan that will be reviewed and updated on a yearly basis.

Our carbon footprint is made up of 3 main areas, Scope 1, 2 and 3.

- **Scope 1** – emissions from combustion of gas in heating boilers, emissions from burning fuel for back-up generators, leakage of cooling system refrigerant gases and emissions from our own vehicles
- **Scope 2** – emissions associated with the consumption of purchased electricity from the national grid
- **Scope 3** – our wider value chain including emissions from procurement, wastemanagement, commuting, business travel (*this makes up the largest part of our carbon footprint)*

ICR footprint breakdown (2019/20 baseline 53,317 tonnes CO_2e)

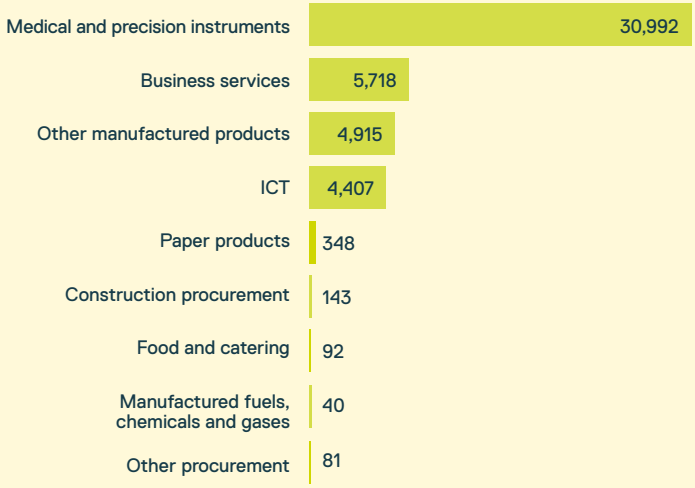
All scopes



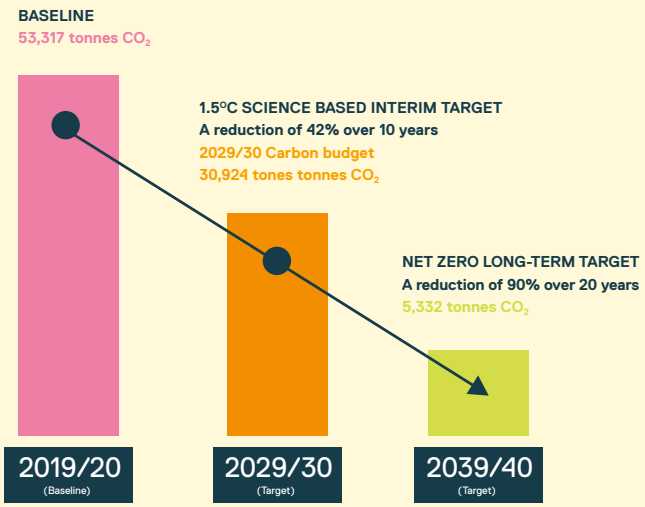
Within Scope 3

97%

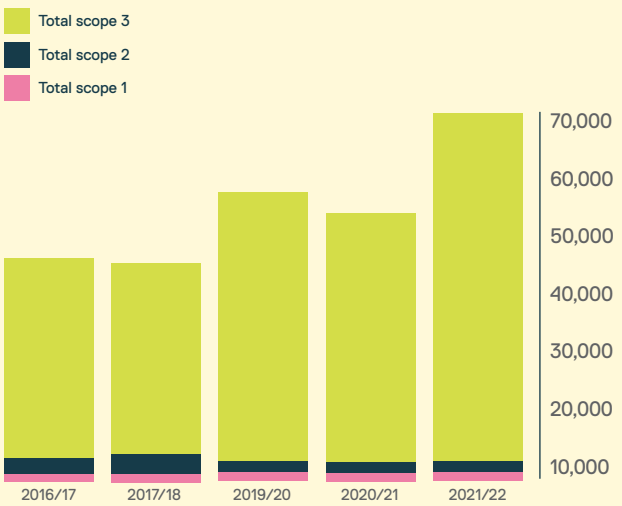
from purchased goods and services, broken down as follows..



ICR's net zero and science-based targets



ICR Annual Carbon footprint Tonnes CO_2equivalent



What does carbon reduction and net zero mean for us?

Buildings & Estate

Halving carbon emissions in buildings by 2030, ambitious measures on energy efficiency, retrofit, net zero objective in all new projects, renewable energy onsite

Laboratory Science

Understanding the impacts of laboratory procedures, using equipment more efficiently, switching equipment off when not in use, significantly reducing single-use plastics in labs, ultra-low temperature freezer management

Procurement

Buying less (stop over-ordering), buying greener, understanding carbon footprint of our supply chain better, providing support to staff to make greener procurement choices

Waste

Stop incinerating non-hazardous and non-clinical waste, significant single use plastic reduction, increased recycling, working with waste management industry partners

Travel

Reducing flying unless necessary, providing information on greener business travel options (e.g. long-distance train travel), improving on-site facilities for cyclists, electric vehicle charging

Governance, accountability & reporting

The success of this sustainability action plan involves the participation of all. It also needs strong supporting governance.

In 2020, we set up the *Sustainability Advisory Group (SAG)* consisting of senior members across the ICR including from estates, facilities, scientific divisions and other key stakeholders. SAG, the ICR Executive Board and the ICR Corporate Leadership Board together with other senior management are ultimately accountable for the delivery of objectives and targets within Sustainable Discoveries.

The Health, Safety, and Environment (HSE) Committee and SAG will be responsible for tracking progress and checking performance against the action plan's objectives. The ICR will take part in the international higher education sector initiative United Nations SDG Accord to commit publicly to supporting the *UN Sustainable Development Goals* and reporting progress against them.

Achieving this sustainability plan is also a big challenge and we should be transparent on progress. We are developing a sustainability dashboard for monitoring progress against the different objectives and will be communicating on progress externally on a regular basis.

Monitoring our progress

- Carbon footprint calculated quarterly and reported
- Development of plans for decarbonisation
- Report progress externally

Case Study

London Cancer Hub, Sutton

The London Cancer Hub is a collaboration between the Institute of Cancer Research and the London borough of Sutton. The project is supported by The Royal Marsden NHS foundation Trust and the Mayor of London. This project aims to attract the best scientists and clinicians, together with innovative companies and influence future cancer research for the benefits of patients.

The hub facilities are meant to become an inspiring and sustainable environment for scientists, staff, patients, and the local community. The development of the hub will enhance local public transport, cycling and walking spaces will be prioritized.

Green places will be integrated into the site, enhancing biodiversity, contributing to well-being of everyone and the increasing the site resilience to heat-wave events.

As the London Cancer hub is a redevelopment project, it will bring benefits to the local community. Indeed, it will create jobs and generate revenue for the borough and boost the local economy. Also, allotment gardens and other facilities will be provided for the local community.

Over the coming years, the London Cancer Hub is expected to create about 13,000 jobs.

Training & capacity

It is important for us that all ICR members have awareness of sustainability issues and how they affect their role and understand how they can help in the delivery of this plan.

Sustainability training is made available to all at the ICR and all newcomers will have a sustainability briefing as part of their induction.

Our Sustainability at the *ICR* training sessions have been accredited by the Institute of Environmental Management and Assessment and are made available at least twice in each academic year. Also, we will provide My Green Lab ambassador training modules to each ICR lab.

Monitoring our progress

- Number of staff undertaking training courses
- Training sessions delivered
- Number of IEMA certificates issued

Case Study

Sustainability Training at the ICR

Many courses have been offered to the ICR members such as:

- Sustainability at the ICR, an externally accredited course which completion allows certification for the IEMA Environmental Sustainability Skills
- Sustainability introduction training – a short online training course offered to all staff and as a part of our induction programme
- My Green Lab Ambassador Training – a series of short online modules covering sustainable lab practices such as green chemistry and carbon and energy reduction
- A Supportive Workplace: covers the ICR's working culture, an overview of relevant equality legislation, bullying and harassment, and the responsibilities of staff and students to each other

Thank you for the course – it was very engaging and eye-opening and I enjoyed it!

ICR Higher Scientific Officer – participant in IEMA accredited Sustainability at the ICR Training

Looking after our people

Creating an inclusive and supportive culture where all can thrive is essential to the ICR and our values. We are expanding our work on gender, social and racial equality, diversity and inclusion within the institute. We will aim to achieve the Athena SWAN award at silver or gold level by 2024 and increase the proportion of students and postdocs from non-white backgrounds by 30%. Also, we will make sure all our contractors are London Living Wage Employers.

Health and Safety

Our *Health, Safety and Environment Policy Statement* says that the ICR will integrate health, safety and environmental protection to all our activities to proportionally and pragmatically manage risk to actively contribute to our success. Our supporting Health, Safety and Quality Action Plan states that we are promoting a proportional approach to risk management to enable world class research. There are three main themes to our approach:

- Develop the culture, ownership and understanding of health and safety related risks
- Ensure competence of all ICR personnel to enable them to fulfil their roles safely
- Monitor and measure health, safety and environmental performance across the ICR

Gender equality

The Athena Swan Charter is a framework which is used across the globe to support and transform gender equality within higher education and research. We hold the Athena SWAN Charter Silver Award for Women in Science, for our work to promote the careers of our female staff and students.

Monitoring our progress

- To obtain 85% agreement (with no differences by gender or ethnicity) on the Attitude Survey question "I believe the ICR is committed to equality and diversity". Repeat the survey every year
- Aim for achieving Athena Swan Gold status for work on gender equality
- 100% of contracted service providers to ICR to pay at least London Living Wage by the end of the academic year 2025/2026
- Meeting the objectives within the Health, Safety and Quality Action Plan

LGBTQ+ inclusion

The Stonewall Diversity Champions programme is the leading employers' programme for ensuring all LGBTQ+ staff are free to be themselves in the workplace. As Stonewall Diversity Champions, we are working with our joint ICR and Royal Marsden Hospital LGBTQ+ staff and student network to review our policies and practices and ensure a fully inclusive workplace.

Race equality

The *Race Equality and Cultural Heritage Forum* at the ICR and the Royal Marsden provides a space to discuss issues and push for initiatives that can help promote diversity and drive greater equality in our workplaces. In 2020, the ICR launched the *Race Equality: Beyond the Statements* action plan, which incorporates its six commitments to tackling racial inequality to promote a culture of inclusivity.

Disability and mental health

Our joint ICR and Royal Marsden Disabilities Network Support (Access for All) provide support and adjustments for disabled students and staff. This network is made of ICR members trained to be wellbeing advisers and student confidants, who provide an informal listening ear for staff and students.

> Creating an inclusive and supportive culture where all can thrive is essential to the ICR and our values

Our communities

Monitoring our progress

- Public and community engagement activities
- % Staff taking part in external public engagement activities

From visiting schools to discuss careers in science and cancer research, hosting workshops or interactive demonstrations for members of the public to engaging with patients about our research – it is our responsibility to share our discoveries and the benefits of research with the public.

We are proud that more and more ICR staff and students have taken part in public and community engagement activities, successfully connected with our target audiences through creative engagement activities and delivered innovative projects in collaboration with our partners.

Engaging with our communities is important for us. We will continue to engage with local schools and more widely with students and young people to encourage scientific research careers – especially from backgrounds currently under-represented in research science.

We will connect with a range of audiences within our local and neighboring boroughs, ensuring that our audiences for engagement reflect the diversity of our local communities.

Case Study

ActNow staff sustainability group

In our 2021 Staff Attitude survey, some 83% of staff and students said that sustainability should be a key priority for ICR. Prompted by this response, staff network ActNow was created to help address sustainability, by bringing together colleagues who share a passion, ideas, and expertise in the field of sustainability and environmental matters and share best practice effectively across the ICR.

Since its inception earlier this year, members of ActNow have been actively working with their counterpart sustainability group at The Royal Marsden *Green Matters*, to develop opportunities and initiatives, and have been instrumental in helping to develop our action-plan *Sustainable Discoveries*.

ActNow meets monthly to discuss possible greener initiatives to implement across the ICR such as more sustainable laboratory practices. If you have any questions regarding the ActNow group, please contact ACTNOW@icr.ac.uk.

Community event with local children at the ICR

Sustainable Operations

Our work towards becoming more sustainable starts with our buildings, estates and facilities. We use resources such as energy and water and generate waste and a carbon footprint with a significant environmental impact. Besides reducing the impacts from consumption, it is important for us to make sure our facilities are climate resilient to future heat-waves, water shortages and other future risks.

Carbon emissions from buildings

The ICR has a significant energy and carbon footprint from its buildings, approximately 80% of our floor space is laboratories which typically consume five times more energy for their equivalent floor area than office buildings. This is due to the specialized ventilation, lighting and cooling systems as well as the laboratory equipment such as fume cupboards, ultra-low temperature freezers and other items.

In line with our net zero objective and science-based target, we are committed to reduce our carbon emissions from buildings by 42% by 2030 and 90% by 2040 (over a 2019/2020 base year).

To do so, we will retrofit all our buildings and shift to onsite renewable energy. We will carry surveys to investigate the potential of renewable energy generation and develop an estates decarbonisation plan for the retrofit of existing buildings. The ICR is already purchasing 100% certified renewable electricity through the grid through joint purchasing consortium with other London universities.

Construction projects, refurbishments and refits are a huge opportunity for sustainability – we are developing a Sustainable Construction Project Plan to ensure our buildings are energy-efficient, low carbon and climate resilient.

Monitoring our progress

- Installation of sub-metering of electricity and gas in all our buildings and link it to our energy management software to help us monitor our progress monthly
- Implementation of onsite renewable energy projects at ICR campuses

Case Study

BREEAM Excellent Centre for Cancer Drug Discovery (CCDD)

The Building Research Establishment Environmental Assessment Method (BREEAM) is a design and rating tool which assesses the sustainability performance of buildings across various categories across the whole building lifecycle (design, specification, construction and once in use).

It looks at sustainable practices of buildings in categories such as management, Health and Well Being, Energy, Transport, Water, Materials, Waste, Land Use and Ecology, Pollution and Innovation.

In April 2022, our Centre for Cancer Drug Discovery (CCDD) building received a BREEAM certification with rating “Excellent”.

Fewer than 10% of buildings achieve the Excellent designation. In the case of the Center for Cancer Drug Discovery building, we implemented several sustainability actions such as monitoring energy and water usage throughout construction, maintaining, and monitoring high-quality indoor air quality, minimising our energy use through solar panels, carefully managing our waste and we have an ecology plan in place for our impact on biodiversity.

> Our work towards becoming more sustainable starts with our buildings, estates and facilities

BREEAM Excellent Centre for Cancer Drug Discovery (CCDD)

Waste

Monitoring our progress

- Tonnes of waste generated
- % of waste recycled
- % of waste recovered

Sustainability for the ICR means an overarching focus on waste reduction (such as through behaviour change and procurement initiatives) and moving towards circular economy practices.

What is a circular economy?
A circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.

Our current economic system treats resources in a very linear way: often known as the 'take-make-waste' approach. It is often easier and cheaper to create products that can be used only a few times, rather than designing for sustainability and longevity.

How much plastic do laboratories use?

Researchers at the University of Exeter weighed up their bioscience department's annual plastic waste and extrapolated that biomedical and agricultural laboratories worldwide could be responsible for 5.5m tonnes of plastic waste a year – equal to 83% of the plastic recycled worldwide each year.

Many products that can be recycled, are not. For example, 91% of plastic globally is not recycled – and the amount that is cannot be recycled infinitely.

We have recently developed the ICR Sustainable Waste Action Plan 2022-2025. We recognise the importance of promoting a sustainable waste management programme, not only for the immediate effect on the environment but from a financial benefit too. The Waste Strategy provides a clear, innovative approach to waste management for the ICR by setting ambitious targets following themes of reduce, reuse and recycle.

A significant waste stream for the ICR is single-use plastics (disposable plastics) intended to be used only once before being thrown away. This is a particularly problematic waste stream from our labs – where items such as plastic petri dishes, bottles of various shapes and sizes, gloves, pipettes and pipette tips, sample tubes and vials are frequently disposed of as cytotoxic and/or hazardous waste streams and are disposed of via high temperature incineration at significant cost to the ICR.

Our waste streams include:

- Dry mixed recycling and cardboard
- Chemical wastes
- Construction project wastes
- Cytotoxic and hazardous clinical waste

During the academic year 2020/2021, the ICR generated 318 tons of waste, we recycled 41% of waste, 36% went for energy recovery and 23% was incinerated.

We are working hard to reduce, reuse and recycle. We are committed to reduce our waste arisings by 4.2% per year until 2024/25 and recycle at least 50% of site waste by the end of 2025.

Circularity for the ICR means working with suppliers who can reduce waste and packaging. This involves all stakeholders such as our procurement team, scientists and others. It also means seeking to engage with suppliers who offer innovations such as take-back schemes, rental models and other more sustainable approaches in the supply of goods and services.

Water

Monitoring our progress

- Operational water consumption
- Number of water use surveys carried out
- Implementation of water reduction measures
- Development of water reduction initiatives in laboratories

The UK, and especially the South East is subject to water stress due to the availability of water resources and the population density. Furthermore, the abstraction and treatment of water comes with a carbon footprint and significant cost.

Laboratory processes use significant quantities of water, we also use water for grounds maintenance and for projects.

In 2020/2021, the ICR consumed 28,907 cubic meters of water, enough water to fill an Olympic swimming pool 11 and a half times. For this reason, the Institute of Cancer Research is committed to reduce its water use by 10% per ICR Member by 2029/30. We are developing a water reduction plan, water use audits and putting in place programmes to reduce water consumption.

The laboratory sustainability initiatives we are working with (LEAF and MyGreenLab – see Science Section) have a strong focus on water use reduction in laboratories.

> In 2020/2021, the ICR consumed 28,907 cubic meters of water, enough water to fill an Olympic swimming pool **11 and a half times**

Commuting and visiting the ICR

Monitoring our progress

- Carbon emissions associated with commuting
- Cyclist facilities installed
- Electric vehicle charging facilities installed

Travel to the ICR is a significant sustainability issue giving rise to greenhouse gas emissions and potentially contributing to local congestion and air quality. Air quality in London is a significant public health risk. The volume of road traffic in London makes it one of the most polluted places in the UK.

And air pollution is not just a central London problem – 100% of Londoners live in an area where pollution exceeds the latest recommendations from the World Health Organization for particulate matter PM2.5. This is one of the air pollutants thought to have the greatest impact on human health.

We have developed and implemented a Green Travel Plan which is reviewed on a regular basis. We also carry out a staff travel survey every two years. Our transport modal shift aims include:

- Increase cycling to and from the ICR
- Increase walking to and from the ICR
- Increase travelling to and from the ICR by public transport (in particular, by train and shuttle bus); and
- Increase car sharing to and from the ICR

As part of working towards our net zero target, we aim to reduce the carbon intensity of commuting by 4.2% per year and the other objectives towards modal shift.

The objectives within our sustainability plan include the improvement of electric vehicle charging facilitiues at our Sutton site.

We will update our green travel plan including the requirement to decarbonise travel in line with the ICR's net zero target, improve cyclist facilities at both sites and implement charging stations for electric vehicle at Sutton. We are also upgrading our cyclist facilities at our Chelsea site so that more of our people and visitors will choose two wheels.

Enhancing biodiversity and nature

Monitoring our progress

- Square meters of habitat created
- Type/category of habitat
- Contribution to local Biodiversity Action Plan

Biodiversity is the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Biodiversity supports everything in nature that we need to survive such as food, clean water, medicine, shelter and climate regulation.

At the ICR we have external areas which can be used to enhance and complement local biodiversity as well as improving the attractiveness of the campus and contributing to wellbeing.

The Sutton Campus is an opportunity to work together on biodiversity enhancement with our partners including Epsom and St Helier University Hospitals, the Royal Marsden and London Borough of Sutton on site-wide initiatives including through the London Cancer Hub programme.

We will continue to place nature and biodiversity at the heart of our decision making and develop at least 2 new areas of nature enhancing habitats at Sutton site.

The ICR's Physic sensory garden at Sutton

Sustainable Science

Science is at the heart of the ICR. Scientific research has historically had a large carbon and waste footprint — laboratories by their very nature can use a lot of energy and water and produce significant amounts of waste.

Our sustainability action plan includes actions around:

- Undertaking research (such as life-cycle assessment) into the environmental impact of laboratory processes
- Reducing over-ordering of laboratory consumables
- Increasing usage of inhouse-produced laboratory media instead of buying in
- Buying greener alternatives for laboratory equipment and consumables and engaging with our supply chain in doing so
- Building capability within our research divisions for our scientists and researchers to understand sustainability and labs
- Reducing quantity of laboratory wastes and their sustainable management – including specifically reducing the quantity of waste going for high-temperature incineration

Furthermore, the greening of laboratory practices and processes is a key activity of the ActNow sustainability group.

Collaboration

We are collaborating with other universities, pharmaceutical companies, research institutes and NHS Trusts (including not least of all, our neighbour – the Royal Marsden NHS Trust, to share knowledge on best practice on sustainable laboratory practices and research science.

Monitoring our progress

- Number of laboratories under sustainability accreditation
- My Green Lab sustainability rating
- Annual laboratory equipment carbon emission reduction %
- Typical daily/weekly/annual energy use in kilowatt-hours
- X% of freezers operating at -70°C
- Annual laboratory equipment waste reduction %

Capacity

We will make sure our researchers have the necessary knowledge and tools to make more sustainable choices in labs by providing sustainable procurement guidance for laboratory equipment such as recyclable or reusable laboratory consumables.

We also have supporting training from MyGreenLab and IEMA to support this.

Case Study

Freezer Challenge

The ICR currently has 155 ultra low temperature freezers, with each of them using the equivalent of 2 to 5 household electricity per year. To reduce our impact, the ICR has been participating in the international MyGreenLab Freezer Challenge programme.

The Freezer Challenge is an international competition to encourage laboratories around the world to adopt efficient cold storage management benefits such as energy use reduction, improvement of sample accessibility, reduced risks, and cost savings. Actions include raising temperature from -80 to -70°C, sample consolidation and freezer management and maintenance practices.

In 2022, we were part of the 1,200 labs from 27 countries in the freezer challenge, which together have saved a total of 6,732 tons of carbon dioxide equivalent. The ICR received an honorable mention for significant energy savings made during the first year of participation in the challenge.

Laboratory practices

Together with our scientists, we are working hard to get most of our labs with laboratory sustainability certification schemes including the UK-based higher education LEAF (Laboratories Environmental Assessment Framework) and the international science sector initiative MyGreenLab. These programmes will support lab teams to reduce energy consumption, carbon emissions and waste in line with our net zero and other sustainability objectives.

We will investigate the energy consumption and carbon footprint from different types of laboratory equipment and adopt a behavior change and controls approach. For example, we have identified significant energy and carbon saving opportunities from the way we maintain and operate ultra-low temperature freezers.

In terms of lab waste, we are looking to reduce the waste we generate and segregate waste more effectively to recycle more and incinerate less. Indeed, we want to reduce the quantity of non-hazardous, non-clinical waste entering the hazardous/clinical waste stream through better signage and consistent visual identity which will be updated annually.

Case Study

InHouse Laboratory Media

The ICR's Laboratory Site Services (LSS) can provide more than 100 types of media for typical laboratory and can produce bespoke formulations where necessary.

This is a more sustainable practice than buying in laboratory media via procurement routes because:

- Inhouse media does not have disposable (frequently plastic) packaging
- Using Inhouse media does not involve such frequency of transportation – the ingredients used by LSS are bought in bulk quantities

Even factoring in the use of autoclaves for cleaning of glass bottles, this reduces the carbon footprint and wider environmental impacts substantially.

For example, the transportation of externally bought in RPMI and DMEM media (used to grow cell cultures in vitro) during 2021 was associated with 78.4 tonnes of carbon dioxide equivalent (about the same as the annual carbon footprint from burning 41,000 litres of gasoline).

> Science is at the heart of the ICR

Sustainable Procurement

ICR's supply chain is very varied consisting of facilities services, laboratory equipment, laboratory consumables, construction materials and many other types of products. The environmental and social risks and opportunities from such a diverse supply chain are complex and varied.

It is important for the ICR to tackle these and take a focussed approach in doing so – not least of all because carbon footprinting has shown that approximately 90% of our climate impacts are from procurement. Decarbonising our procurement will not be easy, but it is now a priority, and we are ready for the challenge.

The ICR is part of the *London Universities Purchasing Consortium (LUPC)* and have mapped out social related risks from issues such as child labour, modern slavery, illegal work practices and others. We also meet our legal requirements under the Modern Slavery Act 2015 including publishing our assessment of slavery risks in our operations and supply chain.

ICR is a member of *Electronics Watch* – the independent monitoring organisation that aims to improve workers' conditions in global electronics supply chains. This affiliation and continuous collaboration with LUPC, fellow members and the wider sector will enhance our focus on responsible procurement and support work to mitigate human rights abuses in supply chains.

Supplier engagement

We are mapping our suppliers and contractors against sustainability risks – for example identifying carbon hotspots from our purchased goods and services. We communicate ICR's sustainable procurement policy and guidelines to key suppliers and are introducing sustainable procurement criteria in all competitive tenders. We are implementing a project to request to our suppliers to provide supplier-specific carbon data which will help identify where improvements can be made.

As a result, we expect that 100% of our suppliers will be aligned with our Net Zero target by 2030. We hope to make a real difference in our supply chain and support our suppliers to take the same path.

Greener business travel

Finally, we will promote reduction in business travel carbon emissions in line with our net zero target and provide guidance for our people to assess when it is possible to avoid business travel or take lower carbon transport modes of transport. For example, this would include looking at sustainable transport choices (long distance rail vs flying) or questioning the need for travel – using video conferencing, virtual meetings and other forms of technology.

Engaging with ICR members on sustainable choices

Also, we will make sure to give the necessary training and guidance for our people to make more sustainable choices to decrease our environmental and social impacts. ICR members will be able to identify what is not necessary to buy and to understand the sustainable alternatives to purchase. This will be a substantial area of work for us over the coming months and years.

Facility-wise, we have been buying renewable electricity via the higher education purchasing group TEC. We will continue to make sure we purchase only 100% of our energy from reliable renewable sources.

Monitoring our progress

- % of supply chain mapped for carbon
- Tonnes of carbon from procurement
- Development of guidance and systems for informing ICR members on sustainable procurement choices
- Tonnes of carbon from business travel

Our Sustainability Plan

Objectives and targets

Sustainable Foundations

Theme	Theme objective	Principal/long-term target	Annual/interim target
Net Zero	ICR to be net zero by 2040	ICR to reduce carbon footprint by 42% by 2029/30 (Over a 2019/20 baseline)	4.2% yearly carbon footprint reduction across Scopes 1, 2 and 3 Develop supporting decarbonisation plan and update annually
		ICR to be net zero by 2039/40	4.2% yearly carbon footprint reduction across Scopes 1, 2 and 3 Develop supporting decarbonisation plan and update annually
Governance, accountability and reporting	Reporting progress on this sustainability plan	Regular reporting on carbon footprint	Carbon footprint calculated quarterly and to report this to internal stakeholders
		Sustainability reporting development	Develop short sustainability report to put on external website and update annually – to start end of 2022/23
		Develop sustainability dashboard to show our progress against this sustainability plan and its objectives and targets	To be implemented during 2022/23
	Supporting governance and oversight of our sustainability plan	ICR Executive Board to have ownership of Sustainable Discoveries	ICR Executive Board to approve and support this Action Plan – including supporting communication from senior staff and through requisite financial and human resources
		Sustainability Advisory Group to review progress at quarterly SAG meetings	SAG to track progress of this strategy during quarterly meetings
		Institute Health Safety and Environment Committee responsible for monitoring and reporting on performance	HSE committee standing agenda item – checking performance against the action plan objectives
		ICR to sign the higher eduction sector UN SDG Accord – committing to supporting the UN Sustainable Development Goals and reporting progress against them	SDG Accord to be signed by end of December 2022

Sustainable Foundations

Theme	Theme objective	Principal/long-term target	Annual/interim target
Our communities	Community Engagement*	Schools, students and young person engagement – we will engage with local schools and more widely with students and young people to encourage scientific research careers – especially from backgrounds currently under-represented in research science	
		Local community engagement – We will connect with a range of audiences within our local and neighbouring boroughs, ensuring that our audiences for engagement reflect the diversity of our local communities	Take part in festivals and events local to our two sites Build sustainable and mutually beneficial partnerships with local community groups, and develop collaborative community engagement projects with local organisations Work with the London Borough of Sutton to engage with the local community
Training and capability	All staff have sustainability awareness	All at ICR have sustainability awareness and understand key issues and how they impact their role, All new ICR members to undertake sustainability briefing as part of their induction	E-Learning Course – Sustainability at the ICR to launch during 2022/23
	Sustainability training available for all	For those needing detail – IEMA accredited training Sustainability at the ICR – Modules A, B and C For short briefings on lab sustainability practices: My Green Lab Ambassador training – covers Energy, Waste, Water, and Green Chemistry & Community	IEMA accredited training sessions to be made available at least twice in each academic year

*Community engagement targets will be reported on separately to the sustainability plan under the ICR's Public Engagement Strategy

Sustainable Foundations

Theme	Theme objective	Principal/long-term target	Annual/interim target
Looking after our people	Equality, Diversity and Inclusion (EDI)*	To continue and expand our work on gender equality, with the aim of eliminating differences in experience of ICR culture and career outcomes by gender Athena SWAN award at silver or gold level (TBC) 2024. Aspirational target: gender parity at Faculty	Estimated April 2024
		To fulfil the commitments on race equality made by the ICR and implemented in our Race Equality: Beyond the Statements programme To increase proportion of BAME faculty to align with BAME students and postdocs (30%) To increase ethnic diversity in senior Prof Services roles (PS1,2 and above) to align with lower Prof Services grades (30%)	By 2025 to close the gap between Postdoc and Faculty, by growing the proportion of BAME Faculty from 16% to 20% By 2025 to increase representation from 10% to 20% BAME in these role
		To create an inclusive and supportive culture where all can thrive and which recognises and celebrates difference. To obtain 85% agreement (with no differences by gender or ethnicity) on the Attitude Survey question "I believe the ICR is committed to equality and diversity"	To be reviewed in the 2023 attitude survey
	Health, Safety and Quality Action Plan	Implement objectives within the HSQ Action Plan. Themes: - Develop the culture, ownership and understanding of health and safety related risks - Ensure competence of all ICR personnel to enable them to fulfil their roles safely - Monitor and measure health, safety and environmental performance across the ICR	Implement objectives within the HSQ Action Plan
	Fair wages	100% of contracted service providers to ICR to pay at least London Living Wage	At least 50% of contracted service providers to ICR to pay London Living Wage by 2024/25 London Living Wage to be mandated in all new ICR service provider contracts from start of 2022/23 onwards

*EDI targets will be reported on separately to this sustainability plan under the ICR's EDI Plan

Sustainable Operations

Theme	Theme objective	Principal/long-term target	Annual/interim target
Buildings training and capability	Reducing energy consumption and carbon emissions of building operations	Reduction in carbon emissions related to buildings and owned transport (from electricity, gas, refrigerant losses, generator fuel and own vehicles) by 42% by 2029/30 based on 2019/20 baseline	Annual reduction in carbon emissions of 4.2% per year in Scope 1 and 2
		Sub-metering of electricity and gas on all ICR buildings linked to energy management software to be completed by April 2023	–
		Monthly energy usage reviews of buildings using sub-metering data with results shared to drive energy use reduction	Undertake monthly
	Reducing energy and carbon emissions of buildings through retrofit and onsite renewable energy	Develop estates decarbonisation plan for retrofit of existing buildings and opportunities for onsite renewable energy	To be commissioned by August 2022, surveys completed at Sutton and Chelsea by February 2023
		Develop of plan to increase onsite renewable energy	Surveys completed at Sutton and Chelsea by February 2023
	Sustainable construction projects	Sustainable construction plan to mainstream net-zero into all new-build, refurbishment and fit-out projects	To be developed by end of 2022/23
	Reducing water use	Reduce water consumption by 10% per ICR Member by 2029/30	Annual review to action water reduction measures
		Undertake water use surveys to determine areas of high consumption including using building level water meters	Water use surveys carried out on phased basis (e.g. building by building Commence in 2022/23

Sustainable Operations

Theme	Theme objective	Principal/long-term target	Annual/interim target
Buildings training and capability (continued)	Reducing waste arisings and the sustainable management of waste	Reduce waste arisings (From ICR Waste Action Plan) by 4.2% per annum	Reduce waste arisings (From ICR Waste Action Plan). by 4.2% per annum
		Recycle more site waste (From ICR Waste Action Plan) – Recycle at least 50% of site waste by 2024/25	Increase recycling rate annually in-line with required increase by 2024/25
		Implement ICR Sustainable Waste Action Plan 2022–2025	Annual review of progress with waste action plan
	Resilience of ICR to climate change impacts	Undertake review of resilience of ICR buildings and ground to climate change impacts including heat waves/over-heating of buildings, solar shading requirements, water shortages etc	Complete review in first half of 2022/23
	Use certified management systems to manage health, safety, environment and quality	Maintain IMS coverage (ISO9001, ISO14001, ISO45001)	Annual internal audit programme Annual external audit programme 3 yearly re-certification cycle
Commuting and visiting the ICR	Supporting greener commuting and better facilities for cyclists and electric vehicles	Update green travel plan including the requirement to decarbonise travel in line with the ICR's Science Based Target	Completed bi-annually (ongoing)
		Undertake staff travel survey	Completed bi-annually (ongoing)
		Reduce carbon intensity of commuting inline with our net zero objective including improving cyclist facilities and charging for electric vehicles	Reduce carbon intensity of commuting by 4.2% per year
		Improving cyclist facilities at Chelsea – implementing secure and easily accessible cycle storage by end of 2022/23	
Biodiversity	Improving biodiversity on our sites	Commission new site biodiversity plan	Commission by end of 2022/23
		Develop habitat relevant to London Borough of Sutton Local Biodiversity Action Plan at Sutton site	Develop at least 2 areas of Sutton BAP relevant habitat by end of 2022/23

Sustainable Science

Theme	Theme objective	Principal/long-term objective	Annual/interim objective
Capability	Supporting the ACT NOW sustainability group	Senior staff support for Act Now including human and financial resources	ACT Now Group meetings on a monthly basis, ACT Now representation at quarterly ICR Sustainability Advisory Group (SAG) meetings
	Providing researchers with information to make sustainable procurement choices	Develop resources on Nexus to give scientists information on sustainable procurement choices (e.g. laboratory equipment)	Sustainable procurement guidance to be updated at least annually
Laboratory practices	Using a frame-work /certification for laboratory sustainability to drive improvement	MyGreenLab or LEAF accreditation of laboratories	
	Reducing energy consumption and carbon footprint of lab equipment in line with our net zero objective	Understand energy and carbon footprint from different types of laboratory equipment and reduce this using techniques related to behaviour, management, controls etc,	Increase proportion to 90% of ULT freezers operating at -70 as opposed to -80 by end of 2022/23
	Reducing waste in laboratories and segregating waste more effectively – less incineration and more recycling	To reduce the quantity of non-hazardous, non-clinical waste entering the hazardous/clinical waste stream through better signage and consistent visual identity, standardised improvement of bins and communications	Implement new bins, signage and supporting communications across ICR by start of 2022/23 and refresh communications annually
Collaboration	Inter-institutional collaborations with other universities, pharmaceutical companies, research institutes, hospitals etc. to share knowledge on best practice in laboratory sustainability	For the ICR to be able to share knowledge on sustainability and laboratory science and to be able to learn from others	To have at least 2 meetings per semester with other institutions on sustainability matters

Sustainable Procurement

Theme	Theme objective	Principal/long-term target	Annual/interim target
Understanding sustainability risks and opportunities in our supply-chain	P1 Developing a sustainable procurement strategy and understanding supply chain risks	Develop responsible procurement strategy including updating respon-sible procurement policy, responsible procurement code and guide to sourcing suppliers & managing contracts	Stakeholder mapping and engagement commencing 2022/23 Plan developed & documents updated by 2022/23 Responsible Procurement Code has been updated Bi-annual review of all documents
		Supply Chain Mapping – Supplier profiling, determine carbon hotspots in specific ICR procured goods and services Work with Consortia and other procurement bodies	Mapping exercise complete by November 2022 (include Chelsea and Sutton stores) Link Supplier spend and HESCET tool for Category analysis
	P2 Engaging our suppliers	Supplier Engagement, communicate responsible procurement code key suppliers and ICR's sustainable procurement policy	Include in all competitive tenders Send to top 50 spend suppliers 2022/23 Responsible procurement standing agenda items in meetings
	P3 Procurement decarbonisation	Reduce supply chain carbon emissions focusing on category specific spend, system & process activities and/or results from supplier profiling	Greener products to be implemented in stores Stakeholder engagement commencing 2022/23 Reduction in deliveries to both Sutton & Chelsea commenced August 2022/23
		Develop plan and processes to better quantify carbon emissions from procurement (moving away from using purely spend-based factors)	Mixed methodology (actual v theoretical) to calculate emissions
Engaging with ICR members on sustainable choices	P4 Communicating sustainable choices to our people and questioning need to buy	Promote best practice in responsible procurement areas	Sustainability training for procurement staff – Review Sector Training & Mygreen Labs, LEAF - ISO20400 plan – Revised plan to be updated 2022/23 Annual Modern Slavery statement – Review & complete by December 2023 Guidance on energy efficient equipment – available for freezers, wider guide by January 2023 Procure 100% green energy – started and ongoing Produce practical guidance for procurement – January 2023
Greener business travel	P5 Greener business travel	Promote reduction in business travel by 4.2% per year (inline with net zero target) providing guidance of reducing the carbon footprint of business travel	Reduce carbon footprint of business travel by 4.2% per year (as part of our science-based target) Prompt to travelers about journey impact CO_2 journey emissions, rail vs air options Provide data on travel emissions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