



**SUSTAINABLE
DEVELOPMENT
GOALS REPORT**

2022/23

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FOREWORD



Nicola Davies, Chief Financial Officer and Chair of the Sustainability Board

The **United Nation's 17 Sustainable Development Goals** (SDGs) are our world's call to action on the most pressing challenges and opportunities facing humanity and the natural world. At the University of Liverpool, we are dedicated to embracing the SDGs by making a positive impact and contributing to a more sustainable and inclusive world. Through our commitment to these goals, we strive to integrate sustainability into our business practices and operations, to collaborating with regional, national, and international partners in support of the goals; and to sharing best practice. With that in mind, it is with great pleasure that I introduce our new Sustainable Development Goals Report 2022-2023, which captures the activities across research, teaching, public engagement and campus operations which support these goals in alignment with the University's strategic vision and objectives.

A YEAR IN SUSTAINABILITY



SUSTAINABLE DEVELOPMENT GOALS



Supporting staff with the **Cost of Living Salary Advance Scheme**



Tackling food poverty with the **Student Food Pantry**



New **Mental Health Research for Innovation Centre**



All our students have access to **Education for Sustainable Development**



Women in Data Science scholarship bridging the gap for women



Free sanitary products for all staff & students




Clean energy research initiative **CLEAN-Air (Africa)**



Libraries, Museums & Galleries **Student Partners project**



Digital Innovation Facility creating jobs within the Liverpool City Region



Cowrie Foundation scholarship supporting disadvantaged Black British students



Staff & student Travel Survey improving sustainable travel




LEAF Gold Award for Materials Innovation Factory lab



New **Climate Plan** launched to become net zero by 2035



Exploring changing **nutrient sources in the Arctic Ocean**



Supporting wildlife on campus with **Bioscope NatureArks & wild pod planters**



Free & confidential legal advice at the **Liverpool Law Clinic**



Member of the **Liverpool City Region All Party Parliamentary Group**

INTRODUCTION

In 2022 we launched our [Climate Plan](#) which sets out the principles and key actions that will support us in our journey to reach net zero by 2035. From this, we have seen an array of new initiatives and collective action across our campuses including the university's first ever [Sustainability Week](#), the development of the [Student Sustainability Network and Hub](#), and ground-breaking research that is helping the UK to transition to clean, affordable energy.

We are proud to have been ranked among the world's top 100 for our social, ecological and economic impact in the [2023 Times Higher Education \(THE\) Impact Rankings](#), and we have received recognition for our efforts in the University of Liverpool staff awards and we were awarded a commendation in the ['University Impact Initiative of the Year'](#) category at the sector-specific AUDE awards.



Members of the University Sustainability team attend the AUDE Awards

SUPPORTING EACH OF THE 17 SDGS

By working in partnerships both locally and globally, we are tackling the SDGs through our research and knowledge exchange, students and their learning, and through our operations. In the following section of this report, you will find examples of our work including specific case studies which demonstrate our commitment to the individual SDGs.



GOAL 1: NO POVERTY

End poverty in all its forms everywhere

Operations

The University has a long-standing track record of improving the social mobility of our students by widening access to participation in Higher Education, as set out in our [Access and Participation Plan](#). Our [Student Success Framework](#) has targets for ensuring students from economically disadvantaged backgrounds have opportunities to get great graduate jobs and to also undertake further postgraduate study. We offer [scholarships and bursaries](#) to support talented students from every background. Students who are experiencing poverty, can also access [hardship funding](#) and other [financial help](#), as well as a range of [other measures](#) such as providing subsidised food, free sanitary and sexual health products and extending access to campus facilities. We are an accredited [Living Wage Employer](#) and we encourage staff to give their time to supporting local charities through our [Liv to Give volunteering programme](#) and provide [financial support](#) to supporting the growth of financial and socially sustainable businesses.

Learning and students

The root causes of poverty are many and complex, and our students are able to explore these causes and solutions from several perspectives within course modules, such as ['Understanding Social Exclusion'](#), which explores different 'interpretations' of social exclusion – as well as related concepts, such as poverty, inequality and deprivation. ['Quantitative approaches to poverty over the life-course'](#) introduces students to concepts and measures of poverty and life-course disadvantage that are relevant to sociology and social policy. There are many other ways students can support the aims and objectives of SDG1 through extra-curricular activities, including volunteering opportunities provided by the Guild of Students. This includes, the [IntoUniversity Mentoring Scheme](#) where students work with young people from some of the UK's most disadvantaged areas, supporting them to raise their aspirations and achieve their potential.

Research and knowledge exchange

Our academics contribute to the research of causes and solutions of poverty. Recent research includes the Liverpool-led study, [Child poverty and children entering care in England](#), which offers evidence that rising child poverty rates are contributing to an increase in children entering care in England. A recent paper [Unlocking barriers to opportunities for young people in Liverpool City Region](#) explores some of the specific barriers to opportunity facing young people and considers how these might be overcome to improve social mobility for the next generation. The University also participates in policy making to implement programmes and policies to end poverty in all its dimensions.

Case Study

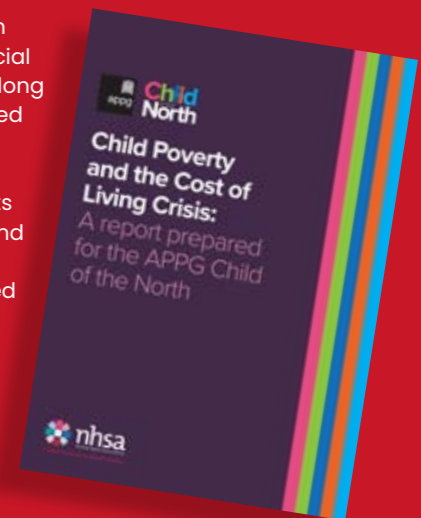
Cost of Living Salary Advance Scheme

In response to the increase in the cost of living, the University introduced a temporary Salary Advance Scheme to support staff who receive large or unexpected bills. The salary advance is a form of loan with no interest payable and staff were able to request 10%, 20% or 30% of gross monthly basic pay, and the amount is collected from colleagues' monthly pay in six equal instalments. The University has implemented [several measures](#) to support colleagues given the recent rises in the cost of living. We remain committed to national pay bargaining but know that the unprecedented rises cause immediate financial difficulties for many, and so will continue to look for a range of measures to provide staff with support.

Case Study

Child poverty in the North of England

Researchers, including academics from the University, warned that children living in the North of England are among the most vulnerable to rising living costs. The [Child Poverty and the Cost of Living Crisis report](#) showed that for many families the current economic chaos will deepen an enduring child poverty crisis in the region. The authors issued a stark warning to government that rising living costs will lead to immediate and lifelong harms for children: worsening physical and mental health outcomes; undermining children's learning, social wellbeing, and education; and risking lower lifelong health and productivity. The report was prepared by experts from northern organisations and universities for the APPG Child of the North. The APPG brings together policy makers and experts in child outcomes from across the country to find solutions to the disparities suffered by children in the North of England. The group was launched following the publication of The Child of the North report. A suite of recommendations to government have been laid out by the report authors to ensure families with children have enough money and security of income to meet basic needs, such as healthy food to eat and warm homes.





GOAL 2: ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Operations

We provide a [Student Hardship Fund](#), short loans and debt advice for students who may be experiencing food poverty, as well as a range of other measures such as the [Student Food Pantry](#). The University [Sustainable Food Policy outlines](#) our obligations and commercial commitments and ensures local, seasonal ethically sourced, high-quality, and affordable food is provided throughout our catering outlets, and much of our food waste is collected and sent for anaerobic digestion or redistributed to our Food Pantry or local charities. We embed responsible procurement principles across all our purchasing activities, and are a member of purchasing organisation, [TUCO](#) (The University Caterers Organisation Limited).

Learning and students

[‘Living with environmental change’](#) offers students unique insights into

many of the most pressing issues facing the world in the 21st century, such as globalisation, geopolitics, climate change, sustainability, health, economics, population, hazards, pollution, and natural resource management. The Guild of Students are responding to the interests and concerns of students, by offering events, Give it a Go sessions, volunteering opportunities and support campaigns that explore sustainability and further help students become meaningful and empowered agents of change. There are weekly [food growing initiatives](#) on campus, and during Sustainability Week, students could attend a [zero food waste](#) workshop which showcased the diversity of fermented food through traditional and sustainable methods.

Research and knowledge exchange

[The Liverpool Food Growers Network](#) was founded by our academics and aims to create and sustainably develop

an integrated network of community food growing projects, organisations and related supportive partners including academia, further education, public, private and third sector organisations, across the Liverpool City Region. A new study involving our researchers, [How Much Food Can We Grow in Urban Areas? Food Production and Crop Yields of Urban Agriculture: A Meta-Analysis](#), found that urban crops can sometimes have higher yields than conventional farming. Growing fruit and veg in urban areas has a wide range of benefits for people and planet, including improving access to healthy foods and potentially alleviating food insecurity. The [Household Food Insecurity research project](#) (having insufficient or insecure access to food due to resource constraints) and its effect on mental and physical health is building on previous [N8 Agrifood-funded work](#) which identified that food insecurity, and the stress that this generates, biases people’s decisions towards cheap convenient foods.

Case Study

Student Food Pantry

The [Student Food Pantry](#) is a recent project developed by the Money, Advice Guidance Team as part



Students at the student food pantry

of Student Services, to support our students during the cost-of-living crisis, for those experiencing food poverty. As part of a partnership with the Environmental Sustainability team and Campus Food and Drink, the Food Pantry provides a range of household supplies, free period products and redistributed food that would normally go to landfill to student members for a small weekly fee. The Food Pantry has proven to be a lifeline for students. It is a community hub which provides a safe space for students, and ensures they are supported in meeting their daily food needs. Future plans for the Pantry include healthy budget-friendly cooking demonstrations and savvy spending workshops with our Money Coaches who will provide peer to peer support.

Case Study

Food growing on campus

[Sowing the Seeds of Sustainability](#) is a Sustainability Funded project that is primarily based around upscaling and invigorating food growing at the University, for diet, wellbeing, and environmental benefits. The project aims to increase the number of food growing initiatives on campus, and to get staff and students involved as ambassadors for encouraging biodiversity in urban settings. Together with the Liverpool Guild of Students and staff at the Central Teaching labs, the project has produced fruits and vegetables on campus, which are offered to students and within our local community. The project is raising the profile of food growing to our staff and students and aims to ultimately develop many different gardens on campus, growing healthy food with no packaging, creating new green spaces and contributing to positive wellbeing. Staff and students are encouraged to volunteer at the weekly gardening sessions to experience planting, harvesting and general maintenance of the campus gardens and reduce the University’s carbon footprint. Sowing the Seeds is an example of how we can begin to improve and create more sustainable food systems at a local level. We hope that large organisations will be encouraged to work on initiatives such as this and start to change our perception of how we consume food.



Volunteers gardening on campus



GOAL 3: GOOD HEALTH AND WELLBEING

Ensure healthy lives and promote well-being for all at all ages

Operations

Ensuring healthy lives and promoting wellbeing for all is essential to sustainable development and we have created a [wellbeing map](#) to highlight the opportunities that are available on campus. The map contains information on places to be active, places to connect, places for support, places to take time out and places to eat well. Our sports centre, [Sport Liverpool](#) offers sports facilities and services to improve physical and mental health and is also open to members of the public. Additionally, there are many green spaces on campus including our library garden for students to study, and everyone is encouraged to use our [botanical gardens](#) to bring gardening, wellbeing and botany to more people.

We have a [Wellbeing Advice and Guidance Team](#) who provide information, advice, and guidance to students on a range of personal and social issues, with a focus on improving the overall mental and physical wellbeing. The [Mental Health Advisory Service](#) provide a confidential service for students experiencing complex and/or significant mental health difficulties. Students can also access a confidential, inclusive [Counselling Service](#) with

qualified therapists trained in a range of evidence-based psychological therapies. We are committed to ensuring that our staff have a safe, healthy, and enjoyable place to work, through our [Employee Assistance Programme](#), offering a [range of services](#).

Our full-time general practice [Student Health Centre](#) provides dedicated student health services and surgeries, and the [Student Health Advice Centre](#) offers a full range of nursing services including contraception, sexual health screening, health advice, minor injuries, and the management of chronic diseases such as asthma and diabetes.

Learning and students

[‘Health, Cultures and Societies’](#) provides an exciting opportunity for students to explore issues around health, illness, wellbeing, and medicine. Students can also support the aims and objectives of SDG3 by delivering workshops on mental health and wellbeing as an [outreach volunteer](#). For Sustainability Week, the Guild of Students delivered a workshop on [Collective Care for Activists: Exploring climate-anxiety and burnout](#), where activists could explore how to identify situations of burnout and eco-anxiety and uncover the best ways to

implement self-care and collective care in activism.

Research and knowledge exchange

The [Institute of Population Health](#) facilitate interdisciplinary partnerships based on a shared vision, sharing knowledge and expertise, with [Liverpool Health Partners](#), the [Northern Health Science Alliance](#) and local NHS Trusts. Outreach activities are delivered within the community by the [Faculty of Health and Life Sciences](#) and the [Merseyside Young Health and Life Scientists](#) programme of health-related activities supports young people from under-represented groups and have the potential and interest in studying health and life sciences subjects at university. Our researchers are contributing to the identification of achieving good health and wellbeing and the potential solutions across many areas, such as [The Children Growing Up in Liverpool \(C-GULL\) Study](#), a new longitudinal birth cohort focused on improving the health and wellbeing of children and their families within the Liverpool City Region and other similar regions within the UK.



Case Study

Free Sexual Health Products in the Guild

The Liverpool Guild of Students now offer completely free of charge sexual health products to students, to support sexual health on campus and ensure students are not priced out, or too embarrassed, to access sexual health products. The Guild worked with local charities and organisations such as Axess Merseyside, and were able to build valuable connections which enabled them to source good quality products that could be provided to students. After running several successful sexual health stalls and calculating the demand and uptake they established that providing free products within the Guild on a permanent basis was a necessity. Students can now access dental dams, condoms, lubricant, and pregnancy tests from both the Guild Reception and the Guild Shop.

Case Study

New ground-breaking mental health research facility

The University and Mersey Care NHS Foundation Trust have teamed up to create the Mental Health Research for Innovation Centre (M-RIC). The ground-breaking research facility based in Liverpool will impact directly on NHS mental health services. The aim is to improve mental healthcare for all patients and service users, by making Liverpool a world leader in learning better mental healthcare systematically from research embedded in care. The Centre will be funded by the award of £10.5 million of government funding from the Office for Life Sciences and the National Institute for Health and Care Research as part of the Government's 'Mental Health Mission'. The M-RIC will bring together academic researchers, healthcare providers and industry to develop and evaluate new treatments and deliver innovative

services. This will include trialling new drugs and new uses of existing drugs. It will also involve researching digital therapies such as apps and artificial intelligence for delivering virtual talking therapies and new ways to support mental wellbeing. It aims to improve mental healthcare by shortening the time it takes to translate research into real benefits for our local communities. Liverpool has one of the UK's highest levels of social and economic disadvantage and poor mental health, but despite this, there has been little mental health research in areas like Liverpool, which need it most. M-RIC will tackle this inequality head on. The award of £10.5m provides a landmark opportunity for Liverpool City region enabling residents to access mental health research and innovative, high-quality care. The focus will be on under-researched areas such as early intervention in psychosis, depression, and children and young people's mental health. Our research will underpin Liverpool City Region's commitment to service users, providing easy access to clinical trials and increasing their involvement in better care, closer



GOAL 4: QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Operations

Education provides the possibility of increased healthcare, improving financial prospects and improves both social stability and social mobility. Our IntoUniversity North Liverpool partnership helps talented young people from all backgrounds to achieve at school and believe in their ability to get to university. Staff have the opportunity to offer support to enhance student experience and future graduate employability, through providing graduate career opportunities, becoming a mentor, supporting recruitment activity or becoming a School Governor. The Centre for Innovation (CIE)'s core function is to work closely with individual academic colleagues and programme teams to support the enhancement of the student experience through effective curriculum design. Libraries play a fundamental role in learning within educational institutions, and we are committed to the principles of Open Access, providing free access to research for all. We also deliver educational course, lectures, and events through Continuing Education as well as provide free access to podcasts, blogs, and articles. The Victoria Gallery & Museum offer a wide range of educational workshops, talks, activities, and resources that are free to everyone. The annual Learning & Teaching Conference, hosted by the Centre for Innovation in Education, was held on in July 2023. The theme for that year's conference was 'Reassessing Assessment'.

Learning and students

We empower learners by equipping them with the knowledge, understanding, skills and attitudes to make their own contribution to a sustainable future through Education for Sustainable Development. In 2022, the University achieved a target from the Sustainability Strategy, for every student to have the opportunity to undertake a sustainability-related module, extra-curricular activity, or other relevant learning. The Student Sustainability Hub is the result of collaborative project

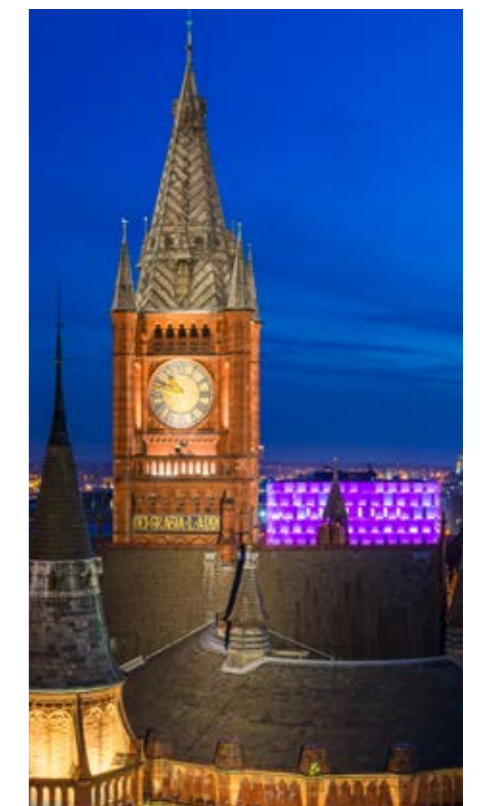
between Careers and Employability, the Centre for Innovation in Education, and the Education for Sustainable Development working group, and is a central resource for all students interested in sustainability and provides access to the Student Sustainability Network, practical resources and guidance, volunteering opportunities and events. Students can also complete the Sustainability in Action online course, which introduces the Sustainable Development Goals and upon completion, they receive HEAR accreditation. Our undergraduate and postgraduate students can audit their curriculum modules for their relevance to all of the SDGs and to make recommendations for changes to the course content. During Sustainability Week students attended a taster session on Decolonising the Curriculum to find out about a new audit tool and toolkit to help progress ambitions. All undergraduate and postgraduate taught degree students at the University receive a digital Higher Education Achievement report (HEAR) at the end of their studies. It is a comprehensive record of all students' university achievements, including the co- and extra-curricular activities undertaken during their academic studies.) at the end of their studies. It is a comprehensive record of all students' university achievements, including the co- and extra-curricular activities undertaken during their academic studies.

The University of Liverpool Maths School is unique in the North West of England as it is the only school to specialise in delivering a stimulating academic curriculum focused around A Levels in Maths, Further Maths, Computer Science and Physics. The Centre for Higher Education Studies contributes to society by offering quality education to our students and exploring many areas of research. Our students can explore the topic of education from several different perspectives within course modules, such as 'Strategic learning, training and development' which helps students develop a critical understanding of the strategic

importance of learning, training, and development. The Liverpool Curriculum Framework ensures that all students get access to core attributes and hallmarks as part of their experience with us, and we have embedded the core value of inclusivity to ensure that all our students can access their curriculum.

Research and Knowledge exchange

The University of Liverpool is part of the elite Russell Group of research universities and is internationally renowned for its cutting-edge research. Lecture capture affects student learning behaviour looks at how the real-time recording of live lectures may negatively affect some students' attendance and study behaviour. New analysis from the Child of the North: Addressing Education and Health Inequity report found the schools funding imbalance corresponds with children in the North having higher school absences and experience poor educational outcomes.



Learning Summit 2023

The University's [Learning Summit 2023](#) sought to explore the concept of citizenship within the modern university at a global level, a local level, and in the digital sphere. We examined what it means for a university to be a civic institution and how institutions can navigate their role in their local communities, whilst carefully balancing this with expected global impact. Our primary themes included: Local Citizenship, Global Citizenship and Digital Citizenship. Alongside the primary themes we were particularly interested in sustainability and student partnership. Throughout the week we held interactive sessions including, a roundtable on 'Connecting Learning with Local Cultural Opportunities', exploring the idea of 'cultural resourcefulness', where educators utilise local cultural resources including partnership with cultural institutions to provide enriched learning experiences for students. 'Mapping the Student Civic Experience' looked at new ways to understand the student experience in higher education, with a focus on the civic life of universities and their impact on local places. And 'Student Partnership in the modern University' which explored student partnership projects, where students are empowered to partner with organisations in problem-solving and solution-building, are increasingly valued by universities and local/national organisations to bring unique perspectives and energy to solving old problems, whilst simultaneously providing a rewarding learning experience for students.

Green Fingers outreach programme

In partnership with Kids in Bloom University of Liverpool Nursery, the Guild of Students run Green Fingers, a volunteering opportunity that gives students the chance to engage 3-4-year-old children in nature. The 2022/23 program involved training, including safeguarding, and a ten-week schedule of interactive sessions including crafts, such as bug hotels, butterfly decorating and gardening. Green Fingers provides vital introductions to sustainability for children from a young age whilst also giving our students the opportunity to develop leadership and communication skills.

University student watering plants on the Guild of Students roof garden



GOAL 5: GENDER EQUALITY

Achieve gender equality and empower all women and girls

Operations

We are actively [tackling barriers related to gender](#) and aim to create an inclusive environment where all of our staff and students can reach their full potential and there are many [policies, initiatives and facilities](#) in place to achieve this. Our [Diversity & Equality Policies](#) prevent discrimination based on gender and/or sex. Our [Bullying & Harassment Policy](#) covers harassment and discrimination against women. Our [Report & Support](#) system addresses alleged cases of bullying, sexual harassment or discrimination. Our community is supported through [various related networks](#) that staff and students can join, such as the Endometriosis network, Female Early Career network, Trans and non-binary peer support network and Menopause network. Through the Guild, [women students](#) can join the Women's Network or Feminist Society to use resources, come together and bring positive change to women students' University experiences, and life beyond University. The University joined the Higher Education sector's gender equality [Athena Swan Charter](#) in 2009 and was recognised with an institutional Silver

award in 2016 and again in 2022. We are committed to ensuring that our employees receive equal pay for equal work of equal value, and to addressing the causes of our [Gender Pay Gap](#). There are wide ranging internal professional development and access to external development opportunities available too, such as [Advance HE's Aurora leadership programme for women](#) and support for girls and women in STEM through societies like [LivWiSE](#). During International Women's Day and Women's History Month, the University hosted a [varied lineup of events](#) that spotlights the history, experiences, and voices of women and the remarkable accomplishments of our female alumni and staff.

Learning and students

Gender equality is at the forefront of many teaching modules at the University. ['Law and Gender'](#) aims to create a gender awareness in students' understanding of and approach to law, and ['Gender And Feminist Politics'](#) conveys core concepts and ideas in gender politics. There are many different societies students can get involved with which support the aims of SDG5,

such as the [Feminist Society](#), a group of intersectional feminists who aim to create a fun, safe and educational space where people can come to make friends and get involved in activism. Their main priorities are campaigning, fundraising, and educating.

Research and knowledge exchange

Our academics contribute many areas of research about gender equality. [The Effectiveness of Gender Diversity Reforms and the Impact of a Familial Culture: A Spillover Effect on Board Independence](#) examines how gender diversity reforms have helped UK company boards, but they are failing in other countries. The [Department of Women's and Children's Health](#) is internationally renowned for its research covering obstetrics, gynaecology, neonatology, and medical and surgical paediatrics.

Women in Data Science scholarship launched

Statistics show that less than 25% of data science professionals are women, so in 2022, the University's Computational Biology Facility launched the first ['International Women's Day Health and Life Sciences, Data Science re-training scholarship'](#). An annual award to try to bridge the gap for women in the field. The scholarship is an opportunity for all women but particularly for those coming back from a career break that want to train or re-train in aspects of data analytics in life sciences or clinical research. In this field keeping up to date with developments is crucial and [this year's winner, Dr Shakila Bibi](#) was awarded access to all CBF professional courses for a period of 5 years, and also enrolled in a peer-peer support community to nurture their skillset and expertise as well as provide effective networking opportunities. This opportunity resonates with our commitment to both EDI and the Researcher Development Concordat in highly on-demand areas.

The Sisters of Mersey project

The [Sisters of Mersey](#) is a research project looking at the remarkable women who have helped shape the history, culture and life of the city of Liverpool and beyond, led by Dr Samantha Caslin, Lecturer in Modern History with the Faculty of Humanities & Social Sciences. The research into the street patrol work of local female philanthropists demonstrates that the trope of the woman in public as either a moral saviour or a "fallen" social outcast remained prevalent in Liverpool for much of the twentieth century. The idea that women from marginalised communities, particularly working-class and immigrant communities, were morally "vulnerable" had real policy implications. These concerns about the supposed moral vulnerability of some women were used to justify the post-war strengthening of the laws used to police sex workers, which effectively enshrined in law the notion that prostitution was a form of immoral contagion; as a result, sex workers were pushed into more covert forms of working which made them less safe. As such, this research project seeks to draw out the ways in which women's experiences of the city were shaped by moral ideas about appropriate femininity and respectability well into the twentieth century.



GOAL 6: CLEAN WATER AND SANITATION

Ensure availability and sustainable management of water and sanitation for all

Operations

Access to clean safe drinking water and sanitation is a fundamental need for the world's population. The University has processes in place and the necessary permits and licences for any water usage and care. Free drinking water refill stations are located across our campus, and we have listed all publicly facing catering venues and libraries on the [Refill app](#), enabling any individual on our campus to search for the nearest place to refill based on their location at any time. All new builds aim to achieve BREEAM Excellent standards for sustainable construction, which includes water considerations and harnesses technologies, such as [water conservation systems, and rainwater harvesting](#) where rainwater is collected and recycled for hydrating purposes across our gardens or grounds, helping to lessen our reliance on fresh water supply. We actively [promote conscious water usage on campus](#)

and celebrated World Water Day with a digital campaign asking staff and students to consider their water usage, whilst offering advice and guidance. We also use [AquaFund](#), an ADSM scheme that helps us to drive down our water consumption and costs. As [AquaFund](#) donates 1% of its revenue to WaterAid, the University is also helping millions of people in the world's poorest countries to have access to clean, safe water. Additionally, to help ensure sanitation for all, we partnered with Hey! to initiate and fund a new scheme providing [free period products](#) for our staff and students. The Guild of Students also provide free sanitary products.

Learning and students

We deliver cutting-edge teaching on clean water and sanitation. Students can explore courses such as ['Sustainable Water Engineering'](#) which aims to introduce students to the work of the water engineer, to

provide a practical understanding of some of the key environmental, social and economic problems, and provide students with the necessary knowledge, skills and understanding to contribute to the solution of these problems, within the context of major global change and engineering for sustainable development.

Research and knowledge exchange

Our academics are looking at the root causes and potential solutions relating to SDG6 across many areas of research, including informing water, sanitation, and hygiene interventions in [Domestic river water uses and risk of typhoid fever. Results from a Case-control Study in Blantyre, Malawi](#). Another recent [study](#) led by researchers at the University is exploring the effects of pollution 'passed down' through generations in water fleas.

Case Study

Sanitation for all

We are dedicated to improving period dignity, ending the stigma surrounding menstruation, ending period poverty, and ensuring access to water and sanitation. This year, we joined forces with Hey Girls, a period poverty-focused social enterprise, to offer [free, plant-powered period products to all staff and students](#).

The partnership between Hey! and colleagues in the Facilities, Residential and Commercial Services team coordinated the provision of free sanitary products in bathrooms on campus. Since starting the roll out in July 2022, sanitary products have been distributed in male, female and gender-neutral bathrooms on campus to ensure that all people who have periods

can access the products. This is just one of the ways we are taking action to end poverty and protect the environment, helping us to become net zero by 2035.



Case Study

Dig Deep student ambassador scheme

The University provides the opportunity for students to become [ambassadors for Dig Deep](#), an international development charity, who recruit and support fundraisers to climb Kilimanjaro to change the lives of thousands of school children by providing them with access to clean water and sanitation through fundraising efforts. Where [Dig Deep](#) work, 8 out of every 10 people lack access to clean water, safe toilets and good hygiene. Most residents live in rural communities and spend hours every day walking to collect dirty water or find a safe place to relieve themselves. By reducing the time lost to water collection and preventable disease we remove these barriers to learning and earning, allowing people to lift themselves out of poverty. Last



Dig deep student ambassador, Henry Morten

year's [Team Leader at Liverpool, was Geophysics student Henry Morten](#), who climbed Mount Kilimanjaro and collectively [raised a total of £34,293](#), which has gone towards improving clean water access, creating safe toilets, and good hygiene for Kenya's poorest residents.



GOAL 7: AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

Operations

Our Combined Heat and Power (CHP) Energy Centre has successfully helped the University to reduce its carbon emissions through the use of efficient technology. Although a significantly more sustainable process than some other methods of generating electricity, the use of gas prevents us from reaching our [2035 net zero target](#), which is why we are in the process of [fully decarbonising our estate](#). When there are new builds and renovations taking place on campus, we follow energy efficiency standards, aiming to achieve BREEAM Excellent standards. As outlined in our [Ethical Investment Policy](#), the University excludes from its direct investments companies that derive significant revenues from the exploration and

extraction of fossil fuels including thermal coal, oil, gas and tar sands.

Learning and students

Students are able to study modules such as ['Renewable Energy and Smart Grid'](#) to develop a good understanding of different renewable energy sources and the principle of energy conversion from renewable sources into electricity. Students can also support the aims and objectives of SDG7 through extra-curricular activities, such as joining our Energy Services team for regular guided tours of the [Energy Centre](#).

Research and knowledge exchange

We are host to the first interdisciplinary

centre dedicated to energy research in the North West, the [Stephenson Institute for Renewable Energy](#) which undertakes research into renewable energy sources such as hydrogen generation and storage, solar harvesting, wind and marine energy and fusion technology. In the Department of Geography and Planning, one of our case studies, [Achieving low-carbon growth across small businesses in Liverpool City Region](#), supports innovation and the move to a cleaner, low carbon economy. A research paper [Fairness, Resilience and Prosperity: Addressing energy and net zero challenges in Liverpool City Region](#), produced for the Liverpool City Region APPG, discusses the challenges posed by rising energy prices and the transition to net zero.

Case Study

Clean energy research initiative launches in Kenya

A collaboration led by the University of Liverpool to address the burden of disease from household air pollution in sub-Saharan Africa celebrated its official [launch in Kenya](#) in November 2022. The NIHR Global Health Research Unit on CLEAN-Air (Africa) aims to help scale adoption of clean energy to reduce respiratory and cardiovascular disease from exposure household air pollution, which is responsible for 634,000 preventable deaths each year in sub-Saharan Africa. The £7 million initiative brings together academic, research and clinical experts from the UK, Kenya, Cameroon, Tanzania, Rwanda and Uganda to provide research evidence for national policies supporting populations transition from polluting solid fuels (e.g. wood, charcoal, biomass) and kerosene to clean fuels/ energy. A five-year programme of policy-oriented research and health systems strengthening will provide an evidence base for national strategies to meet many of the UN SDGs. The NIHR CLEAN-Air(Africa) Unit involves research partners from the University of Liverpool, Kenya Medical Research



Institute (KEMRI), Moi University, University of Dar es Salaam, Makerere University Lung Institute, Rwanda Biomedical Center and Eagle Research Center and Douala General Hospital.

Case Study

Net Zero Week: Decarbonising our Campus

In order for the University to achieve its 2035 net zero carbon target, we are embarking on an exciting journey to fully decarbonise our campus and in November 2022, the University of Liverpool Energy Company (ULEC) Board enlisted the services of Ramboll to oversee the creation of a [decarbonisation plan](#). Ramboll conducted a baseline review to gain an understanding of the current energy, carbon, and utility usage across all of our campuses. Following this, a Commercial Baseline exercise was carried out to assess the financial aspects of our energy position and explored potential grants and low-cost funding opportunities. The next stage of the project included a technical review whereby Ramboll analysed the existing energy production strategies for each campus and evaluated the electricity infrastructure to identify potential connections and constraints for implementing new carbon-saving technologies. The next stage of the decarbonisation project consisted of a Future Demand Assessment, which focused on estimating the current and future annual heat and electricity demands for each building based on floor area data. The ULEC Board will receive a report outlining various decarbonisation options in 2023, these are likely to include options for heat pumps, solar PV, biomethane, and hydrogen fuels. Once approved the next stage of the project will begin. Whilst the decarbonisation options provided by Ramboll will address scope 1 emissions in the long term, a further study has been conducted by Ramboll to look at ways to reduce CO2 from our Energy Centre's CHP operation in the short term. Running in parallel, we are also implementing a separate programme of work for a wholesale energy efficiency survey of the estate. Together with the District Network and energy supply decarbonisation, this will support full delivery of the University's 2035 net zero carbon target across scope 1 and 2 emissions.

GOAL 8: DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Operations

The University is a major contributor to the economy of Liverpool City Region, supporting employment, expenditure and investment on a huge scale. Over recent years the **IP commercialisation team** has driven significant growth in the formation of new spin-out companies, with the potential to benefit society and the wider economy. Our staff **volunteering framework Liv to Give** provides staff with the opportunity to volunteer in the community and is making a growing contribution to that effort as our actions with local people and communities to increase health and wellbeing, local employment, social mobility and community capacity clearly demonstrates as do our actions to promote innovation, thought leadership, volunteering and cultural engagement. Helping our students to find employment within the Liverpool City Region through the work of our **Careers and Employability** team is amongst the most important ways in which we support the region's social and economic development. In addition, we provide opportunities for local young people to work at the University through our **apprenticeship programme**, the most successful of its type in the university sector. We provide training opportunities through the **GiveGetGo Volunteering Programme** for local people who are looking for employment and guarantee to interview all individuals who complete the programme.

Our employment practices mean that staff have a safe, fairly paid, secure and fulfilling job, regardless of gender, age, nationality or ability. The **University of Liverpool Values and Ethics Principles**, developed in conjunction with staff, sets out our commitment to creating a culture of openness, transparency, and respect, where staff work together for the future success of the University. We celebrate the achievements of our staff with our annual Staff Awards and Long Service Award and there are a range of staff networks and groups fostering a sense of community amongst groups sharing common interests. We

are accredited with the **Living Wage Foundation**, a member of the Stonewall Diversity Champions programme, a Disability Confident Employer and hold an **institutional Silver Athena Swan Award**. Our **Modern Slavery Statement** outlines our commitment to improving our practices to combat slavery and human trafficking and we are looking at solutions to address the **Gender Pay Gap**.

Learning and students

Students can explore teaching modules like **'Enterprise studies'** which introduces them to various aspects of entrepreneurial activity. There are also several ways that students can support the aims and objectives of SDG8 through extra-curricular activities, such as mentoring young people and helping to ensure that the background young people are born into does not affect their life chances through the **IntoUniversity Mentoring Scheme**.



Research and knowledge exchange

Virtual engineering research at the University, **Unlocking manufacturing competitiveness by increasing digital engineering literacy: enabling reality from research** has underpinned the development of the Virtual Engineering Centre (VEC) which has worked with UK industry to explore, develop and test digital technologies which has resulted in positive economic, productivity and training outcomes and is cited by government as an exemplar in meeting the UK vision for e-infrastructure. Research on the **value of the social economy in the Liverpool City Region (LCR)**, has led to new strategic initiatives supported by the Metro Mayor and Combined Authority. By advancing the social economy and encouraging new social enterprise and growth in the sector, local politicians, policy makers and social entrepreneurs have been able to expand their efforts to provide longer term sustainable impact that is directly associated with this body of work.

Case Study

Libraries, Museums & Galleries student partners project

In summer 2023, Libraries, Museums and Galleries launched the first ever **'Student Partners' project** to recruit 18 enthusiastic, talented students, to join their team to shape the library of the future. The project provides hands-on experience to students with archives and special collections, to help highlight the University's research to the world, and develop social media and digital content skills. The LMG Student Partners work alongside subject matter experts and experienced managers, working on projects spanning themes such as Collection Development, Heritage, Open Access and Research, User Experience, and Supporting Teaching and Learning. The roles provide a unique insight into the information and heritage sector, while allowing students the perfect opportunity to develop much sought-after transferable skills in support of academic, personal, and future success.

Case Study

Liv to Give Community Clean-Up Day at Festival Gardens

The University teamed up with Liverpool City Council (Gardens) and St Michaels Councillors to organise a **Volunteer Community Clean Up Day at the Liverpool Festival Gardens** back in August 2022. Originally created for the International Garden Festival in 1984, and later part of Pleasure Island attraction, Liverpool Festival Gardens re-opened in 2012 as Liverpool's newest public park. Featuring Chinese and Japanese gardens, Moon Wall, Children's Play area, Forest Walk and waterways, the Park was in need of some tender loving care. The main focus of the day was litter picking, clearing away debris along paths and communal seating areas, clearing weeds and overgrowth along pathways, walls and gates and painting gates, seating areas and fences. Over 60 people attended, mostly University staff, using over 150 staff volunteer hours through the Liv to Give volunteering framework. Community clean-ups can help to boost the economy and protect the environment at the same time. Waste pollution is one of the biggest threats facing our oceans, rivers, and public spaces, and clean-up events can help protect wildlife, and raise public awareness of the threat of litter to both wildlife and communities.



University staff volunteers at the Community Clean-Up Day at Festival Gardens

GOAL 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

Operations

Our **digital innovation** capabilities bridge the gap between academia and industry, driving commercial advantage through collaboration and innovation in our facilities. The **Materials Innovation Factory** is a unique materials chemistry research hub, providing an unparalleled suite of state-of-the-art equipment and internationally leading academic expertise, establishing a vibrant dynamic research community. By providing open access to equipment, the MIF provides opportunities for local industry to accelerate their discovery process and reduce time to market, delivering clear economic benefits to the region. The **Digital Innovation Facility** is a centre of excellence in simulation and virtual reality, bringing together complementary areas of research of computer science, robotics and engineering. Our **Virtual Engineering Centre** leads in the integration and exploitation of virtual engineering technologies such as advanced modelling and simulation. It helps improve business performance

and competitiveness through the evaluation, application and adoption of digital tools and techniques. **Sensor City** brings together a diverse community of entrepreneurs, innovators and inventors, developing creative solutions that will lead to substantial social and economic impact.

Learning and students

Examples of course modules that focus on industry, innovation and infrastructure include '**Advanced embedded systems**' and '**Contemporary Town Planning**'. There are also several ways that students can support the aims and objectives of SDG9 through extra-curricular activities. The Institute for Environmental Management and Assessment (IEMA) delivered a session to students on **green skills and jobs in sustainability** for this year's Sustainability Week. We aim to support enterprising and entrepreneurial students by offering advice and the chance to win financial support for innovative projects, or to help to fund and develop a business

idea through the **Design Your Future** programme. Additionally, to support the development of an existing enterprise or early-stage business idea, students can apply for awards varying from £500-£5,000 through our **Enterprise Fund**.

Research and knowledge exchange

Recent research by our academics, published in the journal Nature **Optimality guarantees for crystal structure prediction** could signal a step change in the quest to design the new materials that are needed to meet the challenge of net zero and a sustainable future. In September 2022, the University hosted a **Industry-Chemistry Engagement Meeting (InChEM)** to showcase the exciting research taking place in the University's Department of Chemistry, with tours of the cutting-edge facilities in the Materials Innovation Factory and the Stephenson Institute for Renewable Energy and to explore collaborative opportunities.



Case Study

The Innovatory commercialisation & sustainability event

The Centre for Global Eco-Innovation, subsequently the Low Carbon Eco-Innovatory, are award-winning centres for delivering low-carbon innovation across SMEs in Liverpool City Region and the North West. Our centres have provided small businesses with dedicated researchers and access to world-leading expertise and facilities, thus enabling the translation of ideas from the drawing board into new, marketable products and services. This body of industry-focused research and development has achieved low-carbon growth by assisting over 300 businesses, delivering energy and resource savings, and generating a minimum of 51 new, eco-innovative products and services. Through the **Low Carbon Eco-Innovatory and Eco-INW** funded support projects ran by the Innovatory team at the University, we engage with and support hundreds of SMEs across Liverpool City Region and the wider Northwest to help them understand how sustainable business practices can be good for business as well as the planet. During Sustainability Week 2022, the Innovatory team **hosted an event** to staff and students, talking through some of the projects they have been working on, that support the many local businesses with their carbon reduction ambition, demonstrating how these interventions create new opportunities that help business growth and positively impact on the customer.

Case Study

DIF celebrates jobs and collaborations in 1st year anniversary

It has been one year since the **University of Liverpool's Digital Innovation Facility (DIF)** officially opened. The £12.7 million Centre of Excellence is home to emerging technologies and cutting-edge equipment within six state-of-the-art digital laboratories, covering a magnitude of capabilities and disciplines such as mixed reality, chemistry, drone technology, computer and data science, robotics, AI, machine learning, modelling and engineering. The 1,500sq metre innovative centre drives local digital skills, generating new jobs and career opportunities whilst supporting research collaborations between academics, researchers, and industry leaders. Since launching, DIF has generated over 70 new jobs as it nurtures skills advancements within the Liverpool City Region. The newly created jobs have been placed within areas including digital engineering, Virtual Reality specialists, translational research, lecturers, data science and software engineering, to name but a few.





GOAL 10: REDUCED INEQUALITIES

Reduce inequality within and among countries

Operations

We work continuously to tackle any inequalities within our community and are committed to ensuring that everyone is treated equally and fairly in an open, transparent, and respectful environment. The **Equality Framework 2016–2026** sets out how the University aims to implement the principles of the **Diversity and Equality of Opportunity Policy**. It outlines key areas of activity and outcomes which we have identified to achieve this. The **Equality, Diversity, and Inclusion Committee** is committed to fostering an inclusive environment and works to create a supportive culture for everyone associated with the university, including staff, students, stakeholders, and visitors. We offer various **staff equality networks** for colleagues to join, all of which serve different purposes, including informal networking, peer support, consultation, and organizing events, fostering a vibrant and inclusive community among our staff. Our **Disability Coaches** provide disability support and are dedicated to helping others maximise the available support services. We are **tackling barriers related to gender** and are committed to supporting all members of our Lesbian, Gay, Bisexual, Transgender, Questioning/Queer, Intersex, Agender/Asexual, Plus (**LGBTQIA+**) **community**. The **PINKBRICK** project charts the political and societal attitudes towards lesbian, gay, bisexual and trans people over the past 40 years from the University's perspective, by looking at official University and Guild records, along with memories of past staff and students. Race equality is a strategic priority for the University and we are undertaking a wide range of activities to **tackle racial harassment** and build a more inclusive campus for all students and staff. We are signed up to the **Advance HE's Race Equality Charter (REC)** and we are improving ethnic diversity and accessibility to leadership roles through the **Advance HE's Diversifying Leadership programme**. We are committed to addressing the causes of our **Gender Pay Gap**. Further to this, the 2022 report has been expanded to include our Ethnicity, Disability and Sexuality Pay Gap calculations.

We deliver **projects and activities to widen access** to the University for those students who are under-represented in higher education such as learners from disadvantaged and low-income backgrounds, looked after children/care leavers, disabled students and students from ethnic minority backgrounds, and provide hardship funding, short loans and debt advice to students who are experiencing poverty. We support local minority ethnic pupils through our **'Fast Trackers' mentoring programme** designed to support Year 11 students from a Somali, Yemeni and Black British backgrounds to get the most out of their final school year and maximise their results at GCSE level. The **Liverpool Scholars Programme** offers Year 12 students from all backgrounds the chance to take part in a range of activities aimed at supporting their entry into higher education. For **Young Adult Carers** who attend the University as a student, we offer opportunities for paid work as a Student Advocate or Mentor, working with pupils in local schools and colleges, develop transferable skills and gain valuable experience to support them within the graduate job market.

Learning and students

Examples of course modules that have a direct or indirect focus on inequalities include, **'Sociologies of Class and Inequality'** and **'Social and Spatial Inequalities'**. There are also several ways that students can support the aims and objectives of SDG10 through extra-curricular activities. The Guild of Students recently hosted a session on **Deconstructing Transphobia: On Inclusivity in Activist Spaces**, which explored inclusive language, practices, and ally ship with transgender and gender non-conforming people and communities.

Research and knowledge exchange

Our pioneering research, such as **Poverty dynamics and health in late childhood in the UK** and **A changing landscape? Dynamics of accommodation and displacement in UK parliamentary discourse on LGBT homelessness** is influencing policy and helping to reduce health and social inequalities.



Case Study

Growing divide in regional health inequalities exposed

The **Health Equity North: 2023** report has found a worrying pattern of lower life expectancy, higher infant mortality and worse health and wellbeing in the North of England. The report provides a snapshot of the health issues facing the North and adds to a growing body of evidence highlighting the urgent need to address regional health inequalities and improve productivity in the North. The report marks the launch of **Health Equity North (HEN)**, a new virtual institute focused on place-based solutions to public health problems and health inequalities across the North of England. The institute's academic directors – including the University of Liverpool's Professor David Taylor-Robinson, analysed the latest available data on life expectancy, infant mortality rates and self-assessed health, disability, and unpaid care, and the findings have exposed the worsening health divide between the North and the rest of England. The North does significantly worse in all these areas, which also impacts productivity with above average rates of economic inactivity due to ill health or disability. HEN brings together leading academics who have a unique understanding of their regional communities enabling the creation of research and policy solutions of local benefit. The institute will produce annual updates of health in the North to help and challenge local and national policy makers in their efforts to reduce regional inequalities. The **Health Equity North: 2023** authors have made a series of recommendations to help improve health and productivity in the North.

Case Study

Cowrie Foundation Scholarship

The University of Liverpool and The **Cowrie Scholarship Foundation** (CSF) offers a scholarship to support Black African and Caribbean heritage applicants from socio-economically under-represented backgrounds. The CSF is a charitable foundation with a mission to fund 100 disadvantaged Black British students through leading UK universities in the next decade. The organisation has secured partnerships with a number of universities including the University of Liverpool. In partnership with donors and business the CSF aims to provide full scholarships removing a significant barrier to world-class education at UK universities for the target beneficiaries. The CSF also aims to provide more than just money and will offer mentorship, role models, and resilience programmes for the students who benefit from scholarships to make the most of the opportunity. The CSF was founded by Richard Oreffo, a University of Liverpool alumnus, to allow economically disadvantaged black students to attend UK universities.



GOAL 11: SUSTAINABLE CITIES AND ECONOMIES

Make cities and human settlements inclusive, safe, resilient and sustainable

Operations

As a Civic University based in a world city, successful stewardship and promotion of our heritage collections and cultural endeavours are intrinsically linked to the communities we serve. We have several cultural institutions, including **museums and galleries** such as the **Victoria Gallery and Museum**, which is the original red brick building. We celebrate our heritage, and our city's heritage with our museums and collections, they are bursting with diverse exhibitions and characters, helping to advance our students' learning and creativity and that of the local community. We provide free public access to our libraries and museums, catering facilities, buildings, and campus grounds, including several green spaces, and hold regular free and paid events, concerts, tours, and exhibitions. The weekly **Lunchtime Concert series** allows everyone to experience the fabulous acoustics of the state-of-the-art **Tung Auditorium** completely free of charge. The Auditorium is a recognised world class music venue with 97 public events reaching over 20,000 people, a major addition to the city's cultural scene. As part of Sustainability Week the Management School's **Centre for Sustainable Business**, together with the Circular Economy Club and colleagues from the Sustainability Team, hosted a Circular Economy **event** with presentations and lively Q&A session on the importance of place; people; connectivity; access; social value and impact. The built environment has a vital role to play in achieving progress against SDG 11. New buildings, and building refurbishments aim to achieve **BREEAM Excellent standards** for sustainable construction, whilst the University has also created the Sustainable Built Environment Investment framework to embed key sustainability principles throughout the design and execution of developing buildings, such as the recent **Refurbishment and Extension of the School of Architecture**. Sustainable travel helps to reduce carbon emissions,

improve local air quality, reduce traffic congestion, and improve local communities. We provide a range of **initiatives and incentives** to support sustainable travel such as our Season Ticket Loan scheme and Cycle to Work Scheme. Students can also benefit from bike hire schemes, free bike maintenance sessions, beginners' bike events and city bike tours. In April 2023, the University launched a new staff and student Travel Survey, help us to identify opportunities to expand and improve sustainable travel services, particularly cycling, walking, and public transport, and make positive changes for the wider city.

Learning and students

Sustainable Cities and Communities is a complex subject matter, and our students can explore course modules such as **Climate Resilience and Environmental Sustainability in Architecture**, or **Green Infrastructure Planning** which introduces the field of Green Infrastructure and green space planning by addressing its principles, values and utility within urban planning.



Students can experience first-hand the role and significance The Beatles and their legacy contribute to tourism and heritage sectors at local, regional and national levels by studying **The Beatles Music Industry and Heritage MA**, an important programme for the heritage of music within the city and the Beatles story.

Research and knowledge exchange

We work with regional organisations to help shape public policy, education, and sustainable tourism strategies in Liverpool and beyond through the **Heritage research theme**, and **Sustainable and Resilient Cities research theme**, which is characterised by a desire to prompt, prime, inform and catalyse sustainable and resilient urban development. Additionally, the **Heseltine Institute for Public Policy, Practice, and Place** brings together academic expertise from across the University with policymakers and practitioners to support the development of sustainable and inclusive cities and city regions.

Case Study

'Melting Metropolis' historical urban heat in cities

At the start of 2023, our researchers received a prestigious **Wellcome Discovery Award** to investigate the history of heat in cities. The project led by the Department of History which started in February 2023 and will span six years, will examine the effect of extreme heat in three major cities, London, Paris, and New York, in the post-war era (1945 to the present day). Researchers will study how Londoners, New Yorkers and Parisians have experienced heat and sought to mitigate its impact on their health and well-being. They will consider people's lived experience alongside the actions of urban authorities and planners. With global temperatures currently rising due to the climate crisis, heatwaves are often amplified through urban heat island effects in cities. This project aims to understand how historical experiences of high temperatures in urban areas can shape how we tackle this pressing issue in the present and future. Entitled **'Melting Metropolis: Everyday Histories of Health and Heat in London, New York, and Paris since 1945'**, the project is worth £3.3m in total, for which the team has received £2.6m of funding from Wellcome. The project will employ archival research, oral history, ethnography, and community engagement to investigate the challenging interaction between the climate crisis, health, and cities. As research artist, Bryony Bengé-Abbott will lead on creative pilot projects to support the development of longer-term community engagement in the three cities, alongside research into the embodied, sensory exploration and expression of the physical experience of global warming. Discovery Awards provide funding for established researchers and teams from any discipline who want to pursue bold and creative research ideas to deliver significant shifts in understanding that could improve human life, health, and wellbeing. This is the first time that researchers at the University of Liverpool have received a Discovery Award.



Case Study

Brett Library Garden

As part of the **Estate Strategy Masterplan** to increase biodiversity at the University, more green spaces are being established across campus and this includes a new outdoor study space for students. The Sydney Jones Library Garden consists of four study carrels which are equipped with portable charging points for phones and laptops. The gardens are home to ornamental tree species and other types of planting to create a "sheltered" garden feel, and a relaxing study space for students for those who wish to study outside. Being outside amongst nature is proven to reduce stress and relax your mood, so not only has the new green space increased biodiversity on campus, it is also contributing to human wellbeing.



The University's Brett Library Garden



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns

Operations

The University is striving to transform its operations through adopting more **sustainable procurement practices**, reviewing our **ethical investment policy**, and encouraging **reuse and recycling initiatives** across campus, all of which contribute to a circular economy. Several key roles have been appointed to support the delivery of this, including the Head of Environmental Sustainability and Energy Services, Waste and Recycling Officer, Circular Economy Manager, three new Sustainability Officers and a Laboratory Sustainability Officer to manage the **Laboratory Efficiency Assessment Framework (LEAF)** programme and its roll out to all laboratories and workshops. New roles have also been recruited within the procurement team. The development of a Circular Economy Strategy is currently underway to enable us to embed a circular approach across our campus, education and teaching, research and innovation, student experience and our wider community. In the meantime, we have been moving forward on a number of initiatives to maximize the value of

existing assets, such as redistributing furniture, reselling unwanted laboratory equipment, establishing a culture of refill and reuse to tackle single use plastic, donating leftover food to the student food pantry, and installing new bins for cigarette and chewing gum litter, with the latter being recycled into new products. We work closely with the University's main waste contractor, Suez, to reduce the amount of waste that is generated, as well as increasing the percentage of waste that is reused and recycled and a new Sustainable Food Policy is also currently being developed, and we are working on several ways to reduce our food waste.

Learning and students

Innovative modules have been developed to enable students to explore this topic in more detail, examining themes such as **Consumer Behaviour**, and **Environmental Sustainability**. The Guild of Students provide many opportunities which aim to inform and encourage action and make positive changes to our daily habits to ensure mindful consumption and sustainable

practices, such as becoming a **Flat Sustainability Champion**, encouraging flatmates in Halls to improve energy saving, recycling, and other behaviour changes, **Leave Liverpool Tidy End of Year Clear Out**, recycling audits, sustainable crafting, litter picks, food growing, student switch off and much more.

Research and knowledge exchange

Our research is helping identify novel solutions, to responsible production such as how the Liverpool City Region can support regeneration without negatively impacting on the natural world, and how we can boost food security and increase resilience, to reduce inequality. The **Centre for Sustainable Business** looks at how companies can achieve a more sustainable supply chain model. Specifically, research on **Responsible Consumption & Circularity** explores sustainable forms of consumption and production models that extend the product lifecycle, to reduce unnecessary waste and overuse of finite resources.

Case Study

Leave Liverpool Tidy: Swap Shop

Leave Liverpool Tidy is an initiative helping to harness the skills and enthusiasm of students across Liverpool to reduce the number of items going to landfill and encourage a new approach to consumption and waste. As part of the Leave Liverpool Tidy campaign for this year's Sustainability Week, the Guild of Students hosted a clothing **Swap Shop**, helping to contribute to a sustainable circular economy. Students were encouraged to make fashion choices that little bit more sustainable, by donating their unwanted clothes, shoes, accessories and dressing up costumes to the Guild and converting old items into coupons to spend on the day. There was a fix-it team on hand to help restore or mend any items that need repairing, and any clothing left over on the day was donated to the British Heart Foundation.



Case Study

LEAF Gold Award for Materials Innovation Factory

The Open Access Laboratory in the **Materials Innovation Factory** become the first lab at the University to achieve the prestigious Laboratory Efficiency and Assessment Framework (LEAF) **Gold Award Accreditation** for its concerted efforts towards creating a more sustainable laboratory. **LEAF** is a green initiative developed by University College London (UCL) to improve the efficiency and sustainability of laboratories and technical workspaces. LEAF consists of actions which lab users can take to save plastics, water, energy and other resources. The Open Access Lab received LEAF Gold Award Accreditation for meeting the 43 distinct criteria organized around specific sustainability themes. To achieve this prestigious honour, technicians and academic staff demonstrated exemplary practices, leading to evidence-based improvements in sustainability measures.



GOAL 13: CLIMATE ACTION

Take urgent action to combat climate change and its impacts

Operations

The University's ambition is to be a climate-resilient campus, that has minimal negative and maximum positive environmental impact, achieving net zero carbon by 2035. We monitor energy and carbon across the entire University as part of our new **Climate plan** and in support of the Sustainability Strategy and Strategy2026 net zero carbon targets. Several key roles have been appointed to support the delivery of the Climate Plan, and we are addressing our scope 1 carbon emissions through a major programme to decarbonise our onsite energy supply. We are also working hard to reduce our scope 2 and scope 3 emissions associated with commuter and business travel. As outlined in our **Ethical Investment Policy**, the University now has full fossil fuel exclusion in place.

Learning and students

The **School of Environmental Sciences**, studies our planet from the atmosphere, the surface to the deep Earth, and exploring the different ways in which societies, communities and ecosystems respond to differing aspects of environmental, economic and social change. We aim to provide students with core knowledge on the impact of climate change and understand policy decisions through modules such as **'Climate Change – a Critical Review'** and **'Ecology and Conservation'**. Students can also support the aims and objectives of SDG13 through the **Student Sustainability Network**. During Sustainability Week students attended a **Climate Action 101 workshop**, exploring ways to take action to tackle climate change. Additionally, our academics delivered **lecture** and Q&A on the science of climate change and the challenges of meeting the goal of net zero. The Guild of Students set up the Climate Action Network for students concerned about climate change

wanting to expand their network and meet like-minded people. Students also organise activities and actions through societies such as the Extinction Rebellion Youth, Fridays for Future, Environmental Science Society and Green Society.

Research and knowledge exchange

Our researchers are responding to the global climate crisis through high-quality research as part of the Climate futures research theme. A recent study, *What the geological past can tell us about the future of the ocean's twilight zone*, warned that the twilight zone is at risk from climate change and could cause a 20-40% reduction in twilight zone life by the end of the century. In *The shrinking road to net zero*, an article published in the *New Stateman*, Professor of zero carbon and nuclear energy, Karl Whittle warned that time is running out and upgrading the UK's energy infrastructure needs to begin now.

Case Study

Climate Plan: net zero by 2035

In November 2022, the University launched an ambitious **Climate plan** to become net zero by 2035 – 15 years ahead of the UK Government's legal commitment of 2050. The Climate plan sets out our ambitions, principles, and commitments in relation to addressing the climate crisis and outlines how we are going to move forward in developing our pathway to net zero, with actions organised under five key themes: operational emissions, research and innovation, students and their education, partnerships, and engaging and embedding sustainable practices across all



University operations. With key activities already underway, the Climate plan will help us transition to net zero at pace and with real impact. The launch of the Climate Plan marked an important step toward achieving our goals and sets out how our whole community can play their part in securing the future of our planet.

Case Study

Postcard from the Straits of Florida

As part of a research project he is leading, Professor Ric Williams Chair in Ocean and Climate Sciences undertook a **research cruise to the Florida Straits**. Professor Williams is the Principal Investigator on a £4 million collaborative research project to explore how the Gulf Stream affects the climate system through the transport of nutrients and carbon. The purpose of the five-day long research cruise was to deploy scientific instruments including moorings and floats with sensors and autonomous vehicles into the fast-flowing waters of the Florida Straits to assess nutrient and carbon levels and the amount of turbulence in the Gulf Stream. The research cruise allowed researchers to deploy the instruments and sensors needed to collect the data needed for this project. This data alongside the latest state-of-the-art ocean and climate models will provide some answers as to how the Gulf Stream affects the carbon cycle, a hitherto ignored aspect of the climate problem.





GOAL 14: LIFE BELOW WATER

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Operations

Our work and activity in relation to SDG14 includes working towards sustainable food. The [Sustainable Food Policy](#) ensures the exclusion of fish species identified as most at risk by the Marine Conservation Society and that we source seafood from only sustainable sources. Our fish suppliers are [Marine Stewardship Council certified](#), helping to reduce the negative impacts on fish stocks and protect our marine environment. It is also essential to prevent the marine environment from plastic pollution and we are reducing single-use plastics across campus and in our laboratories, through the [LEAF](#) programme. We also recognise our responsibility to inform and raise awareness in the use, reduction and recycling of plastic and have established a culture of refill and reuse to tackle single use plastic.

Learning and students

Innovative modules have been developed to enable students to explore this topic in more detail, such as [‘Contemporary Issues in Ocean and Climate Sciences’](#) and [‘Climate, Atmosphere and Oceans’](#). Students can also support the aims and objectives of SDG14 through volunteering activities, such as helping to keep the coastline safe for wildlife by getting involved in [beach litter picks](#) organised by the Guild of Students. During Sustainability Week, [Plastic Tactics](#), a local community interest group, were on campus to deliver a transformational workshop where students were invited to turn their everyday plastic waste into usable items.

Research and knowledge exchange

The [Liverpool Institute for Sustainable Coasts and Oceans](#) combines the coastal, marine and maritime expertise of Liverpool John Moores University, the National Oceanography Centre and the University to bring the natural and social sciences together for the future well-being of the coasts and seas. Research under this theme focuses on the role of the oceans in Earth’s climate, and on how our changing climate will affect the ocean and ocean ecosystems. [The extension of marine spatial planning to the management of the world ocean, especially areas beyond national jurisdiction](#) is a recent example of recent research undertaken by our academics which supports the aims of SDG14.

Case Study

World Refill Day

Both tiny microplastics and large single use plastics can be implicated in the deaths of freshwater and marine animals, and there is potential for that plastic to enter human food chains through the seafood we eat. In an effort to remove single use plastics, we celebrated [World Refill Day](#) on the 16th June by highlighting all of the refill opportunities and initiatives on campus and supporting staff and students to prevent plastic pollution and reduce waste. To promote awareness of the refill options on offer, the University has listed all publicly-facing catering venues and libraries on the Refill app, including details of what can be refilled in each location. This enables individuals on our campus to search for the nearest place to refill based on their location at any time. Complementing this, the Facilities, Residential and Commercial Services department have been busy mapping all internal water fountains available to our students and staff. Not only is this a useful tool for helping to promote awareness, but the information gathered is also being used to identify areas in need of refill solutions and for planning works to swap stand-alone water coolers for plumbed-in fountains, reducing the need for replacement cooler bottles. Throughout the week leading up to World Refill Day, we ran a competition, asking students and staff to share photos of their refill experience on campus for their chance to win a refill gift pack.

Case Study

Exploring changing nutrient sources in the Arctic Ocean

Ocean scientists from the School of Environmental Sciences embarked on a [research expedition](#) to investigate the effects of rapid warming and sea ice loss on nutrient sources in the Arctic ocean. Professor Claire Mahaffey was the Principal Investigator on the five-week expedition that looked to see if microbes typically associated with warmer waters are now present in the cold polar waters. The team studied the distribution, abundance and activity of nitrogen fixing organisms in the Barents Sea in the eastern Arctic Ocean. It also included two of our undergraduate students from the Department of Earth, Ocean and Ecological Sciences who analysed samples onboard the ship. The Arctic is warming at an unprecedented rate, four times faster than the rest of the planet. This warming is driving a decline in the area and thickness of sea ice, with knock-on effects for ocean circulation and biological productivity. A major consequence of this rapid change is the decline in nutrients, which are vital for fuelling biological productivity which underpins the entire Arctic ecosystem. The project hopes to discover how important these organisms are to supplying nitrogen in these cold polar waters, and therefore supporting the unique Arctic ecosystem now and in the future.



GOAL 15: LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Operations

The University’s Climate Plan sets out a number of principles that will guide our climate response, one of which is to enhance the resilience of our campuses through improved biodiversity. Our estate is extremely diverse and supports a wide variety of habitats and ecological diversity, including built urban environments, amenity land, woodlands, pastures and agricultural land, formally landscaped grounds, and a botanic garden. By preserving these we are contributing to human wellbeing and conserving existing ecological and biodiversity resources on campus. [Ness Botanic Gardens](#) is host to a wide variety of amphibians, birds, insects, mammals, and reptiles, producing a diverse system of ecological niches. Ness Gardens’ central mission and values as a botanic garden sitting within a higher education setting, includes the championing of plants and biodiversity conservation and supporting the advancement of learning. Ness provides opportunities to staff, students, and visitors to increase their knowledge of biodiversity with gardening courses, creative workshops, school visits, and creative courses which allow participants to gain a nationally recognised RHS qualification. We are a gold accredited member of the [Hedgehog friendly campus scheme](#) and have recently installed ‘Bioscope NatureArks’ and wild pod planters across our Liverpool campus, containing wet and dry habitats, providing support for wildlife including bees and hedgehogs. We harvest and grow food on our campus gardens and herb wall garden at the Guild and have recently embarked on a relaxed mowing regime for three large grassland areas on campus to allow meadow vegetation to develop that in time will support a wide diversity of plant and animal species.

Learning and students

Life on land affects us all and students can explore a range of topics and ways in which humans have impacted upon the environment and how

these impacts can be mitigated by studying [‘Advanced conservation biology’](#) and [‘Global Environmental Crimes and Justice’](#). There are also many opportunities for students to get involved outside of their studies, such as urban food growing, permaculture and biodiversity at the [weekly gardening sessions](#), herb pot planting to microgreens growing with the [Guild of Students](#).

Research and knowledge exchange

The [Buxton Climate Change Impacts Lab](#) is dedicated to investigating the impact that climate change has on the UK’s grasslands and how to maintain and protect the biodiversity that lives within it for future generations.

Originally established in 1993, the BCCIL is the longest running climate change experiment in the UK, and the second longest in the world. Regular surveys of the vegetation have made a major contribution to our understanding of how plants respond to, and can resist, climate changes. The experiment is recognised as a globally important resource for our understanding of climate impacts on plants and soil microbes and fauna. The [Mammalian Behaviour and Evolution Group’s](#) research spans animal behaviour and ecology, conservation biology and animal welfare. Other research undertaken by our academics which supports the aims of SDG15 includes, [Global environmental changes more frequently offset than intensify detrimental effects of biological invasions](#).



Case Study

Postcard from Vienna: Exchanging knowledge to support forest expansion

Dr Andrew Hacket-Pain, Senior Lecturer in the University's School of Environmental Sciences took part in a **six-week placement in Vienna**, working alongside Austrian academic and industry partners to gather evidence to inform policy and practice in the UK that will expand domestic tree seed supply. Trees store carbon, provide timber, support biodiversity and enhance mental health, among many diverse benefits. While tree cover in the UK is amongst the lowest in Europe, it is now expanding, through initiatives such as the Northern Forest project to plant 50 million trees across northern England, which includes the Mersey Forest. A major challenge in the expansion of woodlands is the sourcing of seeds, especially from timber-quality broadleaved trees, including oak. Sourcing high-quality seeds is a widely acknowledged bottleneck to UK woodland expansion. The trip to Vienna enabled Andrew to learn lessons from a major research project in Austria that seeks to address similar challenges with seed supply, as Austria transitions from a spruce-dominated forest to a landscape and industry based on a more diverse mix of species. The focus of the trip was to gather evidence and establish relationships to help exchange knowledge back to the UK, so that we can also gain value from this ground-breaking project.

Case Study

Is organic farming always good for the environment?

In a recent study published in **Ecology Letters**, a team of researchers, including from Xi'an Jiaotong-Liverpool University and the University of Liverpool, developed a method to help farmers and policymakers decide if switching from conventional to organic farming will increase biodiversity while maintaining productivity. This study is the first international meta-analysis that quantifies the trade-off between yield and biodiversity within the same land areas. Organic farming's need for extra land may cancel out the resulting biodiversity gains and has led to the discussion of "land sharing" vs "land sparing". The researchers analysed the yield and biodiversity of land in 75 international studies to calculate a threshold where the increase in biodiversity from organic farming and land sharing is advantageous despite the extra land it takes up. Importantly, they show that the threshold depends on how much biodiversity is already present on the additional land that would be needed to grow crops to make up for lost yield. The study found that the impact of organic farming on biodiversity and yield is dependent on the species being measured and the crops being grown. This means certain types of produce can be organically farmed with no need for more land to achieve the same yield. The researchers stress that this threshold is only a guide, as other factors such as surrounding landscapes and variation of organic treatment can also affect the benefits of organic farming. For example, moderate-intensity fertilisation of organic non-cereal crops may enhance both yield and biodiversity. So is organic farming better? That depends – what are you trying to grow, and where are you trying to grow it?



Senior Lecturer at the University Dr Andrew Hacket-Pain on a six-week placement in Vienna



GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Operations

We are socially invested in improving the lives of everyone who works and studies here and we have a duty to conduct our affairs in a responsible and transparent way. Our aim is to create a culture of openness, transparency, respect and uphold individual rights, as well as the right to privacy, freedom of expression, and access to information. We have a robust and inclusive governance structure, with elected representation on the University's highest governing body from students, faculty staff, professional service staff and the Liverpool Guild of Students. **Council** is the University's overall governing body. It delegates the majority of academic governance matters to **Senate**. Council and Senate are supported in their work by a range of more specialist **committees**. **Senior Leadership Team** (SLT) is the University's key operational management committee and is chaired by the Vice-Chancellor, Professor Tim Jones. We recognise **Liverpool Guild of Students** as the voice of students at Liverpool. It is one of the best funded students' unions in the country and works closely with the University on a whole range of student issues, amplifying the student voice on campus and on a national scale.

As part of our commitment to employee engagement, the University has developed a set of **Values and Ethics Principles** which communicate our practices and aspirations that define how we operate in all areas including decision making, working in partnership with our students and collaborators, local and global impact, and staff offer. We have introduced policies and procedures to ensure that we conduct all of our business in an honest and ethical manner. The University has zero tolerance of **bullying and harassment** and our **Policy and Code of Practice Regarding Freedom of Speech** supports academics in their research and ensures that all groups within the University are able to exercise Freedom of Speech. **Report**

+ Support is a reporting tool for our staff and students to report bullying, harassment, sexual misconduct, hate crime, assault, or discrimination. The University is signed up to the **Can't Buy My Silence** universities pledge to stop using NDAs for complaints about sexual harassment, bullying and other forms of misconduct.

Our **anti-bribery and corruption** policy outlines how we are committed to acting professionally, fairly and with integrity in all the University business dealings and relationships. The **Ethical Investment Policy** commits the University to invest its funds on a socially responsible basis with due regard to environmental, social and governance issues, and we publish full **Financial Statements** each year.

Learning and students

Students are able to explore this topic by studying **'Liberty, Justice and the Good Society'** which considers some of the main concepts in political philosophy, including freedom, equality and justice. Alongside these studies, our **Climate Justice Art** workshop and **'Tent Talks'** event during Sustainability

Week encouraged students to consider and support the aims and objectives of SDG16

Research and knowledge exchange

Our academics are exploring the issues surrounding peace, justice and strong institutions and the potential solutions across many areas of research. The **#Speakout: tackling online harassment in educational contexts** research project enabled our students to 'speak out' confidentially about their experiences of online harassment in their peer groups, which has informed interventions that are tackling and de-normalising these practices in this institutional context. More widely, the research is being used by policymakers, professional services and practitioners at the local, regional and national level, to develop initiatives that actively tackle online harassment in educational contexts. Other current research includes, **Freedom, domination and the gig economy** which explores the precarious employment practices in the gig economy.



University staff and students attend the Sustainability Fair during Sustainability Week

Law Clinic celebrates success

The University of Liverpool Law School celebrated success from our Law Clinic, a service which provides free and confidential legal advice to members of the public in the Liverpool area who are unable to otherwise afford it. The Clinic's primary aim is to provide law students with direct experience of legal advice and representation in order to deepen their engagement with the law and social justice and to develop their employability skills. Run by qualified solicitors assisted by Law students, the clinic has welcomed more than 400 new clients this year and has dealt with family, special educational needs, domestic abuse and immigration cases. The Clinic provides over 300 Law students each academic year the opportunity to gain hands-on experience in dealing with real cases, which helps to develop their workplace skills. In return, clients receive high-quality legal advice. The Clinic has a history of success in the Attorney General Student Pro Bono Awards and a team of family student leaders were highly commended for **their work in the summer of 2023**.

Sustainability and climate action talks with Trade Unions

Sustainability and climate action was the focus of a series of meetings between senior University leaders and local representatives from University and College Union (UCU), UNITE and UNISON, the Green New Deal (GND) University of Liverpool Action Group and the Liverpool Guild of Students in June 2023. Meetings took place to help foster discussions on the University's sustainability and Climate Plan actions. The meetings signified the importance we place on listening to a range of voices and opinions on how we should tackle the most pressing issues facing society today. The meetings were an opportunity for us to engage in meaningful dialogue with colleagues in the Trade Unions and the Guild over matters relating to sustainability. Through these discussions we were able to share ideas and jointly consider potential solutions on how we can move forward on our pathway to net zero and create a more sustainable future.



GOAL 17: PARTNERSHIP FOR THE GOALS

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Operations

The University is committed to strengthening and streamlining cooperation between nation-states, both developed and developing, using the SDGs as a shared framework and a shared vision for defining a collaborative way forward. We signed the international SDG Accord as part of our ongoing commitment to social responsibility and environmental sustainability and in 2022 were ranked first out of 1,438 institutions for SDG17, in the **THE Impact Rankings**, scoring 100%. As part of a pilot study considering how the **UN SDGs relate to all areas of institutional activity**, we found that the University makes a strong, positive contribution to the goals through its research activities, the knowledge, skills and attributes of graduates and through activities as an employer, land holder, regional partner and civic leader. Our impact against the SDGs has been mapped in many reports with examples including **CIE's Education for Sustainable Development Report**, and the Guild's **SDG Curriculum Mapping Report**. We have provided key data and insights to Liverpool's **SDG Data Platform**, an open-source tool which helps to provide a more complete picture – and richer data – on how the Liverpool city region measures against indicators.

As a key member of the **Liverpool City Region Climate Partnership** the University played a leading role in developing the **Year One Climate Action Plan** for the city region to become zero-carbon by 2040. The **Knowledge Quarter Liverpool** (KQ Liverpool), brings together the city region's key partners, including the University to collaborate in a creative environment and close the economic gap with London and the South East. KQ Liverpool home to some of the world's most influential players in science, health, technology, culture and education and sets out to create and promote the dynamic and innovative industries operating within the Knowledge Quarter.

Learning and students

Students are able to explore this topic from a number of different perspectives within course modules such as **'Environmental planning and management project'** and **'Media and human rights'** and **'Tackling Environmental Issues'**, which provides students with a sound understanding of environmental issues that affect local, national and international governance and enables them to develop the skills to research a key environmental issue and communicate this for both a consultancy report and a policy brief. We provide opportunities for students

to volunteer in outreach activities within schools and the local community through our partnership with **Enactus**, a national initiative that supports students across the country to engage in social action and social enterprise.

Research and knowledge exchange

The **Climate Futures** research theme uses expertise to advise government, industry, and funding bodies and they also informed the UN's **IPCC Report**. The Management School are tackling modern slavery in corporate supply chains and lead a **programme of research** working with government agencies, organisations, and NGOs, to explore how supply chains are responding to TISC legislation. Other important partnerships have been established through the **Antislavery Knowledge Network**, which connects three of the UK's main centres on research into slavery and provides research papers produced by the **Heseltine Institute for Public Policy, Practice, and Place** for the **Liverpool City Region All Party Parliamentary Group**. **CLEAN-Air(Africa)** is a partnership of experts from academic, research, and clinical institutions from the UK, Cameroon, Kenya, Tanzania, Rwanda, and Uganda, and includes researchers from the University of Liverpool.



Liverpool City Region All Party Parliamentary Group partnership



The Heseltine Institute for Public Policy, Practice, and Place is the academic partner of the Liverpool City Region All Party Parliamentary Group (APPG). The

APPG works as a forum for key issues affecting Liverpool City Region to be addressed collaboratively by Parliamentarians from all parties as well as stakeholders from business, the public and third sectors. The group provides a strong voice for the city-region in Westminster, working alongside the Metro Mayor and local leaders to help maximise future investment and growth for the benefit of the communities throughout the city-region. In October 2022, the APPG published the *Future of Housing in Liverpool City Region: Sustainable, Affordable, Healthy Homes* research paper, which assesses the state of housing in the Liverpool city region and identifies opportunities associated with improvements to existing housing stock. The paper highlights a unique challenge for policymakers attempting to address issues such as poor energy inefficiency, ill health and the impacts of climate change, due to the UK's old housing stock. It also examines how the current energy crisis in Europe has placed a particular spotlight on the important role played by housing in keeping energy use – and costs – at a manageable level. Housing is also crucial for the UK to meet its target to reach net zero carbon emissions by 2050. Residential buildings contribute around 15% of overall greenhouse gas emissions. However, over the last decade, investments in home energy efficiency have declined significantly. In light of this context, the paper assesses the housing challenges faced in Liverpool City Region (LCR), and the powers and funding that might be required to meet those challenges.



University Materials Innovation Factory

NSG Group partnership

The University and NSG Group signed a Memorandum of Understanding (MoU) to formalise their partnership and further develop opportunities for collaboration. Under the MoU, the University and NSG Group will explore new opportunities for collaboration with a strong focus on digital materials discovery to address key challenges including sustainability. The new agreement builds on a longstanding partnership between the two organisations who have worked together for more than 15 years on a range of research topics including furnace performance optimisation, solar cells, antimicrobial coatings and more recently work to accelerate materials discovery in partnership with the MIF. In addition to research collaborations, NSG Group are partners in two University of Liverpool Doctoral Training Centres, the CDT in Next-Generation Materials Chemistry and the EPSRC Centre for Doctoral Training – Distributed Algorithms. This combination of industrial expertise and our academic excellence will enable the development of cutting-edge solutions that can address the challenges of our time. From improving energy efficiency and reducing carbon emissions to developing new materials and technologies using the latest digital science.

WHAT NEXT?

2023/24 is set to be an exciting year for sustainability at the University of Liverpool. Following the launch of a new strategic framework, which includes sustainability as a cross-cutting theme, we plan to refresh our Sustainability Strategy to ensure it is aligned with our newly agreed objectives:

- Our multi-disciplinary research will create global impact in addressing the greatest challenges facing today's society
- Our students will be empowered as global citizens to make a difference in a changing world
- Sustainability, including the achievement of Net Zero by 2035, will underpin how we operate within and beyond our organisational boundaries

Our focus will be on driving each of these objectives forward, whilst continuing to deliver the commitments set out in our Climate Plan, our commitment to the Sustainable Development Goals, as well as our numerous regulatory and compliance activities linked to our ISO14001 accredited Environmental Management System. We will monitor our progress against a new set of strategic and operational metrics, reported quarterly to our Sustainability Board and Senior Leadership Team.




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