THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

#SustainableLSE

Carbon Management

2022/23 Report

Foreword by LSE President and Vice Chancellor

In my first few months as LSE's President and Vice Chancellor, I have been struck by the School community's genuine commitment to good environmental citizenship. A large part of that commitment is detailed in this Carbon Management Report, which has been meticulously prepared by our outstanding Sustainability team.

We understand that as an internationally well-known university, we have a responsibility to lead by example in addressing carbon emissions. We have made great strides over the years and must continue to do so. The School's latest development, the Firoz Lalji Global Hub, will enter its construction phase in the coming months. As a net-zero carbon building (in construction and operation) that is also PassivHaus, BREEAM Outstanding, and WELL Platinum certified, it will be an exemplar of its kind. We are thrilled with the development, as well as the focus and enthusiasm of all those working on the project.

Nor is this all. The School was recently awarded £2.7m funding under the Public Sector Decarbonisation Scheme (PSDS), which the School has matched, to implement carbon reduction measures across two other buildings: the Lionel Robbins Building – which houses the LSE Library – and Connaught House. The planned renovations will include the installations of state-of-the-art air source heat pumps; enhancements to existing solar panels; and LED lighting circuits.

We know we must go further than merely addressing the impacts of our buildings and tackle the challenge of addressing our wider Scope 3 emissions. We will continue to improve our measuring and reporting and work with stakeholders, both internally and externally, to address these emissions, to reach our 2050 Net Zero, Scope 1, 2 and 3 target.

As behaviours, technologies, and opportunities change, so too will the challenge to keep our institution functioning within sustainable parameters. We are very proud of the steps we've taken this year, and we are optimistic about the next phase of the journey towards our inevitable goal.

Professor Larry Kramer

LSE President and Vice Chancellor

Our Approach to Carbon Management

Measure, reduce and mitigate our carbon emissions

Our First Carbon Management Plan

2011

LSE is strongly committed to environmental sustainability, and it is a key principle of both our Strategy and Ethics Code.

The School adopted its first Carbon Management Plan in 2011. The Plan set out an ambitious 54 percent carbon reduction target for its direct emissions (scope 1 and 2) by 2020/21 against 2005/06 baseline. This was based on an expected level of investment and stable number of students.

In the following years, LSE invested over £4.5 million in energy conservation measures for its buildings through three phases of work as part of the Mayor of London RE:FIT programme. This programme delivered significant carbon reductions as well as cost savings and a return on investment for the School.

By 2020/21, despite an increase in staff and student numbers of nearly 55 percent, we had reduced our direct emissions by 44 percent against our 2005 baseline.

Going further: the LSE Carbon Reduction Strategy

2021

In 2019, as part of the launch of LSE 2030 Strategy, the School decided to go further and made a public commitment to **reach net-zero carbon by 2030 for its direct emissions** (scope 1 and 2) **and by 2050 for its indirect emissions** (scope 3).

We first focused on our scopes 1 and 2 and undertook a strategic review of our Carbon Management Plan with the support of external consultants. The resulting Carbon Reduction Strategy, adopted in 2020, describes the different measures that could deliver our first net-zero target.

The strategy set a new absolute target aligned to a 1.5˚C Science Based Target of 69 percent carbon reduction by 2030 against the 2005 baseline.

For the residual emissions, mitigation measures will be required. This could include subsiding projects removing and sequestrating carbon emissions from the atmosphere.

2030

Carbon impact

LSE has long been committed to purchasing electricity from renewable sources. Over the past six years, over 99 percent of our electricity has come from wind and solar sources and backed by REGO (Renewable Energy Guarantees of Origin) certificates.

In 2020/21, the School decided to go further, and we offset our direct emissions (scope 1 and 2), as well as the scope 3 emissions we measured (water, waste and business travel booked via our central agent). That year, we became the first carbon neutral verified university for all these emissions.

We partnered with the not-for-profit organisation Compensate and engaged widely across the LSE community to select projects which met robust certification standards.

Since this time, we have continued to offset our measured emissions (scope 1 and 2 and the scope 3 we measure). As carbon reductions should always be a key priority over carbon mitigation, we are reviewing our current offsetting strategy and continuing to look at how we address our emissions at source, as well as widening our Scope 3 measurement and reporting.

Case Study | **The TIST Kenya Community Reforestation Project**

The International Small Group and Tree Planting Program (TIST) Kenya Community Reforestation is an award-winning reforestation and sustainable development programme with a mission to improve lives, empower women, create leaders and have a positive climate impact, contributing to all 17 United Nation Sustainable Development Goals (SDGs).

Participation in the program is completely voluntary and open to everyone. Currently in Kenya there are 76,608 TIST participants, 25,000 of which are women. TIST trains local farmers in building nurseries, fuel-efficient stoves and adopting sustainable farming practices which in many cases result in double yield. Project monitoring ensures that dead trees and thinnings are accounted for and deducted from the carbon calculations.

The project also reinforces good health practices on topics such as HIV/AIDS, malaria, clean water, hygiene and indoor air pollution.

2050

LSE Carbon Footprint 2022/23

Type of emissions	Emissions sources	Carbon emissions Tonnes of carbon equivalent (tCO_2e)	Mitigation measures
Scope 1 Direct emissions from our activities	**Gas and fuels** used to heat and operate our buildings	**3,651** tCO_2e	Carbon credits
Scope 2 Indirect emissions from our electricity use	**Electricity** used for lighting, IT equipment, ventilation, ...	**17** tCO_2e as 99 per cent of our electricity is from renewable sources Or **3,771** tCO_2e if using the UK electricity grid average carbon intensity factor	Electricity from renewable sources and carbon credits
Scope 3 Indirect emissions associated with our activities and supply chain ▲ Emissions measured	**Water** consumed	**68** tCO_2e	Carbon credits
	Waste generated ▪ On campus ▪ Construction projects	**30** tCO_2e	
	Business travel Air and rail booked through LSE central supplier	**2,432** tCO_2e	
▼ Emissions not yet measured	Other business travel: expenses, hotels, taxis, ...		
	Staff/students travel Commuting to campus		
	Goods & services All the things we purchase, including for construction projects		

Our funding options

In addition to the internal budget for projects, LSE has secured a £175 million Sustainable Private Placement for green and social projects at the School.

This fund is supporting the development of our first net-zero carbon building (in construction and operation), the Firoz Lalji Global Hub, as well as projects to decarbonise our heating systems.

This February, LSE also received a £2.7m in funding under the Public Services Decarbonisation Scheme (PSDS) launched by Salix, which will be match-funded by the School. This funding will help the School improve the energy efficiency of two major buildings, the Lionel Robbins Building and Connaught House, by installing state-of-the-art air source heat pumps as well as upgrading the lighting systems and existing photovoltaic panels.

Our Reporting Structure

LSE's carbon reduction plan is coordinated by the Carbon Reduction Manager as part of the Estates Division's Sustainability Team boarder responsibility for the School's environmental performance.

Delivery of the plan and decision-making is supported by several committees and working groups including both student and staff representatives.

Our ISO certified management systems also ensure an effective delivery and monitoring of the carbon reduction plan.

The Sustainability Policy is delivered via our Environmental Management System, which has been ISO 14001 certified since 2012.

The Energy Policy is delivered via our Energy Management System, which has been ISO 50001 certified since 2015.

Further details on our processes and sustainable policies can be found on our website.

Our Scopes 1 and 2

Achieving net-zero by 2030

Our Baseline

Like most of the higher education institutions, LSE's baseline for our scope 1 and 2 emissions is the academic year 2005/06. That year, LSE's total footprint was **13,170 tonnes of carbon dioxide equivalent** (tCO_2e).

Our Targets

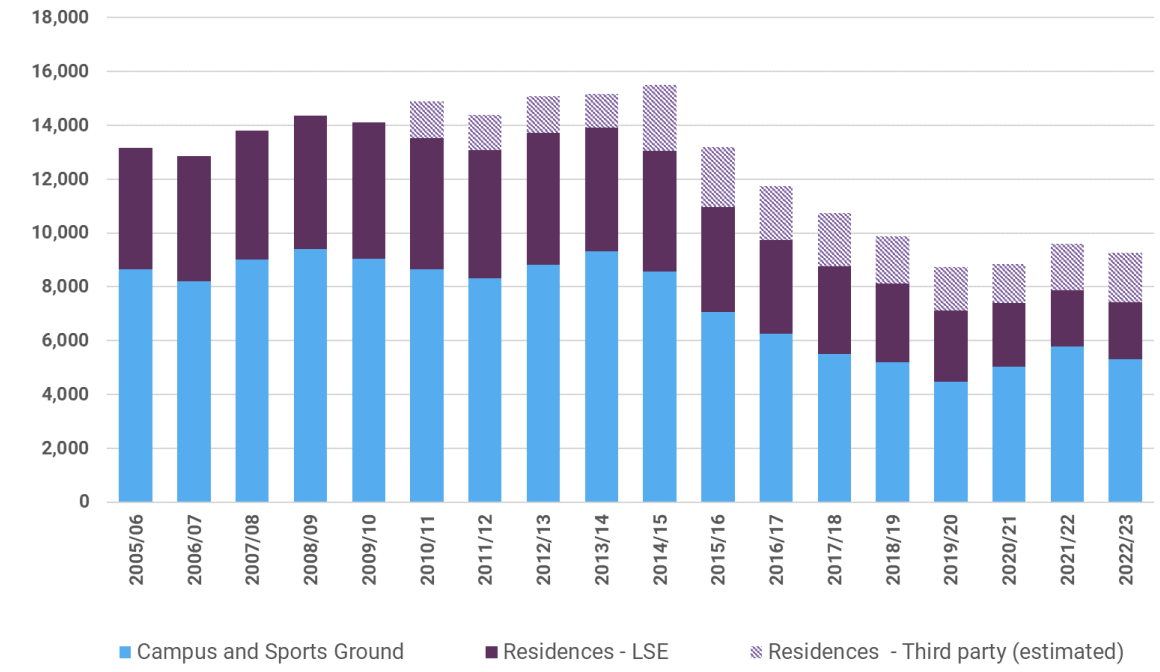
As part of our Carbon Reduction Strategy, LSE adopted an absolute reduction target of **69 per cent carbon reduction for scope 1 and 2 by 2030 against our 2005 baseline**.

By 2050, as we reach our net-zero target for scope 3, our aspiration is to have reduced all emissions related to scope 1 and 2 by 100 per cent.

Our Progress in 2022/23

In 2022/23, LSE's carbon footprint for scope 1 and 2 emissions was **7,422 tCO_2e**. This represents a 44 per cent reduction against our 2005 baseline.

LSE's Scopes 1 and 2 emissions (in tCO_2e)



We are actively implementing our LSE Carbon Reduction Strategy, focusing on decarbonising our heating systems to take advantage of the decarbonisation of the UK electricity grid. In 2022/23, we completed our first electrification project, the Cheng Kin Ku building, where we replaced the boilers and chillers with more sustainable air source heat pumps.

This year, we also started to actively manage the Building Management System. During the winter, the Maintenance Team adjusted the settings daily to optimise gas usage without compromising the comfort of the building users. This contributed to reduce the School's gas usage by 27 per cent compared to a pre-covid year of 2018/19 (after weather adjustment).

This work, combined with the ongoing investments in energy saving technologies and renewal of the estate have helped LSE secure a long-term improvement of our carbon intensity. In 2022/23, our carbon intensity was 34.5 kilogrammes of CO_2e per square meter, representing a 54 per cent reduction since 2005. 'A similar project is currently being implemented in the Old Building

Our Next steps

We will continue to work on the heat decarbonisation of our buildings and several projects are already underway with the support of the PSDS fund we were awarded. To support this work, we are looking at developing a thorough decarbonisation strategy for our campus and residential campuses.

In parallel, we are still working with Westminster and Islington City Councils to connect our buildings to future low carbon district heating networks when feasible.

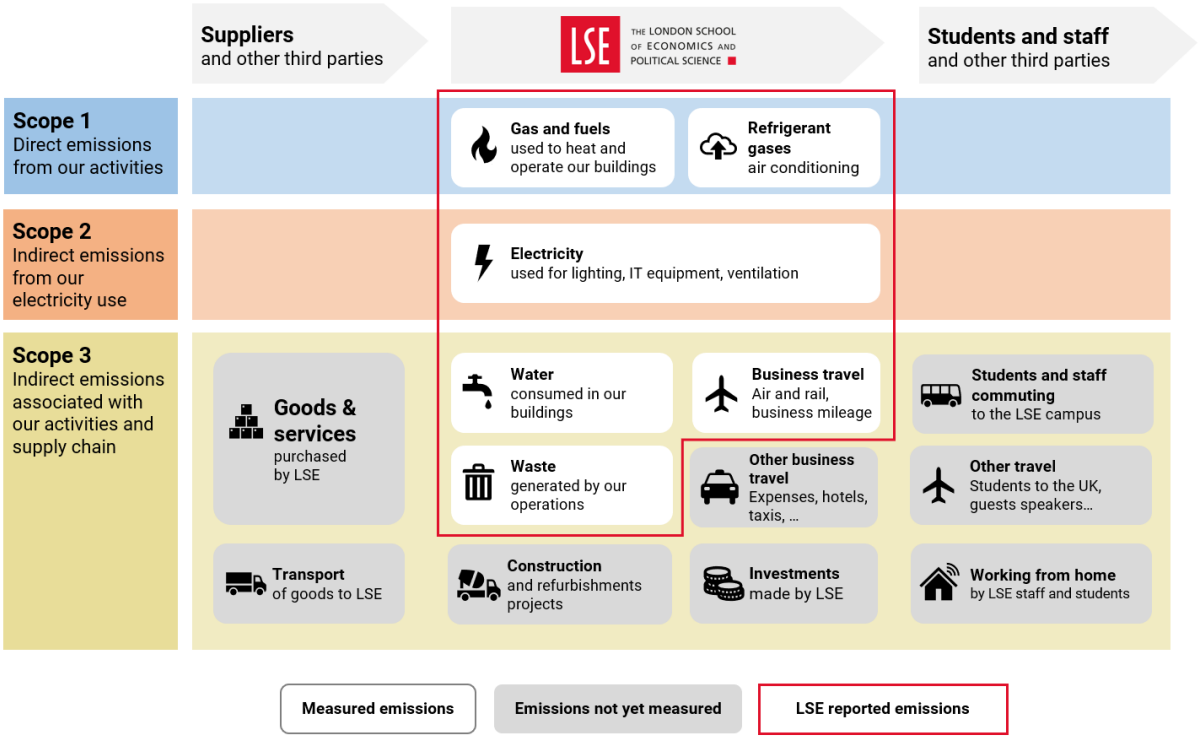
> 'The School has made an excellent start in achieving its ambition to be net zero in Scopes 1 and 2 by 2030. However, we are under no illusions that the further we progress on this journey, the more difficult it will get. We will need the continual commitment and encouragement of the Schools senior leadership and the support of the whole LSE community to achieve our goals.'
>
> *Julian Robinson, Director of Estates, LSE*

Our Scope 3

Achieving net-zero by 2050

Understanding our Scope 3

We have mapped our scope 3 and we now measure and report on some emissions related to water usage, waste generated, and business travel booked via our main travel agent. For these emissions, we have set our baseline as the academic year 2018/19.

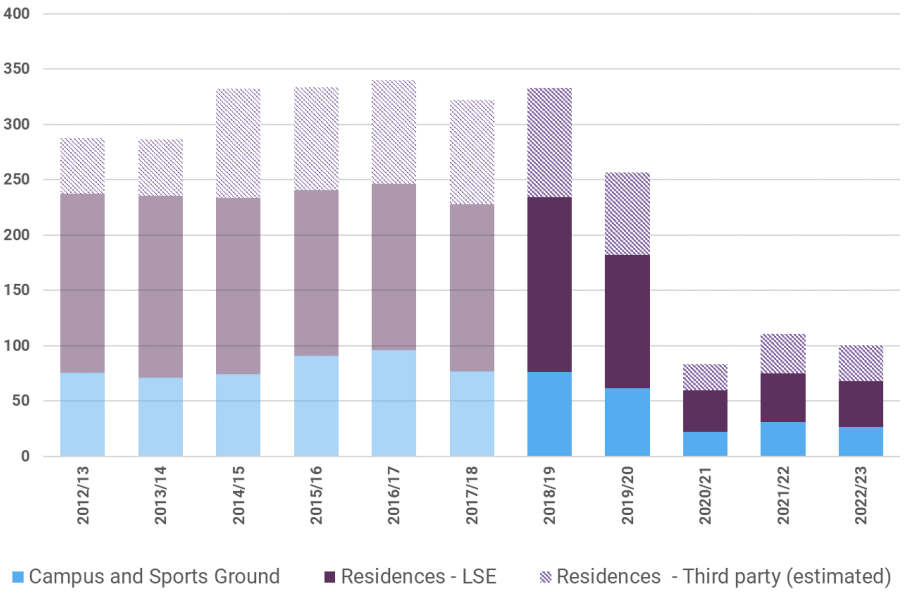


Water and sewage

During our baseline year, in 2018/19, we consumed 221,909 cubic meters of water, representing 235 tCO_2e.

In 2022/23, we consumed 178,154 cubic meters of water. In terms of water use, LSE does not operate any research laboratories and our water is primarily used for offices, catering, and domestic purposes. As a result, 99 per cent of the water we use returns to the network as wastewater. This means that, converted into carbon, our water and wastewater usage for 2022/23 combined emitted 68 tCO_2e.

LSE's Scope 3 emissions - water and sewage (in tCO_2e)



Despite an increase in student numbers, we have reduced our water usage by almost 20 per cent since 2018/19. This reduction can be attributed to the reduced number of staff present on campus since the introduction of hybrid working, as well as the water efficiency measures we have been implementing. These include increasing the number of smart meters we have, fitting leaks detection systems, and trialling new tankless flushes.

By 2035, we aim to reduce our water usage by 30 per cent against our 2018/19 baseline and we are working on a water reduction plan to achieve this target.

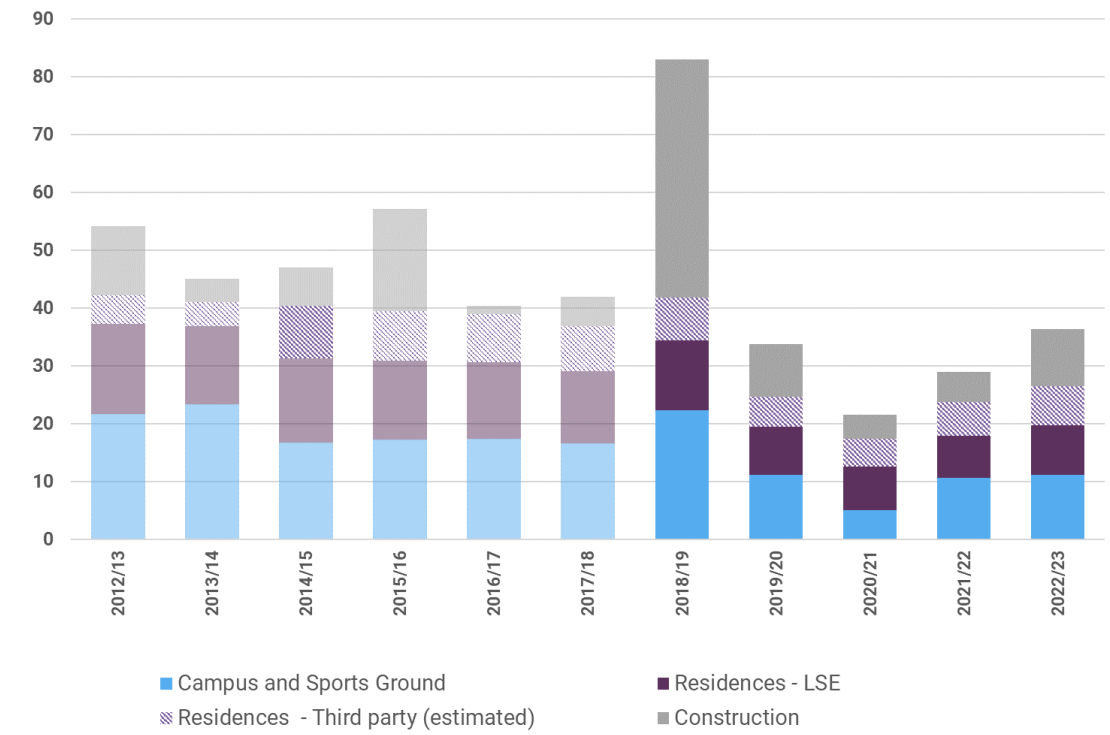
Waste

During our baseline year, in 2018/19, we generated 28,697 tonnes of waste, representing 75.5 tCO_2e. That year, we redeveloped two major buildings, the Centre Building and the Marshall Building, resulting in an increase in construction waste. Without construction, our waste amounted to 1,668 tonnes (34.4 tCO_2e).

In 2022/23, we produced 1,387 tonnes of waste (including construction), 60 per cent of which was reused or recycled. Without construction, we generated 1,115 tonnes of waste and achieved zero waste to landfill.

Our waste contributed to emitting **29.6 tCO_2e**.This 60 per cent reduction against our baseline is largely due to the reduction in construction waste. Without it, we reduced our emissions by 43 per cent, to **19.7 tCO_2e.**

LSE's Scope 3 emissions - waste (in tCO_2e)



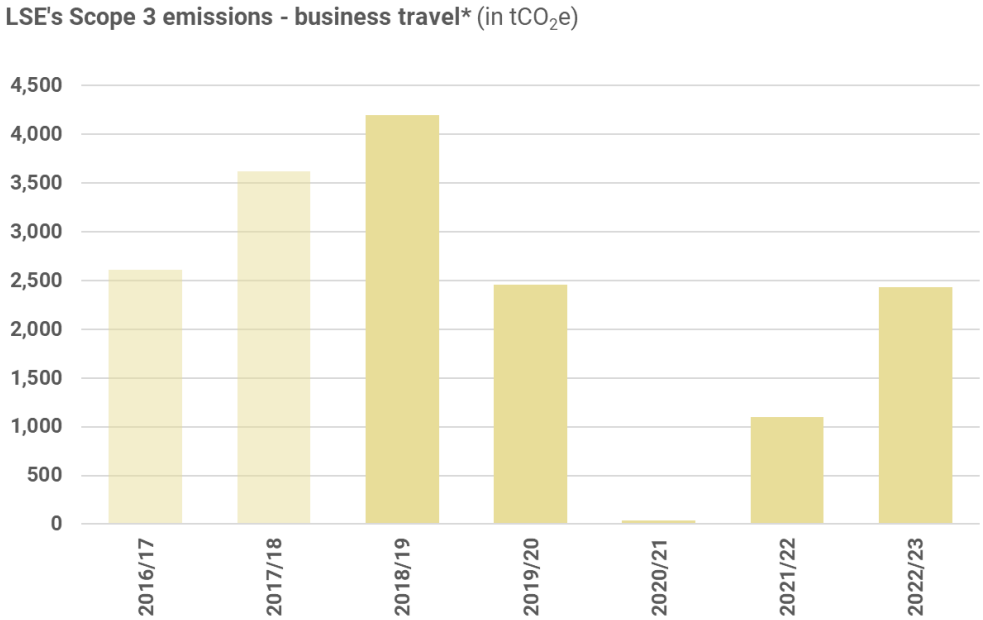
Waste volumes and emissions have reduced from our baseline thanks to the introduction of hybrid working. In 2022/23, we persisted with our efforts to reduce our waste further by improving and standardising our bin signage across the LSE campus. We continued our annual "ReLove" campaign and donated 4.3 tonnes of unwanted items to the British Heart Foundation, saving almost 44 tCO_2e. We also undertook various recycling campaigns, in particular the SOS-UK and Sustainable Halls Campaign, which resulted in an increase in recycling in our halls of residence.

By 2035, we aim to **reduce our total waste by 75 per cent against our 2018/19 baseline**, and by 30 per cent waste excluding construction.

Business Travel

During our baseline year in 2018/19, our business travel booked through our central supplier represented **4,195 tCO_2e**.

In 2022/23, these business travel emissions were **2,432 tCO_2e**, 42 percent below our baseline but well above 2021/22 emissions. This increase was expected as international travel is no longer restricted following COVID.



* Business travel booked via our central supplier (excludes travel claimed on expenses)

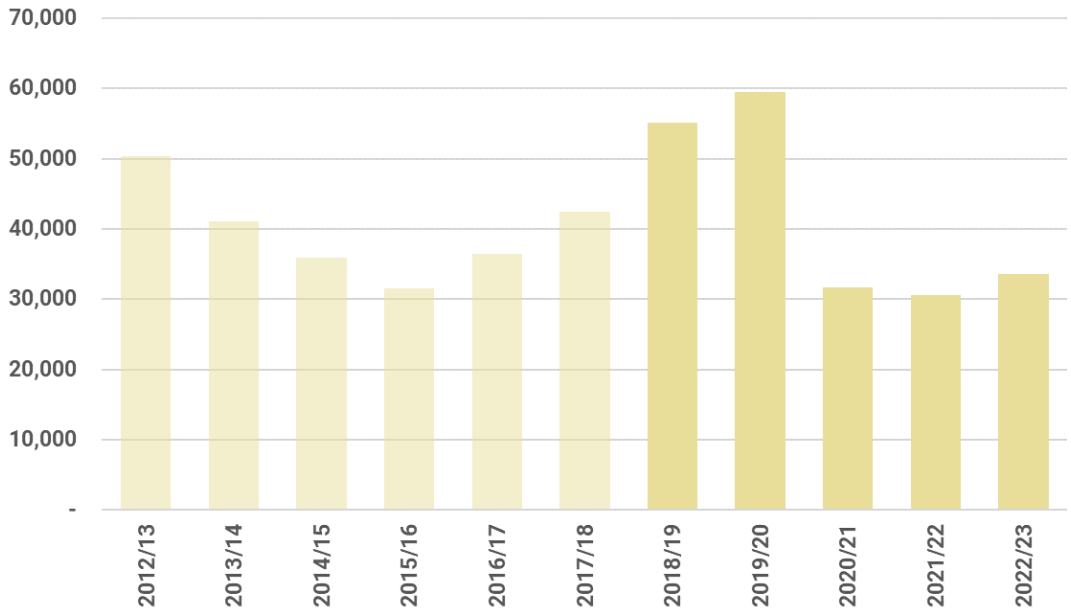
Going forwards, we will work to improve the data quality of our business travel and start accounting for travel booked through expenses and alternative travel agents. We will also continue to promote alternatives to business travel through our Digital Smart campaign and Sustainable Business Travel Guide, championing digital solutions (eg, online conferences and meetings, pre-recorded keynotes) and discouraging, where possible, flights between mainland UK destinations.

Procurement

During our baseline year 2018/19, the goods and services we procured emitted an estimated **55,129** tCO_2e.

In 2022/23, our procurement activities generated about **33,566 tCO_2e.** This represents a 39 per cent reduction against our 2018/19 baseline.

LSE's Scope 3 emissions - procurement (in tCO_2e)



At present, the emissions related to our Procurement are based on spend data and not accurately measured. As a result, it is difficult to analyse trends and establish a reduction plan. Going forward, we will work with some key suppliers to better understand these emissions and start to establish a more accurate baseline.

In the meantime, our Procurement team has developed a Supplier Code of Practice, which is now included into all of our tender projects and contracts. This code specifically asks suppliers to "protect the environment by reducing the carbon emissions and environmental impacts of their products and services".

The measuring the rest of our scope 3

Our scope 3 is still largely unmeasured. Based on Royal Anniversary Trust's 'Accelerating the UK Tertiary Education Sector towards Net Zero' report, we estimate that our total scope 3 could be in the region of 207,000 tCO_2e. Emissions from Finance (resulting from the pension schemes, endowments, and direct investments) are likely to account for over 60 percent of this scope. Travel (business travel, staff and student commuting and end of term travel) have been calculated to represent slightly over 10 percent and emissions related to student living in private accommodation and homeworking could be around 5 percent of our total scope 3.

Going forward, we will continue to work on refining our scope 3 and improving our data quality with the objective to start developing reduction plans for this scope.

Continue the conversation...

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