

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE



LSE 2016/17 Environmental Sustainability Report

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# **Foreword by the Director**

The world faces unprecedented challenges to sustainable development, including climate change, inequality, and resource use. As Director of LSE, I'm proud that the School works extensively to address these issues through our research, education, public engagement and our own campus operations – in keeping with our mission to help "the betterment of society".

This report reviews our sustainability performance during 2016-17, and looks ahead to our plans for future progress. LSE research has tackled a plethora of issues among the UN's Sustainable Development Goals, leading academic debate as well as having far-reaching impact on public understanding and policy-making. I particularly enjoyed the Beveridge 2.0 Festival, which brought academics, students and practitioners together with the public to re-imagine how we address crucial social and economic themes of the 21st century.

As well as teaching our students courses and skills that address key global challenges, several innovative initiatives gave students the opportunity to explore sustainability issues further for themselves. The new LSE LIFE centre helped students explore how they can create positive social impacts through their future careers, and LSE Groups invited project teams to envision greener and more accessible "smart cities".

Meanwhile, I'm delighted that we've cut LSE's own carbon emissions by 26 per cent since 2005, whilst the Centre Buildings Redevelopment achieved "BREEAM Excellent" certification for its sustainable design. We've also improved recycling rates and cut waste whilst buying ethically, connecting with national discussions around cutting disposables and plastic waste. We have also asked our investment fund managers to comply with the UN's Principles for Responsible Investment, ensuring our portfolio performs better on environmental, social and governance issues.

Looking to the future, considerable uncertainty surrounds the direction of both higher education and environmental policy, with significant challenges currently facing the sector. However, I'm excited to be leading LSE through this period, and relish the opportunity to use the unique strengths of our institution to demonstrate leadership on sustainability over the coming years.

Dame Minouche Shafik Director of LSE



# At a glance

This report highlights LSE's sustainability performance and initiatives during 2016/17 and is aimed at LSE students, staff and alumni, as well as interested members of the public. The four chapters correspond to the four strategic themes of LSE's Sustainability Policy, which represent our most significant sustainability impacts:

- 1 Leadership and governance (our processes for converting top-level support for sustainability into tangible action).
- **2** Operations and Estate (energy usage of our buildings, recycling rates, etc).
- **3** Education and research (case studies of research and teaching on sustainability).
- 4 Engagement and community (how we collaborate on sustainability initiatives with students and staff, and spark debate in the wider world).

## Our strategy and targets

LSE's sustainability activities are led by our Sustainability Policy, whose objectives are delivered through targets set annually in our Environmental Action Plan. This report details performance against these KPIs. The "targets" panel throughout the report show the status of these targets:

- Completed, or successfully ongoing.
  - In progress, and on track for successful completion.
- Not complete, or not on track for successful delivery.

## Sustainable Development Goals

In 2015, the UN's Sustainable Development Goals (SDGs) were established as a framework for global action on sustainability, covering a sweeping range of issues including poverty, climate action and resource consumption. This report connects LSE's work with that international effort by accompanying each of our initiatives with the icon of the most relevant SDG. All 17 SDGs are shown below.





## Highlights from 2016/17

26% reduction of carbon emis since 2005	sions	60.6% of waste re-used, recycled or composted	<b>1.8%</b> reduction of waste since 2015/16
<b>1,052</b> LSE staff engaged with Green Imp	act staff insource	racted <b>75</b> students particular de Responsible Glob	articipated in bal Leadership seminar
<b>2.2%</b> reduction of indirect investments into extraction of thermal coal or tar sands, indiscriminate armaments and tobacco manufacturing	UN Climate Change summit – Professor Lord Stern will co-chair a High-Level Commission on Carbon Prices	Silver Food for Life award achieved	Centre Buildings Redevelopment achieved BREEAM "Excellent" (Design)

## LSE's Sustainability Journey

## 2005

## 2007

- Environmental Sustainability Policy adopted
- Part-time Environmental Coordinator appointed
- "2:1" award in the People and Planet Green League

## 2008

- LSE pioneers re-use in halls of residence project
- New Academic Building achieves BREEAM "Excellent"
- LSE's Environmental Management System achieves EcoCampus "Bronze" status

## 2009

- "LSE 100" module teaches all undergraduates about climate change
- "First Class" award in the People and Planet Green League and named 2nd greenest university in the UK



## 2010

 LSE's Environmental Management System achieves EcoCampus "Silver" status

## 2011

- LSE's Environmental Management System achieves EcoCampus "Gold" Certification
- Saw Swee Hock Student Centre certified BREEAM "Outstanding" (Design)

## 2012

• LSE's Environmental Management System achieves ISO 14001 Certification

## 2014

- Winner of EU Fair Cotton Procurement Award
- First Sustainability Report published

## 2017

- 8th year achieving "First Class" award in the People and Planet Green League
- Centre Buildings
   Redevelopment achieves
   BREEAM Excellent (Design)

## 2016

- "Two Star Excellent" rating from the Sustainable Restaurant Association
- RICS Ska rating "Gold" for sustainable refurbishment of LSE Life - the first university to be awarded "Silver" in the new (tougher) Ska rating for Higher Education fit-outs

## 2015

 Energy Management System achieves ISO 50001 certification

# Targets

Deliver and maintain ISO 14001 standard.



Ensure LSE complies with applicable legal requirements, and other requirements to which the School subscribes, which relate to the environment, energy use, consumption and efficiency.

Completed, or successfully ongoing.

- In progress, and on track for successful completion.
- Not complete, or not on track for successful delivery.

# **Leadership and Governance**

We embrace sustainability at every level of LSE – from the top of the School, where sustainability is a key commitment of LSE's 2020 Strategy and Ethics Code – down to the day-to-day working life of the institution. The Sustainability Team in the Estates Division coordinate efforts to improve our environmental impacts, but these depend on the continuous cooperation and hard work of all 10,609 students and 2,289 staff (FTE).

We work closely with our students and the Students' Union, our staff, LSE alumni, neighbouring businesses, the local community, and sector bodies. Through our Sustainability Engagement Strategy, we actively engage in dialogue, seeking our communities' views and expert advice; encourage their active participation in and ownership of sustainability initiatives; and celebrate LSE's sustainability achievements and forthcoming plans.

The infographic on the opposite page shows how we engage with these groups, and the Sustainability Governance Structure on page 9 shows how this feeds into our approach to sustainability leadership.

## Our Community

We actively engage in dialogue with the communities shown below. We use clear processes to listen to their views in order to shape our priorities and approach, whilst in turn seeking to inspire them to adopt sustainable practices



## Governance, reporting and benchmarking

Our Sustainability Policy is put into practice through our Environmental and Energy Management System (EMS & EnMS) which strategically manages, monitors, and improves each of our environmental and energy impacts. Since 2012, our EMS has been certified to the internationally recognised ISO 14001 standard, and our EnMS has been ISO 50001 certified since 2015.

We use those systems to set strategic targets and measure our sustainability performance. The diagram opposite shows how we report internally and make decisions.

We publicly report to statutory requirements like the CRC Energy Efficiency Scheme, to university sustainability rankings, as well as via this report. We also report to the Higher Education Statistics Agency (HESA) "Estates Management Record", which publishes the environmental performance of all UK Higher Education institutions. We use HESA's data to benchmark our performance against that of our peers. LSE also came 14th in People and Planet's "Green" University League – an independent ranking of UK universities' environmental and ethical performance. We are one of only six institutions in the country to have appeared in the top tier of the League for the eighth year in a row.

#### Future goals:

- Achieve ongoing recertification of ISO 50001 and ISO 14001.
- Continue to monitor and report on sustainability targets, and audit the performance of the Environmental and Energy Management Systems to ensure continual improvement.

## How do we make decisions about sustainability?



## Key impacts, opportunities and risks

In 2016-17 we commissioned an independent review of internal and external trends that present strategic risks and opportunities for LSE's sustainability, as well as how we may take action to address them. The report was conducted by Useful Projects, and explored "PESTLE" factors – Political, Economic, Social, Technological, Legal and Environmental. The findings are summarised below.

Internal			
Issue	Significance	Impact and approach to addressing	
Increased focus on student satisfaction	High	Students demand sustainability action from universities, which remains a key driver for LSE's environmental commitments. We will provide further opportunities for students to engage in sustainability initiatives. We will also manage the environmental impacts of providing enhanced student services, eg, IT and facilities.	
Estate development	High	Estate expansion potentially increases carbon emissions, but is an opportunity to replace poorly performing buildings with greener ones that enhance student and staff wellbeing.	
		LSE will move out of leased property into LSE-owned space, enabling better control over environmental management.	
Low-carbon energy centre and district heating network	High	LSE will explore installing an energy centre to provide low-carbon heat and electricity to the campus, significantly cutting our carbon footprint.	
Move towards flexible working	Low	Flexible working patterns can enhance staff wellbeing and inclusivity and may also yield environmental benefits, though these would depend on implementation.	

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External			
Issue	Significance	Impact and approach to addressing	
Policy and regulation	High	There is a lack of HE sector leadership on carbon reduction since the demise of HEFCE, as the new Office for Students has not adopted that remit. However, the UK Clean Growth Act sets voluntary 30 per cent carbon targets for the public sector.	
		The London Plan and London Environment Strategy require new buildings to be zero-carbon.	
		Air quality measures will improve wellbeing of LSE students and staff, though may limit the use of biofuels, which currently form part of LSE's carbon-reduction strategy – this will be reviewed.	
		Brexit will profoundly affect environmental policy, though it is not yet clear how.	
Circular economy	High	LSE will continue to develop our approach to sustainable resource consumptions, obtaining long-term value whilst creating social and environmental benefits and managing supply chain risks. In particular, we are phasing out disposable plastics.	
Smart buildings	Medium	Better data-led understanding of service-use can provide more responsive, tailored services for students whilst enabling energy efficiency.	
Decarbonising the national grid	Medium	As coal-fired power stations are replaced with gas, renewables and soon nuclear, the carbon footprint of our electricity is dropping steeply.	
Increased cost of waste disposal	Low	China's recent policy to reject low-quality recyclates is likely to increase the cost of UK waste disposal. Our waste-avoidance measures will help mitigate this.	

Leadership and Governance

# **Targets**

- Reduce energy intensity from 201 kWh per m<sup>2</sup> GIA in 2013-14 to 150 kWh per m<sup>2</sup> GIA by 2020
- Reduce emissions by 8 per cent through RE:FIT Phase 1 programme
- $\bigcirc$
- Implement Tranche 2 of RE:FIT programme
- Implement auto-shutdown of PC's



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

# **Operations and Estate**

The daily operations of LSE have a significant environmental impact and we recognise that we have a responsibility to manage these impacts, and create positive environmental change where possible.

We proactively work to reduce our resource consumption, ensure our buildings have the lowest possible environmental impact and promote sustainability through responsiblysourced products and services.

## Energy and Carbon

#### **Progress and Initiatives:**

 We have cut our carbon footprint by 26 per cent since 2005. We achieved that largely by retrofitting energy-saving measures in our buildings, such as efficient boilers, solar PV panels, upgraded building controls, and lowenergy LED lighting. Our reduction was also partly helped by the decarbonisation of the national grid, due to coal-fired power stations being phased out.

 Our energy-saving programme was delivered through RE:FIT, a Mayor of London framework to help public sector buildings to achieve guaranteed energy savings. LSE has invested £4m over four years in two successive tranches of retrofitting works, and a third tranche is currently under review. Particular RE:FIT success stories were the New Academic Building and Lionel Robbins Buildings, which decreased their carbon emissions by almost 40 per cent as a result of the project.

## Our carbon emissions: 2005/06 to 2016/17



- LSE's 2016-17 carbon footprint was 9,726 tonnes CO<sub>2</sub>e. Our carbon intensity – a measure of efficiency – was 47.9kg CO<sub>2</sub>e/m<sup>2</sup>, a 37 per cent cut since 2005/06.
- Our energy consumption in 2016/17 was 36,193,000 kWh, which represents a 1 per cent decrease from 2015/16 and an 8 per cent decrease against our 2005/06 baseline. Our energy usage per m<sup>2</sup> in 2016/17 is 178.4 kWh/m<sup>2</sup>. Based on 2015/16 Higher Education sector data, that would place us in the first quartile nationally. (2016/17 data is not yet available at time of publishing.)
- Waste cooking oil from our catering outlets continues to be converted into biofuel to power vehicles. Across halls and campus, 6,400 litres of oil was collected, which saved around 8.5 tonnes CO<sub>2</sub>e in avoided petrol.



#### Future goals:

- Complete delivery of Tranche 2 of the RE:FIT programme and develop proposals for Tranche 3. Tranche 3 involves a further £2 million invested into building refurbishments including upgrading the lighting technology.
- Conduct a feasibility study into constructing an energy-centre and district heating network, providing low-carbon heating and electricity to the campus and helping achieve our carbon reduction targets.
- Review LSE's Carbon Management Plan to establish revised carbon targets including specific targets for IMT.



# Targets

- Reduce total amount of waste generated by 1 per cent year on year
- Increase recycling and composting rates by 2 per cent
- Send zero waste to landfill

## Waste and Resources

We employ the "Reduce, Reuse, Recycle, Recover" waste hierarchy in our waste and resource management, in line with international best practice. This chapter presents our initiatives in each of those four areas.





This work is in line with UN SDG 12: "Ensure sustainable consumption and production patterns"

#### Reduce:

- We disposed of 1,485 tonnes of waste from campus and residences in 2016/17 which is a 1.8 per cent per cent reduction from 2015/16. Whilst the amount of non-recyclable items remained stable, our recycling and reuse total tonnage decreased. This was largely due to cutting the amount of paper waste by digitising paper records.
- All LSE and LSESU catering outlets have stopped using plastic drinking straws. The few straws we do give out are now paper. This is in line with the growing national debate around disposables and plastic waste.
- We saved around 92,000 disposable cups through the sale and use of our "Smart Mugs". We sold 1,032 reusable mugs in 2016/17, a considerable increase from the 600 sold in 2015/16.
   A 10p discount is offered for every drink bought in a reusable mug, encouraging our staff and students to reduce the amount of waste from paper cups.
- In 2016/17 we sold 121 refillable water bottles and we continue to promote our 64 water fountains across campus to help reduce bottled water sales. We also charge a 10p levy on all bottles of water purchased which is re-invested in student-led environmental projects through the Sustainable Projects Fund. For details on the student projects we supported this year, turn to page 43.

- In order to reduce waste, PC suppliers no longer include as standard a new keyboard and mouse. It was noted that many users prefer to keep their previous, working equipment.
- Our pull-printing system saved 805,400 sheets of paper from being wasted, by requiring users to log into shared printers to release print jobs. This is an increase of 31.3 per cent from 2015/16.
- We have digitised all HR paper records, including employment contracts, sick and annual leave records and payslips. This saved 45,600 sheets of paper, £1,800 in stationery costs and 48 hours of staff time per year used to fold and seal the paper payslips.

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Being President of the LSESU FoodCycle we have continued working with the FoodCycle hub in Kings Cross but now work directly work with the LSE community to redistribute food and stop food waste directly.

Joselene Katayama, Politics and Philosophy 3rd year undergraduate, LSESU FoodCycle President, Co-project Manager of SAVE FOOD Project

#### Reuse:

- Our annual "ReLove" re-use programme collected 7.7 tonnes of unwanted items donated by students moving out of halls, working in partnership with the British Heart Foundation and other charities. An additional 40kg of food was donated to Foodcycle and the Trussell Trust.
- We donated 5,790 books (weighing 2.7 tonnes) to charities Better World Books and Book Rescuers, who redistribute them internationally to underprivileged communities.
- The "LSE Skip" Facebook page enables LSE staff to swap unwanted items on campus to give them a new home, and continues to be in regular use. The Department of Management, who first set up the group back in 2015, held an "LSE Skip: LIVE" event in which LSE staff met over lunchtime to exchange items.

#### **Recycle:**

 Our 2016-17 rate of combined re-use, recycling and composting was 60.6 per cent, which is an increase of 3.3 per cent from last year. Based on 2015-16 Higher Education sector data, that would place LSE in the second quartile in the UK (2016-17 data is unavailable at time of publishing). This was because some of the waste we sent to be incinerated for energy was good enough to be diverted for recycling by our contractors.

- We audited the composition of our bins to see what people at LSE are disposing of, and how well they're separating their recycling, in order to create an evidence base for targeted action. We found:
- A large volume of paper was disposed of in general waste bins, instead of being recycled. In response we gave all our recycling bins new lids with wider openings, making it easier for people to recycle.
- Food waste was the main contaminant in both recycling and non-recyclables bins. Additionally, 57 per cent of food waste disposed of was still edible at the point of throwing away.
   In response, LSE Catering are working to tackle food waste at source, and we are engaging with students and staff to encourage correct waste separation.

#### **Recover:**

We continue to send zero waste to landfill, excluding construction waste, and instead send all non-recyclable waste to a plant that converts it into fuel pellets.

## Future goals:

Develop a waste strategy, which will include the following initiatives:

- Phase out single-use plastics and minimise the use of disposables wherever possible.
- Influence waste collection organisations to improve data management.
- Reduce food waste.



# **Targets**

- Factor ethical and environmental decisions into key purchases
- When purchasing electrical items, select those with highest efficiency ratings
- Influence staff, students and suppliers to consider more sustainable services and products including delivering sustainability training to procurement staff and new members of staff
- Use "green" renewable electricity tariffs where possible.



This work is in line with UN SDG 12: "Ensure sustainable consumption and production patterns"

## Supply chain

#### **Progress and Initiatives:**

- Sustainability considerations were incorporated into new contracts for building maintenance, pest control and uniforms, valued at £664,963 annually.
- In 2016/17, we bought 98.4 per cent of our electricity from renewable tariffs; the remaining 1.6 per cent was not possible for logistical reasons. We have committed to source 100 per cent of our energy from renewable sources in the future, and support the NUS Emissions Impossible campaign to achieve this.
- Procurement training was delivered to key staff, which included a range of sustainability issues such as whole-life costing and the circular economy.
- LSE made the decision to bring inhouse over 300 cleaning staff, having previously had an outsourced contract for over 20 years, in order to enhance their employment terms. As full LSE staff members, they will now have better working conditions, employment rights,

and benefits such as better sick leave, holiday and pensions.

#### Future goals:

- Embed sustainability into key contracts, including tender for PCs.
- Perform a gap analysis to assess our alignment with the ISO 20400 framework on sustainable procurement.



## Food

#### **Progress and Initiatives:**

- We retained our "Two Star Excellent" rating from the Sustainable Restaurant Association (SRA) for our four catered halls and three campus restaurants. The rating rigorously assesses 14 key areas that consider society, sourcing and environmental practices. LSE is the first London university to be Two Star-accredited.
- The four catered halls (Bankside, Rosebery, Passfield and Carr Saunders) achieved the Soil Association's "Food for Life Served Here" Silver Award. This recognises healthy menus in which ingredients are more organic, ethical, environmentally friendly and locally sourced.
- Fairtrade Status was achieved in June 2017, jointly for LSE and the Students' Union. 20 per cent of all Catering sales were Fairtrade products. All LSE catering outlets have sold Fairtrade bananas since 2014, and continue to serve triple accredited (Fairtrade, Organic and Rainforest Alliance) coffee at the five largest outlets. We also actively support Fairtrade Fortnight.
- The LSE halls were runners up in the Marine Stewardship Council's Sustainable Fish Award which was open to all UK catering establishments.
- We ran "Feed Your Brain", a healthy eating and lifestyle campaign to promote student wellbeing during the stressful exam period.

# **Targets**

- Liaise with suppliers to gain information regarding provenance, nutrition and welfare of their products to assist us in making more informed choices
- Monitor suppliers to ensure they are certified Marine Stewardship Council approved and where possible use MSC certified fish
- Promote healthy eating and raise awareness of sustainable food choices



This work is in line with UN SDG 12: "Ensure sustainable consumption and production patterns"





- A Union Coffee outlet opened in the New Academic Building. Union build partnerships with small-scale coffee growers and trade directly with them, paying farmers a living wage instead of just minimum wage. Union Coffee meets high ethical standards, showing transparency throughout their supply chain. They also ran promotional events highlighting the social, economic and environmental benefits of directly traded coffee.
- LSE Catering outlets continue to promote vegan and vegetarian options on their menus.

#### Future goals:

- Increase the range of vegan and vegetarian options in catering outlets.
- Cut food waste and increase composting.

## Water

## **Progress and Initiatives:**

- In 2016/17 we consumed 216,110 m<sup>3</sup> of water. This represents a 2 per cent increase against 2015/16 usage which could be explained by the increase of numbers of LSE students and staff.
- We conducted studies to explore water-saving measures via the Mayor of London's RE:FIT framework. However, all initiatives identified were found to be infeasible.

#### Future goals:

- We will tender for a new water contract, and will use this opportunity to engage with the supplier to explore water saving initiatives, including leak detection.
- Improve understanding of our water usage by installing "smart" meters on key buildings.

# **Targets**

Identify opportunities for water efficiency/savings measures in halls and possible infrastructure improvements



This work is in line with UN SDG 6: "Ensure availability and sustainable management of water and sanitation for all"

# Targets

- Obtain BREEAM "Excellent" aspiring to "Outstanding" for all new-builds
- New buildings to obtain Energy Performance Certificate (EPC) rating of "A".



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

## Buildings

## **Progress and Initiatives:**

- The Centre Buildings Redevelopment achieved BREEAM "Excellent" (Design) certification. Work on the building continues with the core of the new 13-storey building in place and the steel frame taking shape in 2018. Modelling of building usage suggests the building will achieve a high "B" Display Energy Certificate rating.
- In 2017 LSE started demolition work for The Marshall Building at 44 Lincoln's Inn Fields. This is another opportunity for embedding sustainable infrastructure, and the project is on track to achieve BREEAM "Excellent" status.
- Both the Centre Building and the Marshall Building will be supplied with low-carbon energy by Combined Heat and Power boilers, which will be fuelled by ethically sourced biofuel made from waste fish oil.

#### Future goals:

- Achieve a minimum of BREEAM "Excellent" rating in design and an "A" rated Energy Performance Certificate in the Marshall Building.
- Progress towards achieving for BREEAM "Excellent" in construction for the Centre Buildings Redevelopment.
- Adopt strong sustainability vision and targets for the planned redevelopment of Bankside hall of residence.

Developing the Centre Buildings and Marshall Building has been an exciting opportunity to create outstanding new learning and work spaces for our students and staff, whilst also contributing to their wellbeing and to LSE's sustainability strategy.

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Julian Robinson, Director of Estates

Operations and Estate

Architects' impression of the Marshall Building

# Targets

Promote and enhance cycling facilities and incentives

Minimise contractor emissions

Monitor emissions from business travel



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

## Transport

#### **Progress and Initiatives:**

- We installed new cycling infrastructure, including new bike racks and a publicly accessible bike pump.
- Transport for London provided free bike maintenance, Santander Cycle vouchers and bike security marking. TfL also ran several cycle confidence training session for LSE students and staff, leading guided tours around local streets, whilst providing professional advice on road cycling safety.
- LSE staff continued to benefit from the Cycle-to-Work scheme, which saves buyers up to 42 per cent on the purchase of a bike.

#### Future goals:

- Continue to promote and enhance cycling facilities and incentives.
- Integrate new cycle facilities into the Marshall Building.



## Pollution

#### **Progress and Initiatives:**

- In 2016-17 we piloted innovative new cleaning technology from "Orbio", avoiding the need for traditional cleaning chemicals. The device passes an electric current through salt dissolved in water, which creates a highly effective cleaning solution. This avoids cleaners being exposed to harmful chemicals and reduces. environmental hazards. It also cuts the amount of cleaning products bought resulting in reduced deliveries and hence road emissions and pollution. Following a successful pilot, we are now going to roll this out to the rest of the campus in the coming year.
- Working with Steer Davies Gleave, we carried out a transport survey to analyse deliveries to campus.
   As a result, we identified several opportunities for improvement which have been incorporated into our travel

and deliveries strategies. In particular, multiple departmental stationery deliveries have been consolidated, cutting our weekly deliveries sevenfold, thereby reducing traffic and associated air pollution in the local area.

• We installed air quality sensors on three LSE buildings to monitor ambient air quality, in response to growing public concern over this issue. This will help inform our approach to protecting the welfare of our students and staff.

#### Future goals:

- Roll out Orbio cleaning equipment across campus to significantly reduce the number of chemical cleaning products used.
- Collect and review data from air quality sensors.
- Promote local routes that minimise exposure to pollution.



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

# Targets

Minimise pollution to air, water and land



# Targets

Maintain and where possible enhance LSE's green spaces on campus and in halls of residence.

Green space incorporated into new builds



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

## Biodiversity

## **Progress and Initiatives:**

- Construction partners Mace have been committed to sustainability throughout their work creating the new Centre Buildings Redevelopment. They installed a green wall on their portacabin site office – believed to be the first time this has been done in the UK. The green wall helps combat on-site air pollution, whilst making the area more attractive. When construction is completed, the wall will be transferred to a permanent home on an LSE building.
- The LSE bees, looked after by over 90 students and staff in the LSESU Beekeeping Society, produced 86 jars of honey in 2017. The society was also very grateful to receive a donation from LSE alum and fellow beekeeper John Fry, which enabled them to install a hive for solitary bees in Passfield Hall. The Beekeeping Society held an end of season event where staff and students sampled and bought the LSE honey, learning about the differences between honey types.

- A new "observation beehive" was installed, which allows visitors to look inside without disturbing the bees.
- Students and staff grew some tasty lettuces and impressive carrots in roof garden planters outside the Shaw Library.

#### Future goals:

- Incorporate green spaces into the Centre Buildings and Marshall Building redevelopments including transferring the Mace green wall to be a permanent fixture.
- Install a "bee cam" to stream live footage of the beehives, fostering education and engagement within the LSE community on biodiversity and the importance of pollinators.
- Replace the planters on the Shaw Library to provide better facilities for LSE students and staff.

## Socially responsible Investment

#### **Progress and initiatives**

- No direct investments in companies engaged in the manufacture of tobacco, indiscriminate armaments, or substantially in extraction of thermal coal or tar sands.
- The establishment of the Responsible Investment Working Party.
- A reduction in indirect investments in from the manufacture of tobacco, indiscriminate armaments, or substantially in extraction of thermal coal or tar sands 3.4 per cent to 1.2 per cent (September 2017).

#### Future goals

- To monitor funds for developments in suitable products with lower allocations in the manufacture of tobacco, indiscriminate armaments, or substantially in extraction of thermal coal or tar sands.
- To seek other similar investors to increase the effectiveness of engagement with fund managers.
- To evaluate the reliability of environmental, social and governance (ESG) ratings.

# **Targets**

- To reduce the threshold of indirect active equity investments in tobacco, indiscriminate armaments or substantially in extraction of thermal coal or tar sands.
- To reduce the aggregate threshold of indirect active equity investments in tobacco, indiscriminate armaments or substantially in extraction of thermal coal or tar sands.
- To require indirect investment fund managers to comply with UN Principles for Responsible Investment.

8 BECENT WORK AND ECONOMIC GROWTH This work is in line with UN SDG 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

# **Targets**

Introduce an LSE 100 module, compulsory for all undergraduates, which focuses on environmental issues

Conduct research that informs public policy on environmental and social issues



This work is in line with UN SDG 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"

# **Education and Research**

Our research continues to be at the forefront of national and global thinking a wide range of sustainability-related themes. In addition to contributing to academic debates, we also share this knowledge with the wider public through our Knowledge Exchange and Impact programmes, in line with our mission to 'create and share knowledge for the betterment of society'. Through our education, we equip LSE graduates with the understanding and critical thinking skills needed to address the future challenges of our global society.

## Education

## What makes a Smart City? Teaching and Learning Centre, LSE GROUPS

'LSE GROUPS' gives undergraduates the opportunity to work on collaborative projects during the summer vacation, addressing a range of topical themes through interdisciplinary research. In June 2017, LSE students tackled 'Smart Cities' in partnership with students from Imperial College London. They addressed challenges around water systems, transportation,



healthcare and waste management, comparing approaches in London and Singapore. Based on their research, they presented proposals at a joint conference.



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

#### **Responsible Global Leadership seminar**

#### **Department of Management**

Each January, LSE organises a two-day seminar on "Responsible Global Leadership" for students studying a joint degree with CEMS and the Global Master's in Management. The conference-like programme reviews different areas of "good business" including sustainability. This year we kicked off the seminar with a panel on Corporate Social Responsibility with representatives from social enterprises who focus on sustainable procurement and ethical sourcing. The founder of Farmstand presented a guest lecture on how he developed



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After a Walk & Talk session, one student said that they were pushed to be more creative whilst another described it as an innovative way to talk about different study issues.

> Gemma Stansfield, LSE LIFE Learning Developer

his restaurant business with the environment and the impact of what we eat in mind. Finally, Rob Paris, Head of Sustainability and Consents at Crossrail, presented on how sustainability is embedded in one of London's largest infrastructure projects. Jon Emmett, LSE Head of Sustainability, chaired this discussion and students ended the day by exploring London Transport Museum in Covent Garden where a Crossrail exhibit was on display.



This work is in line with UN SDG 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

## LSE LIFE and Careers

## Work It Out

LSE LIFE and LSE Careers offer a series of events exploring the concept of meaningful work for LSE students. Events so far have included external guests speaking about their work in ethical and sustainable finance and how jobs in the finance sector can have a positive impact on wider society. With Royal Society for the Encouragement of Arts (RSA) Fellows, students also explored how organisations and jobs will respond to the current major world issues, including climate change.



This work is in line with UN SDG 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

#### Walk & Talk

## Gemma Stansfield, LSE LIFE

LSE LIFE has taken study appointment sessions outdoors to the local green space, Lincoln's Inn Fields, with the "Walk & Talk" initiative. In the 30 minute appointment, students can talk to study advisers about study questions or issues. Topics range from reading more critically and revising for exams to getting started on a dissertation and managing time. The initiative combines dialogue for learning and development with the green outdoors for boosting creative thinking, problemsolving and well-being.



This work is in line with UN SDG 3: "Ensure healthy lives and promote well-being for all at all ages"  $% \left( \left( 1,1\right) \right) =\left( 1,1\right) \right) =\left( 1,1\right) \left( \left( 1,1\right) \right) \right) =\left( 1,1\right) \left( 1,1\right) \left( 1,1\right) \right) \left( 1,1\right) \left( 1,1\right)$ 

## Department of government dissertation paper

The research dissertation paper "climate change as a global security threat" was presented by an LSE BSc graduate as part of the LSE Undergraduate Political Review Dissertation Colloquium where six BSc Government and International Relations graduates presented their dissertations before a large audience which included academic discussants.



This work is in line with UN SDG 13: "Take urgent action to combat climate change and its impacts"

## Experiential learning trip to Kew Gardens

#### Kirstie O'Neill, Department of Geography and Environment

LSE undergraduate students visited Kew Gardens and Richmond Park in order to understand, first-hand, research management and development work in relation to seed and plants in a world with a changing climate. The students from the Department of Geography and Environment explored the work spaces and seed storage facilities and heard from experts at Kew who spoke about seeds, plants and environmental change.



This work is in line with UN SDG 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

#### LSE 100

All undergraduate LSE students study the LSE100 course examining big questions including "How should we address poverty and inequality?". The course enables students to explore social issues from the many different fields of social science.



This work is in line with UN SDG 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"



## Research

## The effects of home energy efficiency upgrades on social housing tenants: evidence from Ireland

# Daire McCoy, Grantham Research Institute on Climate Change and the Environment

Household energy bills have been at the top of the political agenda this year. In the short term, increasing energy efficiency and reducing energy consumption will reduce energy bills. It will also help reduce UK emissions, around 12 per cent of which result from heating the UK's 28 million homes. Though energy efficiency measures have been supported by the government it is not clear how effectively current policies incentivise household cuts in energy use. Studying a sample of social housing in Ireland over three years, Daire McCoy from the Grantham Research Institute, with colleagues from the Economic and Social Research Institute at Trinity College Dublin, found that on average energy usage dropped by about half of the amount that bottom-up engineering models predicted. Given that similar model estimations are widely used to evaluate energy efficiency policy in the UK, the study highlights the importance of using observed data on energy use rather than relying estimated savings when conducting such evaluations.



This work is in line with UN SDG 7: "Ensure access to affordable, reliable, sustainable and modern energy for all"

## Resource Urbanisms

## LSE Cities

This research project investigated questions of urban form, geography and sustainability in Kuwait, Abu Dhabi, Hong Kong and Singapore. The research was guided by the common assumption that cities are directly affected by the availability and costs of natural resources and that different forms of urban development result in substantial differences in resource use. The final research report highlighted that the shape of cities has a considerable impact on resource efficiency, making it a critical factor for global sustainability and carbon emissions. The research also showed that Kuwait's per capita energy consumption is almost five times higher than that of Hong Kong and that these differences can in part be explained by the energy demand of buildings and transport systems. In particular, the size and arrangement of buildings, and the degree of dependence on private cars, directly impact a city's energy requirements and resource consumption patterns. This finding supports LSE Cities' ongoing research around the sustainability benefits of compact and connected city models.



This work is in line with UN SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable"

# Charging for plastic bags: does it reduce consumption?

## Gauri Chandra, Department of Management

Chandra investigated the long-term effectiveness of policies which charge consumers for plastic bags as a means to reduce plastic bag use. The research found individuals who paid for bags felt less guilty and less moral obligation towards the environment, hence highlighting the drawbacks of these initiatives and the need for considering nonmonetary interventions to encourage positive behaviours.



This work is in line with UN SDG 12: "Ensure sustainable consumption and production patterns"

## What is wrong with working from home?

#### Dr Esther Canonico, Department of Management

The benefits of working from home, including improved work/life balance and a stronger work ethic, are well known but Dr Canonico found that the long-term effects of working from home can lead to feeling personally and professionally unsupported, stunted professional progression and breakdown of colleague relationships. Managing expectations, better communication and a supportive company culture were key techniques to ensure successful homeworking.



This work is in line with UN SDG 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

# Air pollution, educational achievements, and human capital formation.

## Dr Sefi Roth, Department of Geography and Environment

The article examines the effect of air pollution on educational outcomes. It draws on recent research which implies that air pollution imposes higher costs on society, because it adversely affects scholastic achievement and human capital formation, in addition to human health. Furthermore, improving air quality may also improve social mobility, as evidence suggests that air pollution affects educational outcomes unevenly across the income distribution. The article therefore highlights that policymakers should acknowledge these additional effects when formulating new environmental regulations.



This work is in line with UN SDG 3: "Ensure healthy lives and promote well-being for all at all ages"

## Global trends in climate change legislation and litigation: 2017 update

## Michal Nachmany, Sam Fankhauser, Joana Setzer and Alina Averchenkova, Grantham Research Institute on Climate Change and the Environment

In the last seven years, the Grantham Research Institute at the London School of Economics has been tracking countries' national climate change regulatory responses, producing the most comprehensive global database on climate laws and policies – Climate Change Laws of the World. The tool now covers nearly 1,400 laws and policies in 177 countries, and climate-related court cases from 25 countries, all featured in an online, open access database which is complemented by a series of analytical publications, and an outreach programme targeting parliamentarians and policymakers worldwide, providing a resource to support increased ambition and action on climate change.



This work is in line with UN SDG 16: "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels."

## Fit for the future – The reform of flood insurance in Ireland: resolving the data controversy and supporting climate change adaptation

## Swenja Surminski, Grantham Research Institute on Climate Change and the Environment

The research found that the key to sustainable flood insurance is improved data-sharing about flood risks between government, insurers and other key sector actors. Improved data-sharing may help to address problems of unaffordable or unavailable flood insurance, which are currently experienced by some homeowners and businesses in Ireland. The research was in collaboration with the Environmental Research Institute at University College Cork.

## 13 CLIMATE



This work is in line with UN SDG 13: "Take urgent action to combat climate change and its impacts"

## LSE Research Festival

The LSE Research Festival is an annual competition giving LSE students and staff the opportunity to publicly exhibit their work. This year's prize-winners included Ganga Shreedhar's poster on what factors make people donate to conservation charities; Aurelia Streit's work on women's empowerment among Syrian refugees; and Victoria Adewole's poster on making surgical equipment more affordable in low and middleincome countries. The Research Festival tied in with the Beveridge 2.0 Festival, which explored some of contemporary society's biggest challenges (see page 44 for details.)



This work is in line with UN SDG 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"

- "The economics of climate-resilient development"
  - Contributed to and reviewed by Jared J. Finnegan (2016), Department of Government and the Grantham Research Institute on Climate Change and the Environment.
- "Estimating the effect of air pollution on road safety using atmospheric temperature"
  - Lutz Sager (2016), working paper no. 251, Grantham Research Institute on Climate Change and the Environment
- "Seeding success: Increasing agricultural technology adoption through information"
- Julia Tobia and Kelsey Jack (2017) IGC Growth Brief Series 012. London: International Growth Centre.
- "Shrimp and Coastal Adaptation: On the Politics of Climate Justice."
- Dr Kasia Paprocki and Saleemul Huq (2017) in Climate and Development 10 (1): 1-3. Department of Geography and Environment.
- "Post-decisional logics of inaction: The influence of knowledge controversy in climate policy decision-making"
- Dr Richard Perkins (with Amelia Sharman), Environment and Planning A, 2017 0(0) 1-19. Department of Geography and Environment.

#### Future Goals:

- Deliver LSE 100 module on environmental issues to LSE undergraduates.
- Deliver training to students on sustainability via LSE LIFE.



LSE Research Festival. Clockwise from top right: LSE Director Minouche Shafik with prizewinners; Beveridge Prize winner Victoria Adewole, Department of Health Policy; Photography prize winner, Farhia Abukar, LSE Faith Centre, with Professor Julia Black; prizewinner Ganga Shreedhar, Department of Geography and Environment.

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couraging innovation	Identify unnet need for UNIC specific equipment and stabilise the market by ensuring the demand. Engage financing and industry staleholders.					

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EXHIBITION AND PRIZEGIVING

# Targets

- Engage staff, students and members of the public in sustainability initiatives
- Actively support events including Green Week
  - Ensure availability of funding and support for student or staff-led sustainability projects
- Deliver sustainability training to staff and students

This work is in line with UN SDG 17: "Strengthen the means of implementation and revitalize the global partnership for sustainable development"

# **Engagement and Community**

We empower our staff and students to reduce their own environmental impacts and start debate and conversation on wider sustainability issues. LSE staff and students get involved in a range of initiatives and LSE reaches out to engage the public community too, inspiring them to take action.

## Engagement within LSE

- Green Week was collaboratively organised by the Students' Union and LSE at the end of February 2017. A week of sustainability events included "Binside Out" which showcases what a day's worth of LSE's waste looks like, Cycle Confident training sessions with Transport for London, visits to the LSE Beehives, and talks on our dependence on animal produce and "Brexit and the Environment".
- The LSE Department of Geography and Environment held a panel discussion for LSE Geography and Environment students about the opportunities and challenges of corporate social responsibility. On the panel were experienced CSR professionals: Susan MacDonald from Global Bright Futures; Amelia Shean from Sancroft; Eoghan Griffin from John Lewis Partnership; and Simon Reid from Innocent Drinks.
- Green Impact has been running for nine years in LSE and sees teams of staff compete to improve the environmental impacts of their own departments. In 2016/17, teams continued to lead their own projects which included an electronics repair workshop, a community fridge and the Management Department's map of "green" things to do within a one-mile radius of LSE - which won the competition! Students can also get involved as project assistants and auditors, gaining valuable experience and skills to support their future careers. Participants' achievements were recognised at our annual Celebration of Sustainability (pictured).



LSE Celebration of Sustainability 2017. Top left: Dr Andrew Young, LSE Chief Operating Officer

**G** 

Ingagement and Community



#### 88,047 kWh saved through Student Switch Off in 2016-17



Compared to a 2010-12 baseline

#### \* www.carbontrust.com

• Student Switch-Off is an international energy-saving competition for students in halls of residence. Over 500 students participated in 2016/17, (13 per cent of students in participating halls) with 41 trained as Student Switch-Off ambassadors. We achieved a 7 per cent drop (88,000 kWh) in energy use compared with 2012, during the months the competition ran.



#### \* www.carbontrust.com

 Reduce the Juice is student competition to save energy, waste and water in halls of residence. This year, its pilot year, it ran in Rosebery Hall and High Holborn Hall in which 57 students participated, of whom 11 'SEALs' (Student Engagement and Action Leaders) were given special training on energy efficiency and engagement. Rosebery reduced energy consumption by 3 per cent, increased recycling by 2.5 per cent whilst High Holborn reduced energy by 2 per cent on the previous year. Rosebery students won a brunch party and were commended as one of the best engaged halls in the national competition.

- LSE students, in collaboration with students from several other University of London colleges, hosted the 2017 Public Interest Environmental Law (PIEL) UK Conference in April. Supported by the Sustainable Projects Fund, the conference focused on the Green Economy post-Brexit.
- The Sustainable Projects Fund provided funding to four student and staff-led sustainability projects: buying an observation beehive and pollinator garden, the Public Interest Environmental Law conference (see above), subsidising the LSE Keep Cups and a staff volunteering day with the London Wildlife Trust. The Fund annually offers support and up to £20,000 for student and staffled projects that enhance sustainability at LSE, and is financed by a 10p levy on plastic bottles sold at LSE catering outlets.
- LSE were Finalists for two awards in the 2017 Green Gown Awards, run by the Environmental Association for Universities and Colleges (EAUC). One was for carbon reduction and the other was for sustainability reporting.

## Engagement in the community

#### **Beveridge 2.0 Festival**

In 1942, former LSE Director William Beveridge wrote a government report that identified the UK's main barriers to social development, identifying five so-called 'Giants' that stood in the way to progress: Want, Disease, Squalor, Ignorance and Idleness. The recommendations of the 'Beveridge Report' became the blueprint for the modern welfare state.

To mark the 75th anniversary of the report, LSE held the Beveridge 2.0 Festival, whose five themes re-cast the original 'giants' as the contemporary challenges of Poverty, Housing and Urbanisation, Future of Work, Education and Skills, and Health and Social Care. The public also voted for 'sustainability' to be added as the 6th 'giant'.

Over 4,600 people attended 39 events with speakers including Danny Dorling, Polly Toynbee and Professor Sir Julian Le Grand. Events included a debate on sustainable food featuring academics, activists and practitioners, as well as free samples of unusual sustainable food, and live research on ethical food choice behaviours. • At the United Nations climate change summit in Marrakech, Morocco, in November 2016, the Carbon Pricing Leadership Coalition announced that Nicholas Stern. Chair of the Grantham Research Institute, and Joseph Stiglitz would cochair the new High-Level Commission on Carbon Prices. Their report, published in Berlin in May 2017 ahead of the G7 summit, found that only a few countries have implemented carbon pricing, and usually at levels that are too low. It concluded that prices of US\$40-\$80 per tonne of carbon dioxide in 2020, and US\$50-\$100 in 2030, supported by appropriate policies, would be consistent with the goal of the Paris Agreement to limit global warming to well below 2 degrees centigrade. The report has been welcomed by political and business leaders around the world, and Lord Stern has been invited to speak about it at a number of high-level events, including the One Planet Summit in Paris in December 2017

 LSE Emeritus Professor of Statistics, Professor Henry Wynn, is a member of the CELSIUS network, which won a prize in the EU Sustainable Energy Awards. As a partner organisation, LSE has worked on business modelling and end-user engagement, led by Professor Wynn, Chair of the LSE Centre for the Analysis of Time Series.





Partha Dasgupta 'How many people can Earth support in comfort?

- LSESU Foodcycle society set up the Save Food volunteer project in June 2017. Each evening of the week, LSE students, staff and members of the public volunteer to collect food donated by local businesses, including LSE Catering, that would otherwise be wasted and distribute it to vulnerable people around Holborn. The project is receiving support from LSE Annual Fund to expand its work.
- The LSE Information, Management and Technology Division Green Impact's team organised an "unwanted coat collection" in which 30 coats were donated by LSE staff to support the "Wrap Up London" initiative. The initiative redistributes donated coats to over 100 charities around London, supporting the homeless, women's refuges, children living in poverty and asylum seekers to name a few. Because of its success, the team plan to run it again next year.
- A number of sustainability related public lectures took place at LSE, including Kate Raworth speaking about her new book: "Doughnut Economics: seven ways to think like a 21st century economist"; the Canadian Minister of Environment and Climate Change, Catherine McKenna speaking on "The environment and the economy: fostering clean growth in the 21st century"; and "How many people can the Earth support in comfort?" led by Professor Partha Dasgupta.

- The LSE Department of Geography's Green Impact team and the Grantham Research Institute on Climate Change and Environment organised a film screening of "Before the Flood" followed by a panel discussion featuring Professor of Environmental Policy in the Department of Geography, Simon Dietz; Senior Lecturer in Environmental Geography, Dr Michael Mason; Dr Rebecca Elliott, from the Department of Sociology and Bob Ward from the Grantham Research Institute.
- LSE Geography Department academics, Dr Ben Groom, Dr Charlie Palmer and Ganga Shreedhar attended the 19th conference of the BIOECON Network in Tilburg, Netherlands, The conference provided a platform to disseminate highquality research on the economics of environmental protection and biodiversity conservation. Dr Groom is the chair of the BIOECON scientific committee whilst Dr Palmer is a member of the committee.
- Dr Sefi Roth from the LSE Department of Geography and Environment appeared on the BBC World Service programme "The Food Chain: The food we breathe". Dr Roth spoke about the economics of air pollution. You can listen to the program online. Dr Roth's interview begins at 6:24. www.bbc.co.uk/ programmes/p04vqs51

 The LSESU Beekeeping Society ran a workshop "Bees and the Environment" at Fairley House, a London school for children with learning disabilities. The 20 children, aged 6-9 years, learnt about the role of bees in pollination, how they're kept to make honey and wax, and how we can help protect them.

#### Future goals:

- Provide engagement opportunities for LSE staff and students and support in projects.
- Develop volunteering opportunities for students and staff to support sustainability initiatives in the local community.
- Integrate sustainability into LSE's new training strategy, including delivering specific sustainability training for leaders and managers.
- Reduce  $CO_2e$  by 0.5 per cent from 2016/17 through Student Switch-Off and Reduce the Juice energy—saving competitions in halls of residence.

# Awards achieved in 2016/17





Aerial view of LSE campus and central London

# ★ Ise.ac.uk/sustainableLSE

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