

# Annual Sustainability Report

2020/21

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## Highlights

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23rd in People and Planet's University League

Ranked in the top 101-200 universities in the global Times Higher Education Impact Rankings

Fairtrade University Accredited since 2012

5 student volunteers receiving training and gaining skills through Student Switch Off

1662,071 kWh and 107 tonnes (both estimates) of carbon saved through student resident actions through Student Switch Off initiative

35,376 kWh of electricity generated from Avery Hill's solar panels

54% reduction of carbon emissions against 2009/10 Carbon Management Plan baseline of a 40% reduction target.

37% recycling rates (excluding construction wastes)

Supply chain emissions reduced by 22% by 13,361 tonnes (scope 3 emissions)

ISO14001 (2015) Certified (Estates & Facilities Directorate)



## **Foreword from Professor Jane Harrington, Vice Chancellor.**

For many years now sustainability has been truly important for the University of Greenwich. Our staff have been conducting research, innovating, and changing the university's internal practices. Whilst our students have been spending their time volunteering, gaining skills on sustainability, and developing businesses that support sustainability as our alumni.

This is now our Sixth Annual Sustainability Report and I am delighted that with every year we have more and more activities and achievements that we can be proud of. This Academic Year has been no different, as we have made longer term strategic decision as well as taking shorter-term specific actions to achieve sustainable change.

In May we have supplemented 'This is Our Time: Strategy 2030' by launching six sub/enabling strategies. Sustainability is a common thread in all of them, whether it is Estates, Student Success, Research and Knowledge Exchange, or others.

At the same time, we have continued to make strides towards our Net Zero Goal. We have fully rolled out our electric double decker busses between Avery Hill and Greenwich campuses. We have made a half-a-million investment in smart, energy efficient heating systems at Avery Hill Halls of Residence. We have achieved a 54% reduction of carbon emissions against 2009/10 Carbon Management Plan baseline of a 40% reduction target. We have generated 35,376 kWh of electricity from Avery Hill's solar panels. And we have reduced our supply chain emissions by 22%.

These are just a few examples, but our work this year has led to us retaining our First-Class Award in People and Planet's University League, to being ranked in the top 101-200 universities in the global Times Higher Education Impact Rankings, to winning Bronze Accreditation for Hedgehog Friendly Campus, and to us leading sustainability work of London Higher, a London-wide university membership body.

I am truly proud of all the work that we have done so far and you can learn more about it in this report. However, we are under no illusion that there is much, much more to do but we are absolutely committed to doing it and you will hear more about this in our report next year.

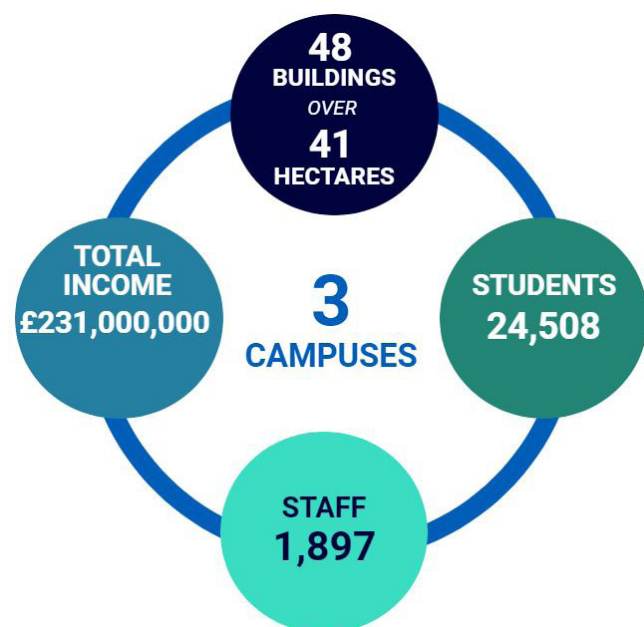
Professor Jane Harrington,  
Vice-Chancellor.

# Introduction

In spring of 2021 the university launched 'This is Our Time' our corporate strategy setting out our goals and objectives that will be met by 2030. This ambitious plan sets out not only our aims focused on teaching, research and operational excellence, it highlights the important role that sustainability plays across all we do.

The new values of **inclusivity**, **collaboration** and **impact** completely align with sustainability and how we use these key requirements to deliver change. We will achieve our goals through our principles that are to create opportunities, build partnerships and deliver impact. Again sustainability provides a perfect tool to support these principles delivering value by considering a holistic approach that reduces impacts and creates opportunities throughout the university.

As a university we have a significant role to improve the needs of society and protect natural systems. At Greenwich we want to excel at this.



Our work will educate and empower our students and graduates to become active contributors. Our researchers will help create solutions to the sustainability challenges we face. Our ways of working will increasingly align to sustainability principles. In every part of our work we will take **actions that count** towards making a better world.

We will inspire and empower our people and communities to contribute to a thriving, sustainable future.

We believe that through our work we can become the destination institution for prospective students, researchers, partners and staff talent who want to co-create a sustainable society.

Strategy2030 provides our university with a clear set of objectives, focused on our core objectives, excellent teaching and research and the support, culture and environments needed for our students and staff to thrive. It states:

***"Supporting and acting responsibly on the green issues of today and tomorrow is also crucial to the future success of the university. We take our sustainable development responsibilities very seriously and we are focused on working in partnership with others to collaborate on climate change and the green agenda.... We will work to embed sustainability in student experience, university operation and our financial strategy" (Strategy2030).***

We committed to achieving net zero carbon emissions by 2030 and in 2022 developed the net zero action plan that is identifying how we decarbonise our estate, our fleet and also reduce our Scope 3 business travel emissions by 50%.

Our strategy focuses on how we maximise the potential of our students and staff known as 'Education Without Boundaries.' Our sustainability ambition underpins this, creating excellent opportunities and outcomes for students contributing to societal and environmental needs.

We made significant investments to improve energy efficiency, particularly for our halls that will increase student wellbeing and experiences. Working with our facilities partners we have been increasing the value of our natural habitats and have better management via monitoring, analysis and reporting of our energy, water and waste impacts.

Covid continued to affect how we operated and therefore the impacts and improvements we made. This academic year was one largely affected by shut-downs, similar to 2019/20. Much teaching was online, with increasing face to face teaching over the year. In person teaching required increased ventilation and heating meaning that the energy saved through lock down closures was made up by additional gas and electricity used to heat and ventilate buildings to meet our Covid responsibilities. Lab research also continued in many labs. Energy savings were met where buildings could be shut down during lock downs and increased home-working. It must be recognised that with home working and study that some of the environmental impacts of undertaking work will be transferred from the campus to the home.

Travel to work and for business was significantly reduced as was commuting of staff and students. Other impact avoided including the almost complete digitisation of work, meaning printing on campus and for prospectuses was virtually eliminated. Other on-campus impacts also reduced, for example, reductions in catering requirements, although additional sanitation for covid management and also increased energy use in halls where residents remaining living on campus lived in halls more increasing energy and water use there.

The development of the estate did not pause during this Covid impacted year where we completed the modular buildings at the Avery Hill site.

Our progress is recognised externally in our University League 1st Class Award (maintaining this since 2012) and recognition for our contributions in contributing to the UN Sustainable Development Goals (SDGs) covering this reporting period through the THE Impact Rankings where we did particularly well in the SDGs: Reduced Inequalities (11th up from 68th the previous year), Life on Land (39th, improving on 66th position last year) Responsible Consumption and Production (80th).

## Greenwich's approach to sustainability

The nature of our organisation is complex, and the social, economic and environmental impact of our activities and the extent of our academic influence are as far reaching as they are long lasting. However, so too are the influences on the university. This is why we take a risk management approach. We seek to anticipate regulatory changes, student needs, resource demands and internal requirements, as well as the longer term global mega-trends that will ultimately affect all our futures. Understanding and recognising these influences in the context of the university allows us to plan for the future, helps us achieve our goals and create a resilient institution. We are motivated by our ability to empower change, the difference we as individuals can make and the significance of our global contribution when we act together; from the smallest action to life-changing research. Our Sustainability Policy is ambitious and wide-ranging, providing high level aims and objectives that help drive efficiencies and raise awareness amongst the next generation of leaders.

## How we are progressing on our policy is set out within this report.

The following report sets out our progress where relevant against targets. It also sets out how we are contributing to the SDGs especially through work delivered by our academic community.

### Governance

The Sustainability Management Board (SMB) exists to help provide direction and accountability for the delivery of sustainability at Greenwich.

The Board comprises professional services staff with responsibilities for key sustainability related impacts including Estates and Facilities, Finance, Procurement, and Information and Library Services. Importantly it also includes key representatives from our Faculties and the Students' Union to ensure the group can connect our students, academics (including teaching and research staff) to the potential that exist in the application of sustainability at Greenwich. It also helps us take advantage of the many opportunities that we can utilise coming from within and outside of the university relating to sustainability. Importantly it is chaired by one

## Contributing to the SDGs

The university recognises the importance of delivering sustainability across its work, including teaching, research and operations. The contributions we make can be clearly identified and reported against using the UN Sustainable Development Goals (SDGs).

These are 17 agreed goals covering social, environmental and economic sustainability objectives that are to be delivered in the developed and developing world. Our research particularly helps us with the latter.

To help us engage stakeholders and illustrate our contributions to the Goals this report sets out the SDGs our work delivers.

Each of the impact areas sets out how we are contributing to the SDGs with a more comprehensive section of this report stating how we are contributing to the goals particularly through our teaching and research.

Building on work we piloted in Medway campus in 2018-19 we have been working with staff to help them understand how they are contributing to the Goals. This has included the promotion of the SDG Teach In that encourages teaching staff to explore the SDGs. We have also been encouraging staff to consider the goals in their teaching through workshops that explore staff understanding of sustainability and using the Goals as a means that identifies connections to staff work. Operationally we have used the goals to promote our sustainability practices around the campus. As an example we used these to promote our second disposables free outlet at Medway.

Our positioning in the Times Higher Impact Ranking further supported the importance of integrating and showcasing the Goals in our work. This certainly created further interest locally and strategically in pursuance of sustainability and thus the SDGs.



of the Deputy Vice Chancellors providing an important connection to improve strategic decision making that takes into account sustainability. To view a copy of the SMB structure visit: <https://www.gre.ac.uk/sustain/strategy>

## About this report

The university is fully committed to functioning as a socially responsible and sustainable institution, aiming to minimise our impact on the environment and to achieve significant cultural, economic, environmental and social contributions at local, national and international levels.

This report has been prepared by the Sustainable Development Unit to illustrate the university's performance against our most significant sustainability impacts for the academic year 2020/21 and includes examples of our achievements and challenges we face. The data for this report represents our owned activities only and is mostly sourced from data we submit to the Estates Management Record 2020/21. The full suite of data is publicly available from the Higher Education Statistics Agency (HESA).

It's important to us that we create materials that our students, staff and other interested parties want to engage with, therefore your feedback is welcomed and encouraged. If you have suggestions for future content or any questions regarding the data within this report and the work the university is doing then please contact us:

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[https://www.instagram.com/uog\\_sustainability/](https://www.instagram.com/uog_sustainability/)

[www.greenwich.ac.uk/sustain](http://www.greenwich.ac.uk/sustain)

***This Is Our Time excerpts: “we will enhance our existing expertise in global sustainability, science and engineering to provide a range of services for local and regional enterprise that are aligned to the regional economic agenda, UK Industrial Strategy and the UN Sustainable Development Goals..”***

# Energy

## Target:

- **To reduce Non Residential Energy Consumption by 14% by 2022 from a 2015/16 baseline**

Our energy consumption has a significant impact on the environment as well as our utilities spend. Costing approximately £3 million a year, it is important that as a university we strive to meet our energy needs as efficiently as possible, ensuring we optimise resource use, deliver value for money and minimise our reliance on the burning of fossil fuels.

The impacts of Covid on how we operated meant that although in some areas we have saved energy, for example, though the shutting down of the campus during lockdowns and electricity reductions for office equipment, this was offset by the need to increase on campus teaching, requiring additional ventilation and heating to ensure we could teach and work in ways that minimised the spread of the virus.

The university has set a strategic KPI to reduce our energy consumption by 14% by 2022 across all non-residential areas. This has been set against a 2015/16 baseline as it best represented our operations at the time. In 2020/21 there was no real change from the previous year with energy use increasing by 1.6% (486,000kWh). The planned disposal of Mansion site was expected to have occurred within this target time-frame and its continued, though reduced use, has contributed to this milestone target not being met.

Having a focus on energy use is important as it provides a clear understanding of how efficient we are in using energy. It has implications on our carbon footprint, especially where energy comes from fossil fuels, such as gas for heating and power, or where from what the electricity is generated that we use to power our campuses many electrical needs. There's also a direct cost implication as for every unit we are able to save through energy conservation and efficiency actions we

will save money that can be reinvested into our teaching, research and improve our student and staff experiences.

Since the Carbon Management Plan baseline position in 2009/10 our estates have seen the addition of Devonport Halls, the Medway Student Hub and the Dreadnought building, all of which have inevitably contributed to increases in energy consumption across our estates.

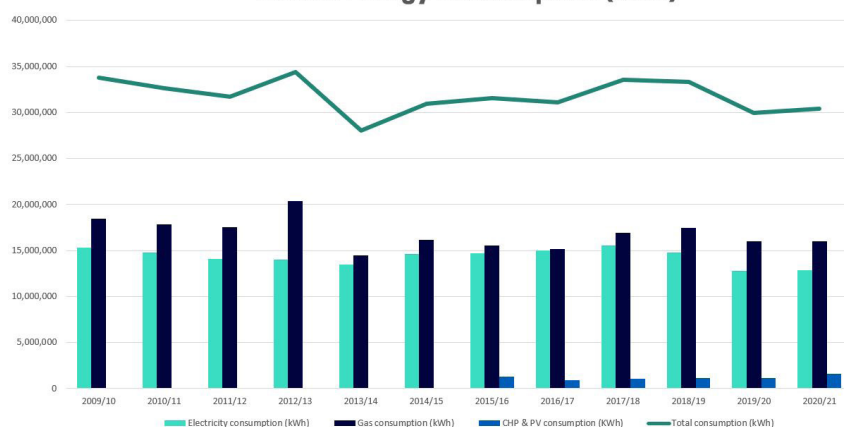
In this year Avery Hill has a partial redevelopment with the installation of the modular buildings including the library, office space, labs and teaching rooms. These will be operational in September 2022. The library includes intelligent Thorlux energy saving lighting systems providing data including data providing individual luminary energy use, room occupancy and centralised control to help set power down and switch off settings. The installation of over £500k worth of intelligent electrical heating in the university operated halls of residence at Avery Hill are expected to deliver energy savings as they will have occupancy sensors as well as other sensors to detect when rooms are not in use or when windows may be open and reducing heating to ensure that it isn't wasted.

The university subscribed to the Student Switch Off campaign. This is an initiative promoting energy efficient behaviours of our students living in UoG halls.

The implementation of the new Integrated Facilities Management contract in May 2020 has created opportunity to target and embed energy efficiency in across facilities management services. Additional staff resource and expertise available from elsewhere in the company has assisted with energy efficiency. The overarching facilities management contract includes more training and engagement of on the ground staff in addition to analytical support of energy use through the central expertise available though Sodexo.

Support includes technical input to improve the energy efficiency of processes and systems, plus engagement support to help UoG energy users.

**Annual Energy Consumption (kWh)**



## Contributing to the SDGs



**“To reduce energy use and to further explore the possibilities of less carbon intensive energy sources”**



# Carbon

## Target:

- To achieve net zero by 2030. Interim targets set out in net zero carbon strategy

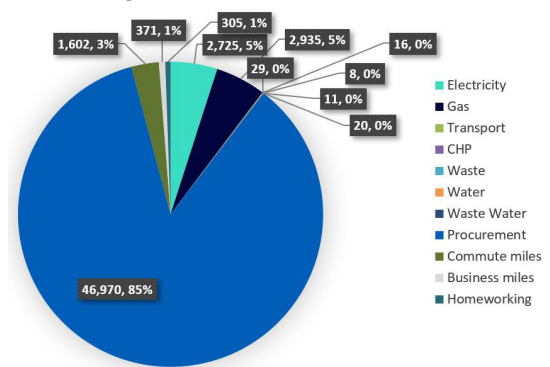
Our Scope 1 and 2 carbon emissions, that's the carbon produced directly from emission sources owned by the university (i.e. gas used for our boilers and fuel in our vehicles) and purchased electricity, have reduced by 53% as compared with our Carbon Management Plan reduction target of 40% to be achieved by 2020.

In the autumn of 2020 the university committed to achieving net zero by 2030. In spring 2021 we began commissioned external experts to undertake audits, research and analysis to create the university's Net Zero Action Plan (Zeroby30). The Plan will be launched in 2021/22. This includes analysis to fully cost and set time lines for completion to ensure we meet this fundamental KPI. It has looked at improving energy efficiency of the estate, investments to decarbonise our estate including heating, catering and lab fuels in addition to fleet fuels. It covers Scopes 1 & 2 and Scope 3 covering a 50% reduction in fleet fossil fuel use and includes Scope 3 emissions relating to recycling, waste and water.

The university calculates its carbon footprint in two ways: A location footprint which includes the carbon footprint of our gas, university fleet and business emissions in addition to those emitted from the electricity used with a national electricity conversion factor applied. The other measure: market based includes the same as location based calculation but takes into account that as the university uses 100% carbon free electricity reducing reported emissions.

Our location based footprint is: 5,722,988 tonnes and our market based footprint is 2,987,913 tonnes

## 2020/21 Carbon Breakdown



The pie chart breaks down our carbon footprint into a range of categories for all carbon reporting scopes. Procurement (Supply Chain) (categorised as Scope 3) has a significant impact on our carbon emissions suggesting we need to buy less or buy items or services with a lower carbon footprint. Travel is also significant particularly private transport (cars) for commuting and the use of business flights.

We plan to have a complete Scope 3 carbon reduction plan in place in 2023/24.

## Contributing to the SDGs

- Carbon reduction is a strategic KPI and an illustration of our commitment to sustainability. We are on a journey that has so far meant the installation of solar cells, biofuel fed CHP plants and the sourcing of only zero carbon electricity. We are therefore focusing on clean energy, innovation and sustainable cities in our objective to take climate action. Our research and teaching highlight this in that we have renowned academics working in areas relating to policy, carbon capture and agricultural systems.



## Scope 1 & 2 Emissions & Targets





# Transport and Travel

## Target:

- **43% vehicle fleet carbon emission reduction achieved against 2020 40% target (baseline 2005)**
- **50% reduction in business travel emissions against 2020 20% target (baseline 2012/13)20 (2012/13 baseline)**
- **29% commuting emission reduction achieved against a 20% target (2007 baseline year).**

This is Our Time states we will “[Minimise harmful emissions arising from business travel, commuting and deliveries by implementing a university-wide Green Travel Plan](#)”

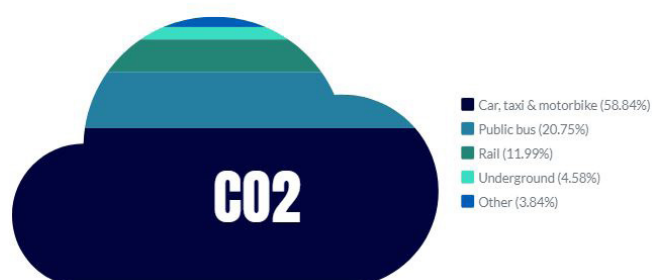
The university has a significant role in providing transport and encouraging students and staff to take journeys with a lower environmental footprint. The Green Travel Plan was in development in 2020/21 and will launch in 2021/22.

The university actively works to reduce the impacts associated with travel between its three campuses. The investment in two electric double decker buses and in two hybrid coaches illustrate how the university is taking responsibility for not only reducing carbon emissions associated with inter-campus stakeholder travel, these buses also reduce other emissions related to internal combustion.

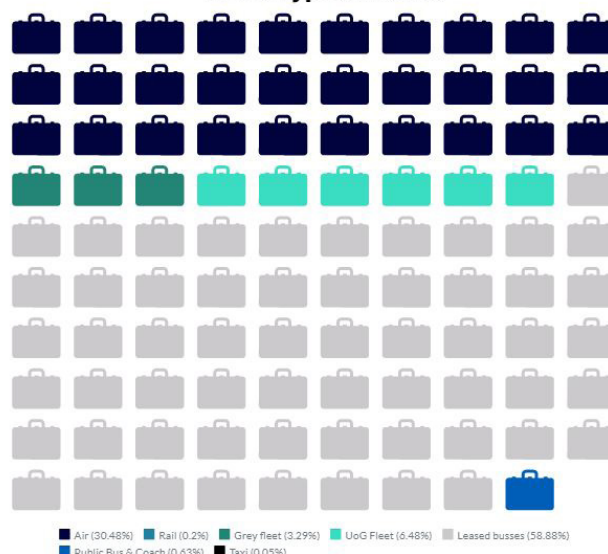
The university promotes options to enable staff and students to utilise public transport, UoG transport and active travel, including walking and cycling. We promote car sharing but realise still we have a major challenge where many staff and students commute from areas where there is often challenging public transport or active travel options. Medway and Avery Hill in particular have higher private car commuting, whereas Greenwich campus is better located to utilise rail, DLR and bus services.

The university’s Travel and Transport team works closely with transport providers to where possible improve public transport services including the

**Proportion of Carbon Emissions from Student & Staff Commuting by Travel Type (Tn CO2e)**



**Proportion of Carbon Emissions by Business Travel Type (TnCO2e)**



university outputs. In 2021 the university committed to procure two electric double decker buses Greenwich-Avery Hill bus service. This is a clear indication of our desire to decarbonise our vehicle fleet, including through the engagement of our bus and coach service contractors.

The Natural Resources Institute initiated its Carbon Working Group with a main aim to reduce the carbon footprint of its flight related travel emissions. This group has been analysing flight usage and developing a deviation methodology to ensure that any flight or journey taken takes carbon into account with the aim of significant reductions in emissions.

**This Is Our Time excerpts: “To minimise harmful emissions arising from business travel, commuting & deliveries..”**

## Contributing to the SDGs

- The university is working hard to reduce the impacts of its travel needs in ways that contribute to SDGs relating to health improvement through the promotion of active travel and reduced emissions that would otherwise impact on health, improving the sustainability of our cities by reducing pollution, improving non-public car related travel systems and promoting digital meetings over physical ones. All this also delivers carbon savings. We know we need to find solutions that work to help meet our travel related net zero carbon targets sooner than 2030 if possible and do so in ways that ensure fairness and equity of access for all.



# Consumption, Waste and Recycling

## Target:

- To achieve a 70% recycling rate (by weight) of non-construction wastes
- Reduce total weight of non-construction wastes by 5% annually

This is Our Time states we will “address pollution by reducing harmful emission and discharges by promoting the ‘zero waste’ principle (rethink, reduce, reuse, recycle) in order to minimise the environmental impact of the use of natural resources and waste disposal.”

The graph above shows we are continuing to generate and dispose of less waste than ever, with a 49% reduction since 2009/10. This is a significant improvement although much of this is due to there being very little on campus activity because of the pandemic. Much waste derived from halls which still operated and producing large amounts of domestic wastes.

It is likely that the 5% target will need to be revised as the reduction target is now almost impossible to attain, particularly with growing numbers of students attending our campuses and the inclusion of halls within our reporting scopes from 2020/21.

Recycling rates also fell from the 57% rate in 2019/20 to 37% in 2020/21. This could be due to a number of reasons: waste contractors were unable to manage recycled materials and these were collected as recycling but co-mingled with general wastes and we have reported this as general wastes. With limited on-site activity engagement programmes did not occur, although online communications continued. Much wastes were derived from halls of residence and were heavier weight, comparatively to more office based wastes and these were not segregated to the level we would have liked. Higher levels of general waste were consigned significantly impacting on our recycling rates. It is also possible that a change in waste contractor has meant that more accurate data is being provided to us.

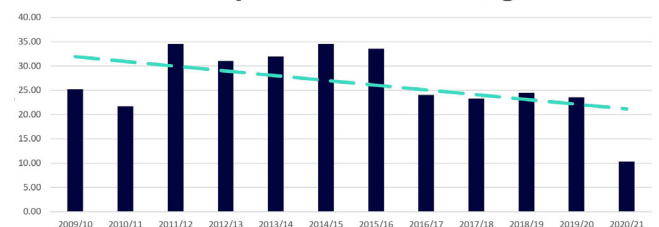
The university continued to reuse furniture especially that coming from the Mansion site which we have been preparing for sale. We made available over 16 tonnes of furniture and other resources worth £40,000 to local schools, care homes and hospitals.

## Contributing to the SDGs

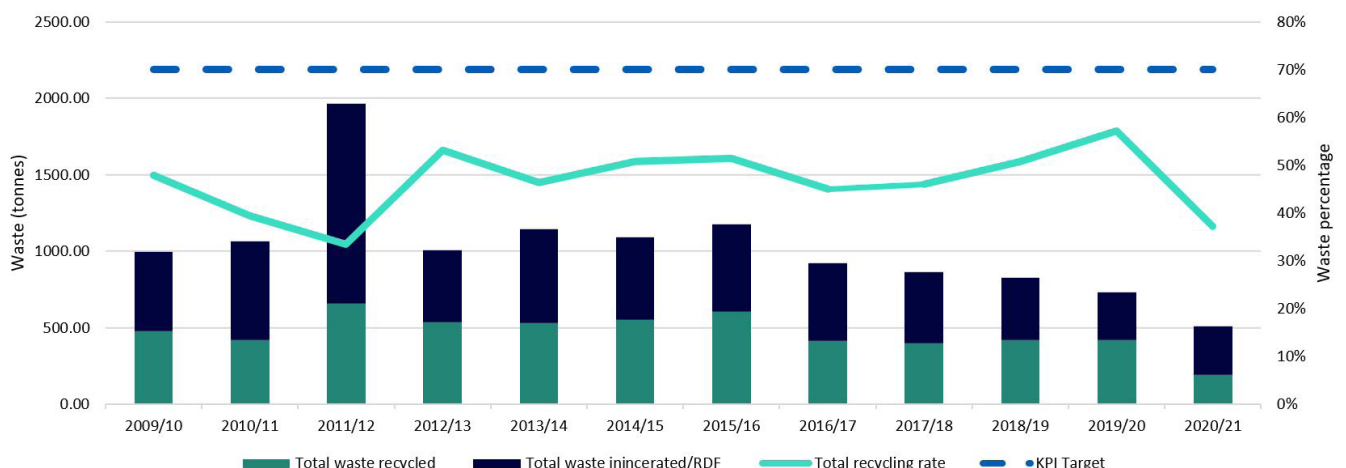
- The university is committed reduce the amount of waste we generate by more intelligent procurement and circular economy thinking. This is already ensuring we donate to our communities significant resources for reuse. We undertake engagement programmes that encourage all stakeholders to take responsibility and action to support this focus that deliver a range of SDGs too.



Waste per student & staff (kg)



## Annual Waste Tonnage & Recycling Rate



# Water

**Target:**

- To reduce water consumption by 1% per annum

Water availability is a key issue in any organisation and its importance is never fully appreciated until there is an interruption in supply. The need to ensure there are sufficient supplies for the university and our wider communities is essential if we are to avoid the need to utilise portaloos and use water tankers or water bottles to meet our needs.

Climate change and the need to be resilient to its impacts is essential. We all need to use water carefully, avoiding waste and where possible identify and utilise alternative sources to maintain our supply into the future.

The graph above illustrates that in 2020/21 our water consumption dropped by a very small margin, mirroring the previous, partially covid impacted year. Covid related closures of buildings has had a continued, although the university did operate and students and staff were on campus and in halls. Improvements in water monitoring, over use and leak reporting has meant better control of water use across the university estate.

Achieving the target using the baseline year will be a challenge, especially where we have grown the estate and increased student numbers. A continuing focus on water saving will continue. The disposal of Mansion site occurred in July 2021 meaning the water savings expected due to its closure will not be included in savings until 2021/22.

As we have a large number of students living in our halls of residences we know there is a large amount of water used domestically, for washing-up, flushing toilets and showering and washing. Through Student Switch Off we encourage students to shorten their showers and wash up using bowls and putting plugs in sinks. This has the potential of not only reducing water use significantly but

for hot water we can also save energy and carbon too. The completion of the first full year if the Integrated Facilities Management contract has provided closer working with key IFM personnel to understand our water consumption, reduce the impact of leaks and provide a better understanding of the quality of water related assets that need management and replacement provides opportunities to better manage water use.

We closely manage watering our grounds and only do so in the goal mouth areas of our football pitches and the Community Edible Garden both at Southwood site in addition to watering the planters outside Drill Hall Library at Medway and some of the living roofs on the Stockwell Street Building. We select more drought tolerant plants for our beds and do not water our grass areas even in the hottest and driest of years. We invested in waterless urinals at all campuses which have saved significant volumes of water in addition to replacement of taps with low flow alternatives. We encourage staff and students to avoid wasting water by not leaving taps running and reporting drips and leaks.

Plans for any redevelopment of the estate will investigate the potential for grey water, rainwater harvesting and also look to ensure sustainable drainage systems are designed in to reduce any surface water flooding that could occur downstream of the campuses.

### Contributing to the SDGs

- The university is seeking to reduce consumption and minimise discharges of harmful materials. It is using innovation to assist these outcomes, with the aim of improving climate resilience within our communities, supporting the SDGs below.

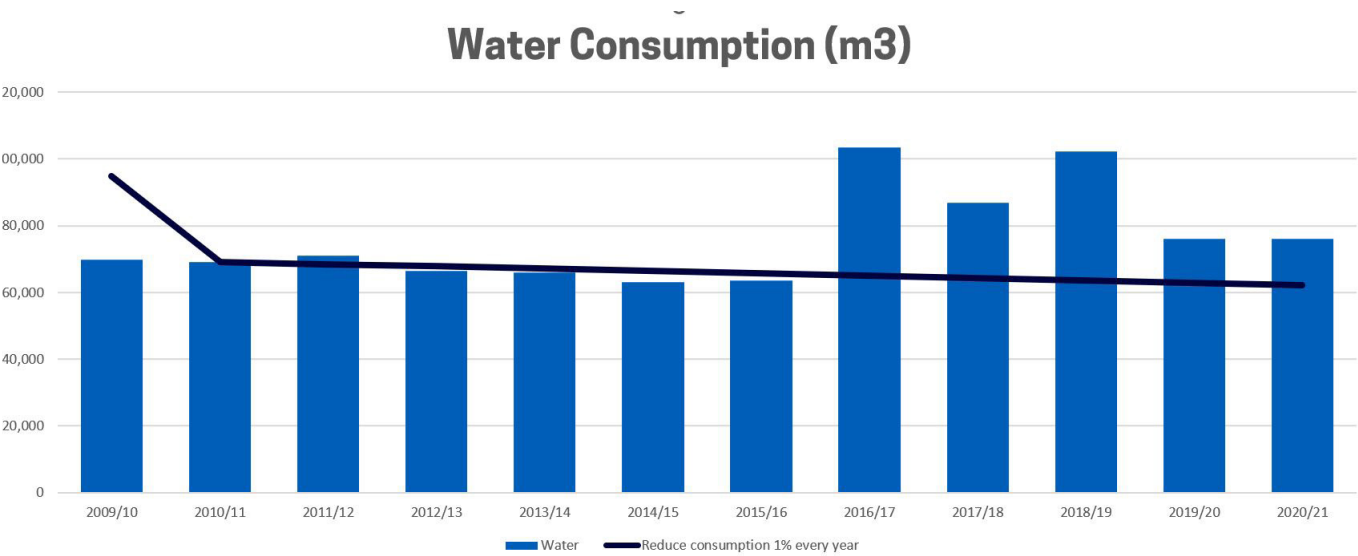
6 CLEAN WATER AND SANITATION

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER





# Sustainable Food

## Target:

- Fairtrade Foundation University
- Food for Life Gold
- Marine Stewardship Council Award for sustainable fish

The provision of delicious and sustainable food is really important to us and we are proud of the progress we have made.

We have retained Food for Life Gold at all our outlets and for all our menus. We have held Fairtrade University status from 2012 to May 2020 and are now in a 'working towards' status for Fairtrade Foundation University award as part of the new audit and award scheme that will be assessed in 2022. We also retain our MSC certification as all seafood comes from MSC certified stocks.

Working in partnership with our caterers BaxterStorey (who provide food at all campuses apart from Southwood Site), Sodexo (who provide catering at the Dome) and the Students' Union we have collaborated to develop initiatives and partnerships that are recognised externally. Our Sustainable Food Steering Group continues to work together to continually improve our food and drink offer

Covid significantly impacted on the provision of catering at our campuses. This also meant that many initiatives sadly could not be taken forwards.

With lock-down we utilised digital means to develop an online Ethical Food and Fairtrade Fortnight which covered a wider range of subjects utilising expert speakers from across the university and experts for the catering trade.

The university and its catering partners joined with the SU-EATABLE Life initiative to help us better understand carbon reduction in our catering offers and to encourage greater awareness of the impacts of high water and carbon intensity food stuffs. The project undertook research to help develop engagement materials and platforms to encourage changes in diets. This is an EU funded project, delivered in the UK by the Sustainable Restaurants Association in partnership with Barilla and other European partners.

<https://blogs.gre.ac.uk/greengreenwich/ethical-food-fairtrade-fortnight-highlights/>

**This Is Our Time excerpts: “We can expect: A culture that is committed to our climate change responsibilities and the Green Agenda”**

## Contributing to the SDGs

### SDG2

- Research undertaken by the university's Natural Resources Institute has led to significant reductions in food wastage and poverty reduction in less developed countries

### SDG3

- At our outlets we have sought to continually improve the healthiness of diets, increasing the amount of plant based ingredients

### SDG6

- We provide free drinking water at all outlets and have increased the number of water fountains on our campuses

### SDG11

- Our food provision, delivery and partnership working has delivered sustainability benefits for London and the region. Where possible we use local suppliers and reduce delivery frequencies

### SDG12

- We promote principles of the circular economy in our outlets through reuse and recycling

### SDG13

- Food wastage is managed to avoid this wherever possible and food waste is bio-digested generating energy and fertiliser. No food waste is sent to landfill where it could rot and generate the greenhouse gas methane

### SDG14

- Having MSC accreditation means we source seafood only from sustainable fish stocks

### SDG15

- Our accreditations require responsible farming practices. We stock organic, Rainforest Alliance and Fairtrade products all having lower impacts upon nature and promote plant based diets.



# Ecosystems Services

## Target:

- **To develop and implement a biodiversity policy that seeks to protect and enhance wildlife on campus.**

We recognise that without a healthy natural environment we will undermine our ability to access the free services that nature provides. Ecosystems services is a term used to describe the many and varied benefits that humanity freely gains from properly functioning ecosystems. These provide us with agricultural produce, timber, and aquatic organisms such as fish. They also provide us with clean drinking water, the decomposition of waste, and the natural pollination of crops and other plants, essential to our own success as a species.

To help us continually improve the value and diversity of our natural spaces in 2021 we updated the university's Biodiversity Action Plan. This review provides a refresh to our targets across not just the improvement and management of our green and blue spaces, but also sets out how we need to improve the engagement of our many stakeholders in our natural spaces.

Our estates offer a variety of biodiverse and valuable natural spaces. Greenwich lies between the River Thames and Greenwich Park and at Stockwell Street our academics have created an incredibly diverse space used for research and valued by wildlife. Medway campus has a rich area of woodland, some of which the university is interested in making wider ecosystem improvements. At Avery Hill we have large green spaces which are actively managed to support the many species that live or pass through our campus.

At Avery Hill here is also an organic food garden and a forest garden, both cared for by volunteers. The diversity of habitats brings an abundance of insect, bird and animal species. This then brings opportunities to use the spaces for teaching, research and leisure and well-being, illustrating that the protection and improvement of our natural spaces is an investment vital to all our futures. The Edible Garden and forest garden welcomes our Primary Education and Early Years students every year to learn how natural spaces can be used to encourage children to connect with nature and also to realise its importance in their lives.

The beautiful Medway campus has woodland areas, green spaces, beehives, and is the home for a significant amount of critically important research and teaching on Ecosystem Services, farming and land use practices.

**“To protect and conserve the heritage buildings we occupy and to actively protect and enhance wildlife on campuses carbon intensive energy sources”**

## Contributing to the SDGs

### SDG2

- Our volunteer run Community Edible Garden provides fruit and vegetables available for free for any of our students, staff and local community to harvest and enjoy

### SDG3

- At Greenwich we encourage natural spaces and encourage people to use them to improve their physical and mental health

### SDG4

- We provide a range of taught courses that focus on the importance of natural systems and the need and means to protect them

### SDG6

- By improving our natural spaces we are better able to regulate water flow and maintain the water quality of water that passes over our estates

### SDG11

- Our volunteers teach other volunteers how to grow their own fruit and vegetables and also encourage others to create their own gardens at home or in their own communities. We welcome volunteers from the University and beyond

### SDG8

- We demonstrate and train people to be more self-sufficient and to learn how we can embrace natural systems to help us grow food organically and without waste

### SDG13

- We encourage the increase of biological life that can improve the capacity of our estates to absorb carbon. Through our spaces we are also able to illustrate the impacts of climate change on natural spaces

### SDG14

- Our operations and outreach work aims to reduce the amount of pollutants that can enter our 'blue' environment

### SDG15

- Through our ecosystems related policies, plans and actions we continually seek to protect and improve our natural spaces.



# Construction and Refurbishment

This is Our Time provides clear expectations as to how sustainability is integrated into our estates and operations. Included within the Connected and Sustainable Campuses Strategic Priority it states we will “*create a green and sustainable university*”, where we will “*reduce energy use and explore the possibilities of less carbon-intensive energy sources*”, “*we will offer a digital first approach to our work, taking account of how technology and environmental sustainability will shift the demand and shape of activities and physical spaces more creatively to deliver the campuses of the future.*”

We will have achieved our ambitions if: ...“*Each campus is able to demonstrate its contribution to the university's overarching KPIs, contributing actively to the overall strategic plan.*” and .. “*we will have reached Net Zero*”

The Estates Strategy, a sub strategy of the This is Our Time, is being developed in 2021/22 and will ensure sustainability drives it forwards. It will not only help deliver Net zero goals, but also ensure that we have all elements in our decision making tool box to avoid sustainability impacts from the concept phase all the way through the project life-cycle including post occupancy and long term operation.

Net zero is a ‘North Star’ for us. Every decision will need to consider the carbon implication. This will in the first phase relate to how projects meet our Scope 1 & 2 net zero plan, but we will also be requiring indirect, Scope 3 emissions to be considered over the next few years. As can be seen from the Carbon section, procurement emissions are significant. We know the carbon footprint of materials for construction are significant. There is about 900Kg carbon footprint per tonne of traditional cement used, approximately 1.85 tonnes of carbon are embodied in every tonne of steel used. We therefore need to very understand what the footprint is of any building and aim to reduce it. We will require such information to judge which materials to use and also to report Scope 3 emissions. Knowing it may be almost impossible to create carbon negative buildings we will need to know the footprint to ultimately offset the carbon emitted through our construction and refurbishments. There are opportunities we must explore including, for example, utilising the university’s Carbon8 technology. This captures carbon from combustion processes and fixes it into materials that can be used in construction, This includes cements and aggregates that are carbon negative.

Understanding not only the embodied carbon of materials is important. We increasingly need to know that we have to design our buildings in ways that have reduced carbon emissions in use, and where possible integrate energy generation, such as PV arrays into the buildings, in addition to water capture and reuse systems.

We must also consider how to meet forthcoming regulations requiring developments to deliver biodiversity net gain. This will require green space that is utilised for new building projects to be considered

and overall improvements to the natural value of space be undertaken to compensate for green space loss. For example, this could mean any amenity grassland lost to a development would need to be offset with the improvement of a larger space with higher natural value planting, for example, a wild-flower meadow, woodland, pond or so on.

In terms of considering sustainability in new developments we have used a more sustainability focused approach in planning for example in response to the closure of the Mansion site. This is meaning that any remaining teaching, office, library and other uses is being transferred to Greenwich and the Southwood campus. A re-evaluation of existing spaces at Avery Hill was undertaken to maximise utility. As some specialist spaces were still needed including library and chemistry labs and additional lecture space the university made a decision that delivered core sustainability outcomes. Existing modular buildings were utilised, one reused and transported from Mansion, the other a temporary two story building was transported from Greenwich to Southwood Site. A new modular library was designed and transported to site and installed over the period of a week or so. Thus building provided a useful linkage between Fry and Grey buildings and provides a library, academic and office space.

Such modular builds mean that they fulfil sustainability aspirations. These are built off-site, often using sustainable and reusable and ultimately recyclable materials that usually have high thermal efficiency. At their end of use they can be simply unbolted and moved to another location to be reused fulfilling a circular economy goal.

## “To incorporate the principles of sustainable development into all new build & refurbishment projects”

### Contributing to the SDGs





# Construction and Refurbishment

## Contributing to the SDGs

### SDG3

- We design and operate our buildings to meet all potential user needs and to ensure that the health and well-being of our users are met

### SDG4

- The University is proud of the high quality teaching it delivers and the hard work our students undertake in pursuing their educational goals

### SDG5

- The University seeks to ensure that our estate ensures that our gender equality commitments are met

### SDG6

- Through our continual improvement of our estate we aim to increase the numbers of water fountains, although this can be restricted by our building's heritage protections

### SDG7

- The University generates its own solar power and buys almost carbon free electricity from its supplier

### SDG8

- Our contracting of building work requires suppliers to provide decent, and safe working environments

### SDG9

- We work with partners to identify where we can integrate effective innovations to our estate that can deliver social, environmental and economic benefit

### SDG10

- We consider users in all design and build decisions to reduce inequalities

### SDG11

- We aim to ensure we build and operate our buildings in ways that complement the sustainability needs and ambitions of the areas our campuses are located in

### SDG12

- We design and build estates that aim to reduce the material and waste in their construction and use and work closely with contractors to ensure they do too.

### SDG13

- It is critical for our success that we seek to reduce the carbon emissions of our work. It is crucial that we design and build with energy and carbon reduction in mind, with a particular focus on engineering out fossil fuels from our buildings. We are on an ongoing journey and this work will keep the Estates team focused for many years ahead

### SDG14

- We have the ability to build in systems that can help protect the blue environment. This includes ensuring we are able to ensure that buildings and their users use water efficiently and we have systems in place to avoid polluting water courses

### SDG15

- We are fortunate to have beautiful and often biodiverse rich campuses and it is essential that our estates development work protects and improves the natural environment. The Estates team are fully aware and engaged on our Ecosystems Services work and this will increase with the integration of ecosystems services thinking into our estates planning and development work.



**This Is Our Time excerpts: “We will offer a digital first approach to our work, taking account of how technology and environmental sustainability will shift the demand and shape of activities and physical spaces more creatively to deliver the campuses of the future..”**

**..“Create a green and sustainable university”... “Reduce energy use and explore the possibilities of less carbon-intensive energy sources..”**

# Education and Research

## Sustainability in Teaching

Our corporate strategy 'This is Our Time' clearly highlights the importance of sustainability in our teaching and learning. For example, we will :*“Increase the awareness and understanding of sustainable development and its practical application among all staff and students though learning opportunities and training.”* Strategy2030

It states we will.. *“Actively encourage and support sustainable development and principles of sustainable learning and teaching practice in curriculum development and delivery....”* and...*“Increase the awareness and understanding of sustainable development and its practical application among all staff and students though learning opportunities and training.”*

This is Our Time recognises that all students expect to be working to solve social and global challenges during their studies and the importance of the skills needed to students not only be work ready but life ready. Applying sustainability within our courses will help our students not only understand the sustainability challenges we face but consider the solutions we need to address them, using the skills that sustainability thinking and actions bring providing the practical life-skills essential to creating the partnerships, creativity and action need to meet our local through to global challenges.

A sustainable and fairer planet the world needs people with the knowledge and skills to achieve this. Our role as an educator is crucial to ensure that our students learn why sustainability is important, how it relates to their programmes and how society and employers may use the knowledge and skills our students can gain. As sustainability relates to every programme we teach then our aim is to ensure that meaningful and fulfilling teaching for sustainability happens. We also are seeking to ensure that either through courses or through extra-curricular opportunities that all students have the opportunity to practice what they are learning. This will provide the confidence, skills and experience that will be invaluable to future career paths.

In 2020/21 **The Curriculum Framework (CF)** was agreed by Academic Council. This recognises eight Dimensions that all teaching needs to consider. Sustainable Development is one of these. The CF sets out why we need to integrate sustainability within our programmes and asks our teaching staff key questions to help them better understand why it is of such importance. It must also be recognised that as sustainability touches on all we do, it also touches on the other Dimensions of the Curriculum Framework, helping to deliver these Dimensions as well as the sustainability goals.

**“To actively encourage and support the teaching of and research into sustainable development in the University”**

In 2020/21 a working group including teaching staff, students and the Sustainability Team created the sustainability Dimension. This working group has been promoting this work since the launch of the Curriculum Framework and it is planned that a Community of Practice focused on Education for Sustainable Development will be launched in 2021/22.

Sustainability can be incorporated or applied to almost every part of our teaching work. It can be used to connect up subjects with issues the world faces and illustrate some of the solutions that are emerging and being implemented to solve them. Sustainability isn't just about climate change and ocean plastics however, we often overlook the need to reconsider and deliver social issues which are a pillar of sustainability. In addition, when we look at economic systems we have to recognise that without alignment to sustainability outcomes then it will become increasingly difficult to live and do businesses on not only a planet suffering climate chaos but also impacted because of soil loss, ecosystem collapses and inequality.

Many of our programmes include sustainability issues, As we would expect the Faculty of Engineering and Science delivers many courses that are either focused on sustainability as an overall issue or deliver courses that are targeted on particular areas of sustainability. These are often distinct in their contributions to the Sustainable Development Goals. Courses, for example, by the NRI often focus on sustainability as a concept and teach in the specific areas that contribute to it. Our School of Pharmacy, for example, delivers teaching directly contributing to SDG 3 (Good Health and Well-Being). This faculty also actively promotes and uses Sulitest as a means of encouraging and supporting the sustainability literacy of students. Our Faculty of Health and Human Sciences directly supports SDG 4 in educating future health professionals including nurses, paramedics and midwives. Much of our teaching is not just focused on physical well-being but also mental well-being which is now becoming recognised as a critically important area to treat. Our teaching enables early years and primary teachers to graduate delivering quality education and also through their studies having a good grasp of sustainability. Annually we welcome students to the Avery Hill Community Edible Campus, for example, to learn about how natural spaces can become one of the most impactful learning environments capable of bringing many subjects to life in fun and inspiring ways.

At the Faculty of Liberal Arts and Sciences we graduate students who will work as surveyors, projects managers, architects and others in the built environment who will have an understanding of how sustainability relates to their work. Students studying law apply their work and learning in areas that contribute to many of the SDGs including SDG 16 (Peace, Justice and Strong Institutions), but also other areas where law can be used to right many of the wrongs that unfairly hold people back. These include SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), and many others including and importantly SDG 17

(Partnerships for the Goals).

For example, Dr Louise Hewitt runs the [Innocence Project London](#) where academics and students work with lawyers to re-examine cases where it is considered there has been a miscarriage of justice. This project was recognised by Green Gown judges and was a finalist in the Green Gown Awards in 2020.

## In Research

This is Our Time clearly illustrates how sustainability has a central role to play in our academic work *"In order to drive the long-term success and reputation of our university we will develop and apply our knowledge capability and academic and professional expertise to seek growing influence by achieving social and academic impact, assisting economic growth and ensuring environmental sustainability..."* *"... Working with international research institutes and funders, we expect to build on our work to deliver globally excellent, impact-driven research aligned to the UN Sustainable Development Goals."*

The Corporate strategy sets out a clear expectation that we will align research to sustainable goals. We recognise the demands for sustainability impact comes from externally from REF, research grant awards, commercial opportunities, government and partnerships. Internally staff are keen to apply their research towards sustainability and this is recognised by how it is included in many research groups. There is more that can be achieved and the university will create the environment and provide support to enable this. Sustainability will become a key component of the Research and Knowledge Exchange Strategy and this will drive progress across our faculties. To support this it is envisaged an umbrella cross faculty sustainability research group will ensure help encourage further interdisciplinary research within and outside Greenwich and raise the profile of our research power within London and the world.

Greenwich is undertaking much research that has national and international impact. The Natural Resources Institute is recognised of global importance in helping tackle issues around food systems that improve nutrition, food loss, sustainable agricultural intensification that is helping to feed a growing global population while maintaining ecosystems services, conserving biodiversity and promoting social equity. Research excellence also covers fair economic systems, climate change and its impacts on agriculture on agriculture and natural resources, capacity strengthening for agricultural development and food security. Innovative research on equality and gender justice, governance, sustainable trade and responsible business and research specific to root and tuber crops or particular importance to meeting food needs of developing nations and incomes of farmers is also undertaken illustrating the breadth of work the NRI does. Examples of their work can be viewed through their [Annual Reports](#) and work and case studies included on their [website](#). This work has led to the award of the

Queens Anniversary Prize in recognition of the impact their work has had.

In 2021 Prof. Alastair Morrison and Prof. Andres Coca-Stefaniak published the [Routledge Handbook of Tourism Cities](#). The book has been entered by Taylor & Francis' Publishers into their newly created [Sustainable Development Goals Online](#) resource, which the publishers describe as "a curated interdisciplinary collection of digital content mapped to the United Nation's Sustainable Development Goals (SDGs). Since the publication of this book a special issue on Sustainable Tourism in Urban Destinations has been published in the International Journal of Tourism Cities.

Increasingly we are undertaking research work that delivers Circular Economy outcomes and we are finding increasing amounts of this work across our faculties. Research including the harnessing of micro-algae that creates fuels and also helps sequestered carbon is being undertaken by a team in the Faculty of Science and Engineering. Research on the carbonation of materials in the construction industry is creating much interest in its ability to create carbon negative products from waste materials. Other work is engaging with food industries ensuring packaging can better protect foodstuffs from damage and deterioration in addition to ensuring packaging is lower impact and recyclable that contributes to circular economy thinking. Furthermore research on communities along the Indian Ocean is helping us better understand how to improve waste management practices and systems to help reduce and avoid the massive problem of ocean plastics. Here again circular thinking can create opportunities to develop sustainable communities that find more value in waste so that management systems become viable alternatives to dumping wastes in watercourses. Research is also being undertaken to ensure that not only the materials that circulate in the circular economy are considered, work is also being undertaken to ensure the health and safety of people working in the waste recycling industries are protected.

This is just a snapshot of the research we are doing. Much more is illustrated in the following pages that highlight our contributions to each of the UN SDGs. We plan to build on this work by encouraging more staff to reference their research and their teaching to the SDGs so that we can raise awareness of the Goals and also encourage greater collaboration within and between faculties and directorates. We are seeing increasing evidence that our staff and student communities are recognising the importance of sustainability and the University is keen to share this interest and work in this field. If you are planning or doing sustainability teaching and research please get in touch with [sustainability@gre.ac.uk](mailto:sustainability@gre.ac.uk) so we can provide any assistance you may need or help showcase the work you are doing.

The university sector has a major role in helping deliver sustainability and contributing to the SDGs. The next section illustrates many examples of how we are delivering the Goals in our teaching and research.



# Greenwich's Contributions to the Sustainable Development Goals

The university recognises the importance of the United Nations Sustainable Development Goals (SDGs) and our role in contributing to them and this is highlighted in our new corporate strategy.

This section provides more detail, illustrating examples of some of the work we are doing in service to the Goals. Please note that some of this work fits outside the 2020/21 time-frame of the overall Annual Sustainability Report.



The university provides subsidised transport and food to reduce financial burdens on our student and staff communities. Bursaries are offered to students to cover tuition costs and bursaries are offered to assist students covering transport costs.

We provide free support including workshops to the local community to encourage business development and mentor match refugees and migrants who want to start their own businesses. This is done through the [SIREE Project](#) (Social Integration of Refugees via Education and Self-employment) where we aim to highlight the positive contribution refugees can make to the economy to policy makers. [The Centre for Research on Employment and Work](#) (CREW) has conducted research on the impact of non-standard contracts on low paid workers for the Trades Union Congress (Living on the Edge Experiencing workplace insecurity in the UK, 2018) and for the Low Pay Commission (Non-Standard Contracts and the National Living Wage: A Report for the Low Pay Commission, 2017). The latter looked at the relationship between the National Living Wage and non-standard contracts and was quoted extensively in the Low Pay Commission's Response to Government on 'One-Sided Flexibility' (2018). CREW is currently leading a EU Social Dialogue project addressing the public sector Gender Pay Gap across Europe in the context of austerity policies and measures taken by social partners to address it.



The work undertaken particularly by the university's Natural Resources Institute has been recognised through the 2019 award of the Queen Anniversary Prize. This award was for the NRI's pest management programme looks specifically at four key

areas, including blackfly transmitting 'river blindness'; rodents spreading disease and destroying crops and infrastructure; mosquitoes transmitting dangerous diseases including malaria, dengue and Zika; and insect pests threatening the horticulture industry. This is just one of the areas the university is working on that has real world impacts in reducing poverty, especially in developing countries. Other areas include research and practical applications in areas of food systems and improved nutrition.

SDG 2 highlights the multi-dimensional nature of food and nutrition security, encompassing the quantity of food available and issues of resilience, nutrient content and food safety, with targets incorporating both agriculture and nutrition, underlying the importance of food-based approaches in addressing nutritional challenges. Examples of our research in this area include exploring [gender-sensitive approaches to support nutritionally vulnerable population groups](#), building information about diets in smallholder farming communities in low income countries to highlight nutritional challenges and guide programmes and policy, and developing the full nutritional potential of small pelagic fish.



The university has a large number of collaborations and partnerships in London and Kent with local health and social care organisations that deliver care and promote and support the public's health and well-being.

These include NHS Trusts such as Oxleas NHS

Trust, Bart's and the London NHS Trust, Lewisham & Greenwich NHS Trust, King's College Hospital NHS Trust, as well as other providers of health and well-being services, including among others Virgin Services, Priory Group, Bexley Women's Aid, Demelza. The university has students on placements in these organisations on health related professional programmes, but staff also deliver a significant amount of continuing professional development courses to partners organisations, as well

advising on and providing 'credit for learning' for in-house courses. We also have students on placements in local authority and non-statutory organisations for social work, promoting the well-being of service users, carers and families. Students work with diverse issues such as mental health, learning difficulties, physical disabilities, dementia, safeguarding children and adults and dual diagnosis.

The above work is underpinned and supported by the [Institute for Lifecourse Development](#). This is an anchor resource where professionals from many different fields work closely together with researchers and stakeholders from public, charitable and voluntary organisations. Together we are developing effective and economically sustainable lifecourse solutions and tackle some of the most significant challenges society faces. An example of this includes how the ILS is partnering with the [Australian Child Maltreatment Study](#).

Similarly in Counselling, we work with local organisations that aim to support public's health and well-being through listening, mentoring and befriending type placements as well as formal counselling placements in voluntary and NHS settings.

We have developed a training programme to help front-line professionals tackle the growing County Lines problem, whereby criminal gangs in London are sending young people into smaller market and coastal towns to sell Class A drugs. Professor Karen Cleaver of the Faculty of Education & Health, has led a project with the Metropolitan Police and a range of partners across statutory agencies to produce a training package which aims to raise awareness of County Lines. As well as awareness raising, the training helps participants develop an understanding of the relationship between vulnerability and becoming a perpetrator of crime and the potential consequences of this for the young person's mental health.

Our Early Years team undertake consultancy with various nurseries locally to improve the well-being of children. Staff act as a Trustee of a community nursery and members of the team run sessions both locally, and internationally, such as in Malaysia on confident children and managing behaviour.

The Students' Unions of the University both offer free sexual health advice to students through their advice services. Greenwich Students' Union has online resources signposting students to local services, as well as having information on how to access free chlamydia tests and morning after pill via our receptions at Greenwich and Avery Hill. Students can also access free condoms and period products at those receptions also. In Medway, Greenwich & Kent Students' Union have free condoms and period products available from their reception, and chlamydia testing kits available in all the toilets.

The university's [Wellbeing Hub](#) has information on the university's employee assistance programme, and the [Access to Work Mental Health Support Service](#) is

delivered by Remploy on behalf of Access to Work across England, Scotland and Wales. The university invests greatly to meet mental wellbeing needs, including mental health first aid training for staff, including managers, Wellbeing days much of this focused on mental health and also the provision of free and subsidised classes and sports facilities for staff and students.



The university is proud of its roots and its continuing role in supporting the local community to access excellent quality teaching and learning at our campuses. The university therefore has a student population that resembles the demographic make up of our local areas and we

welcome to our campuses a wide diversity of students from many backgrounds. We are proud that a high proportion of our students are the first generation within their families to attend university. We actively encourage participation among under-represented groups in our teaching and learning. Our [Access and Participation Plan](#) highlights how we actively target students from disadvantaged backgrounds with our outreach work, ensuring it is fully inclusive for everyone. In 2020/21 we also launched a bursary scheme for applicants students that have refugee status.

For example the Faculty of Liberal Arts and Faculty of Engineering and science organise and host outreach events, targeting female students to engage in STEM (Science, Technology, Engineering and Maths) subjects. Events such as Celebrating Women in Maths and Women into Engineering are regularly run in collaboration with external organisations and national campaigns.

We offer access to university staff and students and the public to access many of our talks, often with relevance, interest and impact in sustainability.



The university measures and tracks women's application rates, entry rate and study completion rates. This information shapes the reporting tools that are created and annual reporting of the success and retention of female students. Our [Access and Participation Plan](#) provides

a framework for ensuring we meet our gender equality responsibilities in our recruitment and teaching work.

The university offers women's access schemes including mentoring through the [Aurora](#) scheme that encourages and supports women to become leaders at Greenwich and elsewhere. The university is also working to reduce the gender pay gap and actively works to achieve this.

Our Equality, Diversity and Inclusion Strategy helps us ensure we can be non-discriminatory for all genders.



The university has processes and systems in place to help ensure we manage the water we use. Our Environmental Management System provides our framework to make improvements and we have a water reduction target of 1% per year. The university does not irrigate

its lawns and only irrigates certain landscape roofs at Stockwell Street, planters in Medway and the Community Edible Garden raised beds at Avery Hill. We provide free water at water fountains across the campuses in addition to providing free water for anyone to access at all of our catering outlets.



The university seeks to ensure operationally that it reduces the amount of energy it needs to use through the application of its [Carbon Management Plan](#), for example through the application of its [Heating and Cooling Policy](#).

Where we use electricity this is predominantly low carbon sourced with our supplier providing 100% of our power from zero carbon sources. Additional to this we utilise clean energy from our Stockwell Street and Avery Hill photovoltaic cells and have a Combined Heat and Power plant in Medway powered by refined used cooking oil.

The university knows the importance of reducing energy demand and this is reflected in our Corporate KPI. We have made investments in boiler, heating, lighting and other power systems that reduce demand and have requirements to ensure our large new builds and refurbishment schemes have to BREEAM certifications that require high energy efficiency.

The university does not have any direct investments in fossil fuel companies, although as part of investment tracking portfolio's at any one time some of our short term investments may move into and out of oil fossil fuel companies. Our Ethical Investment Policy can be reviewed [here](#).



The university recognises unions and labour rights with representation on relevant committees. Our [Equality, Diversity and Inclusion Strategy and Action Plan](#) aims to Deliver measurable equality and inclusion outcomes for both students and staff, promote inclusion,

fairness and dignity at work and ensure we comply with legislative requirements. We have an Annual Statement of Compliance for the [Modern Slavery Act](#) and adhere to our [Anti-Slavery and Trafficking Policy](#).

We have a policy on pay scale equity including a commitment to measurement and elimination of gender pay gaps, and policies and processes to avoid discriminatory practices can occur as illustrated in the documents on [this web page](#). Processes for employees to appeal on employee rights and/or pay are in place if needed.

Our Equality, Diversity and Inclusivity Committee provides the forum for action within the university. We pro-actively ensure that we provide counselling and other direct support to students and staff in addition to ensuring access to buildings and learning and work needs. This can be seen through work undertaken by the [Student Well-being Service](#).



The university's teaching and research contributes to the provision of graduates with skills that will improve the industries and infrastructure making them more resilient and sustainable. For example, integrating sustainability thinking into civil engineering,

green chemistry, the application of novel processes and feedstock such as micro-algae, the application of sustainability and circular economy thinking with in the built environment and the improvement of food systems and the protection of foods in storage and transit and the handling of bulk goods means the university is actively encouraging improvement and innovation that will deliver sustainability outcomes. Work, for example, in carbonising construction materials is seen as a game changer in the construction industry that can now utilise waste materials, lock carbon dioxide into these materials and produce road surfaces, building blocks, cements and other materials that are carbon negative.



## 10 REDUCED INEQUALITIES



The university has an admissions and recruitment policies with [strategic application](#) which are non-discriminatory and provide support and programmes to support students and staff from under-represented groups. Work to recruit students from under-represented groups

is fundamental to our outreach and access delivery. We work closely with schools and colleges that have high proportions of students from areas of low higher education participation, BAME students, students with disability and children in care.

Our Equality, Diversity and Inclusivity Committee is representative of our student and staff make up and that reviews and ensures that the university meets its obligations. Institutionally we measure and track applications & admissions of under-represented (and potentially under-represented) groups including ethnic minorities, low income students, non-traditional students, women, LGBT students, disabled students amongst others. We have [systems](#) in place to help our communities reach their fullest potential at Greenwich and with one example being our [BAME Attainment Gap Project](#). We have a [policy](#) to help protect students from bullying and harassment from staff members, students and third parties.

Our estates are designed and reviewed to ensure that we are able to maximise the accessibility for our users. As we have many protected buildings sometimes it is not possible to enable access to all students to all parts of the university. Where this happens the university ensures that modifications such as providing accessible rooms for those requiring learning and other work spaces. The university has a [Student Well-being Service](#) with staff available to review student needs and support these. Where [disabled students and students with medical conditions](#) require halls accommodation we prioritise students with disabilities when allocating places and have rooms and flats that are fully accessible and equipped for those with disabilities.

The new Estates Enabling Strategy will further focus our work to further improve the access and usability of our spaces for all.

## 11 SUSTAINABLE CITIES AND COMMUNITIES



The university is fortunate to have inspiring campuses of historic, architectural and natural value. Our grounds and some internal areas are open free of charge to the public to enjoy. Public access to indoor spaces includes Medway library where local people have borrowing

rights, in addition to exhibition and cafe spaces available on our campuses. We recognise that there is much academic and intellectual capital we can share and enable public access to many talks we hold through the year. In addition to this our Bathway Theatre and university choir put on performances that are open to the public.

Not only do we seek to help add to and improve the public realm for our local communities we seek to ensure we can reduce any impacts we may have on our neighbours. Examples of this include the extensive university inter-campus bus provision that ensures that we do not add to any local public bus passenger loads. Instead we provide a high capacity and regular bus network between our campuses. These services are also free or heavily subsidised helping reduce costs to our students and staff who need to use these services. Our provision of healthy and active travel alternatives and disincentives for private car use reduce the impacts of travel with the aim of improving mobility and the health of our staff and student communities. This is highlighted in our [Travel Plan](#). How we design and build our estates also contributes to the sustainability of our cities, maximising space utility and making the spaces sustainable through for example the application of the BREEAM building standard, through our ISO14001 (2015) (Environmental Management System) and through improvements we have made, for example, the extensive landscape roofs integrated onto the Stockwell Street building which enabled us to gain a BREEAM innovation credit that illustrates best practice globally.

The university applies its teaching and research on making cities and communities sustainable. Work undertaken across our faculties focusing on the built environment, in FLAS, on health and education at FEHHS, science and engineering including the work undertaken by the NRI contributes greatly to our teaching and research output.

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



The quantity of products and services consumed by the university are significant. The university has a large non-staff spend that contributes to environmental issues such as climate change and other pollution in production and transportation stages. It

can also impact on workers and communities particularly where regulations and enforcement is poor. To overcome this the university has policies and strategies that help us reduce and eliminate these potential impacts. We have, for example, policies on Modern Slavery, a Sustainable Procurement Policy and also we have other more specific policies such as our Sustainable Food and Fairtrade policies that help ensure we meet strict goals relating to the food our caterers procure and serve. All policies can

be found [here](#).

We have a recycling rate of approximately 37% against an ambitious 70% target. One key measurement is the total amount of waste we generate which has been falling significantly for the past five or so years. Investments in technology and other processes has meant a shift away from the need to use paper although we are still some way away from being a paperless university. We have a Waste Strategy that provides clarity for waste generators across the university. For example, this has helped encourage on-going action within our catering outlets to encourage the reuse of hot drink containers, leading to the Queen Mary cafe becoming one of the UK's first totally disposable free cafés, this was followed by Pilkington Cafe in 2020/21. Our work has also meant that food wastes have been reduced.

The university seeks to reduce the materials used and impacts of its estates work through the preference to reuse and re-purpose buildings. The redevelopment of the old Students' Union Cooper building and the reuse of modular buildings at Greenwich and Mansion site saved on the materials and embedded energy of the existing structures. The new library in Phase 1 of the Southwood site redevelopment is reusable and can relatively simply be deconstructed and moved to be rebuilt at a new location. The new modular built library constructed off site in a factory, reducing material wastage. These modular buildings eliminate waste and maximising the flexibility and life of the buildings.

An example of the research we undertake in this area includes how Greenwich leads on the [African Postharvest Losses Information System](#) (APHLIS) initiative. This was developed in response to demands for more accurate understanding of the quantity of staple cereals being lost at the different stages of the value chain in each sub-Saharan African country and in each province within them. This builds on what relevant data already exists in the scientific literature, and adds to it through careful tracking and measurement of what amounts of food are being lost to different causes, at each postharvest stage in typical food systems. This enables policy and investment decision-makers to better target their loss reduction interventions geographically, by value chain stage, and by crop.



The university has made great strides in reducing its carbon footprint. It met its HEFCE carbon target two years ahead of time and met our Carbon Management Plan carbon reduction target in 2020. As highlighted in SDG 7 we procure zero carbon electricity and generate

electricity from two large photovoltaic systems at Avery Hill and Greenwich campuses.

Our academic work is recognised as important in contributing to help solve the climate crisis. Work undertaken for example by Dr. Maria Nikolaidi funded by the New Economics Foundation (NEF), the Network for Social Change and the ClimateWorks Foundation (INSPIRE network) in order to analyse financial policies that are conducive to de-carbonisation and to investigate how the European Central Bank could develop a climate-aligned monetary policy framework. Dr. Maria Nikolaidi has also participated in a panel of academics and finance experts that was commissioned by the Shadow Chancellor of the Exchequer, John McDonnell in 2019. The panel published a report that includes several recommendations through which the UK financial system could contribute to the transition to a low-carbon economy. The university carried out research and consultancy on contingency planning and responses to drought in Northern Kenya, Morocco and Mongolia, including early warning and responses by district-level governments, approx. 1997-2006. This included policy briefs on drought management, and highly-cited research papers on the specific topic of livestock marketing interventions in emergencies. However, this is not a current research focus.

The university participates in co-operative planning for climate change disasters, working with governments and international agencies such as the FAO, for example in [developing countries](#).

The university has supported Professor John Morton over several years' work for the Intergovernmental Panel on Climate Change (Lead Author, Fourth Assessment Report; Expert Reviewer, Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation; coordinating Lead Author, Fifth Assessment Report; Lead Author, Special Report on Climate Change and Land, Chapter on "[Risk management and decision making in relation to sustainable development](#)"). While not directly a form of co-operative planning, the IPCC reports are a very important source of policy-relevant information on climate change, including on risks of and responses to disasters, for government worldwide. The university carried out research and consultancy on contingency planning and responses to drought in Northern Kenya, Morocco and Mongolia, including early warning and responses by district level governments, approx. 1997-2006. This included policy briefs on drought management, and highly-cited research papers on the specific topic of livestock marketing interventions in emergencies. However, this is not a current research focus. Professor John Morton provided a briefing paper on the relation between climate change and livestock emergencies, and a significant amount of new text and editorial amendments, to support preparation of the second edition of the multi-donor Livestock Emergency Guidelines and Standards (2015).

We offer modules at both undergraduate and postgraduate level that relate to climate change. An example being Sustainable Futures looks at the economic, science and social aspects of working towards sustainability and considers communication and

behaviour change necessary. Staff are also developing an undergraduate Climate Change Degree planned for launch in September 2021.



The university offers an Environmental Science undergraduate degree that provides education relating to freshwater ecosystems. Research and teaching has also been undertaken relating to coastal environments including the impacts of sargassum in the Caribbean. Other

academic work covers the impacts of ship breaking in Bangladesh and the problem of plastics entering the Indian Ocean. The university operationally holds Marine Stewardship Council certification for all the fish served in its catering outlets. It also has policies and systems that protect and improve the aquatic environments including having and adhering to our Ecosystem Services Policy and Biodiversity Plan and a very limited chemical grounds services position so we don't use artificial chemical inputs on our the paved and green spaces of our estates. Our Environmental Management System provide us with a clear strategy and the processes needed to reduce any discharges and keep any discharges within set limits. Chemicals are managed in ways whereby any wastes are taken off-site for specialist and safe disposal.



The ways we protect and manage our natural environment is covered by our Ecosystems Services Policy, Biodiversity Action Plan, Environmental Management System and through the processes and systems we have in place. On campus we have protected species including

dormice, bats and birds of prey. We are considerate to our natural species when undertaking using projects and, for example, at our Stockwell Street building were able to create biodiversity gain through the transformation of what was concrete parking space into a three storey building with one of the most diverse and largest green roofed buildings in London (for an office/educational building). This building is ground-breaking as it won two BREEAM innovation credits one relating to the landscape roofs, the learning and information of which is now available to integrate into other building projects globally.



Greenwich has a Governing Body made up of independent and university representatives including elected student representatives. This and other governance groups such as the Finance Committee and other committees enable the effective management

of the university and ensures the objectives of many of the SDGs are met through our operations, procedures, systems and actions. We have clear policies that provide the clarity of direction to ensure progress is maintained. We recognise core tenets of education and academic need including a commitment to academic freedom. We publish our [Annual Financial Statement](#) that illustrates our accountability and meets legal requirements. Our academic staff work on projects and initiatives that strengthen laws or provide opportunities to provide access to legal expertise in cases where a review of cases and evidence can lead to a review of the judgements and sentences. This includes in the latter case the Innocence Project led by Dr Louise Hewitt. Dr Williams has analysed disability discrimination at British Employment Tribunals. She analysed judgments and found that characteristics of claimants were associated to a number of factors leading to the failure of their cases: restrictive judicial decisions, complex legal tests, inequality of arms between claimant and employer and the stigma attached to claimants with mental impairments. Her publication was picked up by the Law Commission for their report on law reform.

The expert knowledge of our academic community has supported national and local government including policy development delivering the SDGs. This includes work undertaken to better understand human emergency escape patterns including providing expert evidence to public enquiries such as [Grenfell](#),

Academic staff in FEHHS are appointed to the Dementia Team of the World Health Organisation, as part of the [Department of Mental Health and Substance Abuse peer reviewer group](#) and [academics contributing to IPCC reports](#). Professor Morton was Lead Author on the chapter on "Risk management and decision-making in relation to sustainable development" of the IPCC Special Report on Climate Change and Land, having been co-leader and rapporteur of the breakout group that drafted the content for the chapter at the Report's Scoping Meeting. The chapter, designed to be policy-relevant like all IPCC outputs, makes the SDGs and trade-offs between them central to its assessment of knowledge on decision-making in pursuit of climate adaptation and mitigation and sustainable land management, see for example Figure 7.7 and Table 7.6 on "Risks at various scales, levels of uncertainty and agreement in relation to trade-offs among SDGs and other goals.

The university is rightly proud of its contribution and values that our academics have been recognised through

the [Queens Anniversary Prize](#).



Importantly the university participates in international collaboration on gathering and measuring data for the SDGs. We have worked with UN Habitat (Global Land Tools Network /Global Land Indicator Initiative) over three assignments. The assignments involved NRI providing research

and technical support to GLTN /GLII for developing conceptual and operational frameworks for global land monitoring indicators. We supported GLTN /GLII on 15 global land monitoring indicators as well as a specific SDG indicator 1.4.2 related to land tenure security. This was done consultatively working with the GLTN (Mr. Oumar Sylla, Unit Leader – Land and Global Land Tool Network, Everlyne Nairesiae, Coordinator Global Land Indicators Initiative (GLII); Robert Ndugwa, Head-Global Urban Observatory Unit, and Donatien Beguy, Human Settlement Officer in Research and Capacity Development Branch in UN Habitat and its platform partners such as World Bank, Africa Centre for Statistics (UN Economic Commission for Africa), an expert group involving representatives from civil society, academia, private sector, international organisations (Landesa, Land Policy Initiative for Africa (LPI); European Environment Agency; International Land Coalition (ILC); Millennium Challenge Corporation (MCC), Oxfam, USAID, University of Calgary, Knowledge Ltd, Lantmateriet etc. As part of this work, we also consulted /surveyed national statistical offices in the 17 countries. Cool Towns is a co-operation between 13 European partners aimed to counteract the negative effects of climate change and find attractive solutions that make cities climate-proof and robust so that heat stress is prevented or limited as much as possible.

The university has also been involved with international collaboration and research and developing international best practice on tackling the SDGs. On the causes of inequality and policies to tackle inequality we completed a project in 2018 funded by INET on “The Causes of Falling Wage Share and Prospects for Growth with Equality in a Globalised Economy.” We shared the results at a large conference together with the TUC, OECD/ TUAC and think tank Foundation of European Progressive Studies at University of Greenwich. Our research on the effect of inequality on growth, and the role of wages on demand was used by the UN/ILO in G20 meetings in particular in 2015 in its international policy guidance providing the economic case for increasing the labour income share through combined policy measures. It changed the understanding of national and international trade unions about the impact of wages and trade unions on growth and macroeconomic stability and provided a policy simulation on the effect of increasing the labour income share and public investment to L20 to provide

policy guidance to G20 in 2014. It provided input to the South Korean President's new policy document ‘Economic Paradigm Shift’ in 2017, which outlines Korea's general economic policy strategy. Ozlem Onaran was invited to speak at the Korea Development Institute (KDI), 11 October 2017 and Karl Polanyi Institute Asia, 12 October 2017.



# Estates and Facilities Directorate

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