

**AMBITION  
DELIVERED  
TODAY**



# ENVIRONMENTAL REPORT

**2020/21**







Welcome to our Environmental Report, which, in keeping with our environmental aspirations, we are publishing online.

Please let us know if you have any feedback on this report, or if you need any additional information.

[tees.ac.uk/green](https://tees.ac.uk/green)



[EcoCampus](#) provides a structured framework to manage universities' sustainability performance in logical steps, in line with the international management system standard, ISO14001.

Teesside University is committed to retaining and improving our EcoCampus accreditation. The criteria for this prestigious award enables us to work in a consistent and pragmatic way towards ensuring that we manage our environmental obligations.

We are currently accredited at Gold level and we are committed to retaining this.

There are eleven areas considered within the EcoCampus management system and we have based this environmental report around these

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## Introduction

Welcome to the annual environmental report for 2020/21 which highlights some of our activities and achievements relating to sustainability.

Whilst the impact of COVID-19 has had a dramatic effect on the University community, the introduction of the hybrid teaching model and introduction of working from home prioritised the wellbeing of our staff and students. This has allowed University operations to continue in a safe and sustainable manner and this has seen a significant reduction in energy consumption, travel, waste and carbon emissions.

We have utilised our campus, teaching and our research expertise to understand and address the impacts of the pandemic. This has included the training of nursing staff, and research to better understand the virus and its impact on communities around the world.

Our response exemplifies the spirit of Team Teesside. Covid-19 challenges remain, and we continue to work to manage and address these within our own organisation but also in the communities we work with locally and around the world.

As the world returns to normal post COVID-19, the positive aspects of digital connectivity, reduced/changing travel patterns, waste management and review of space management will be explored. This will inform longer term environmental improvement objectives which will include a decarbonisation study to support the University's aspiration of becoming carbon neutral by 2030.



## Health and safety

Teesside University produces an annual health, safety and well-being report which is published online, and can be viewed by staff, students, and members of the public.



## Sustainability in Numbers

100%

of electricity used by the University is from green sources

20

NEW TREES

Planted as part of Cornell development

A reduction of CO2 emissions of

37.4%

against the 2005 baseline in 2020/21.

### THE UNIVERSITY USED

16,708,728 KWH OF GAS

10,105,677 KWH OF ELECTRICITY

44,319 M3 OF WATER

TOTAL SPEND ON UTILITIES WAS

£2,354,836.53

10,000

CUBIC METRES

of water saved – enough to fill four Olympic sized swimming pools.

Up to 2021 donations of goods of over **23.8 tonnes** to the British Heart Foundation from staff and students diverted from landfill equivalent of 242,538 Kg of CO2 emissions. This raised **£42,986** for the BHF

TO HELP REDUCE PLASTIC WASTE, **OVER 25**

drinking water refill locations are available across campus.

80

EXTERNAL

cycle parking spaces on campus

219

COVERED

cycle parking spaces on campus

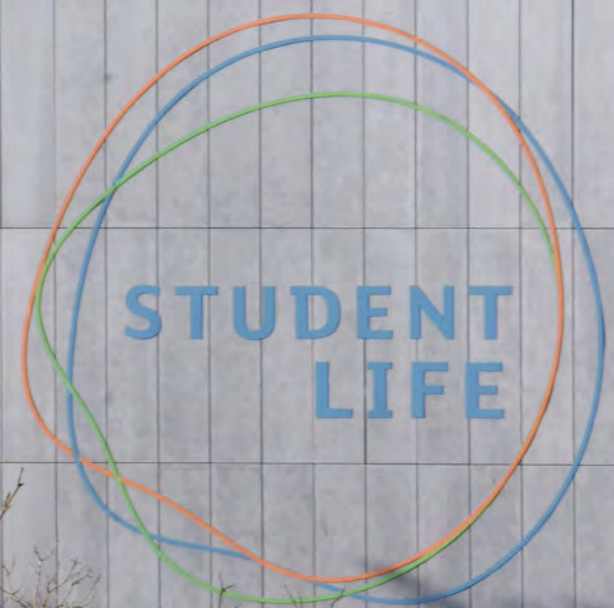
FOUR SOLAR

PV arrays on campus generating a capacity of

101.54 KWP.

IN 2020 WE RECYCLED OVER **50 TONNES** OF CARDBOARD, PAPER, PLASTIC AND CANS.

SINCE 2018 WE HAVE RECYCLED MORE THAN **90 TONNES** OF GLASS.





# Energy and water

Our energy team produces a comprehensive energy report every month and annually. This is available to staff, students and the public on Green Tees.

## Carbon

The University achieved a reduction of CO<sub>2</sub> emissions of 37.4% against the baseline in 2020/21.

Since 2008 the University has progressively added water leak detection systems to all major buildings across the campus. Up until the end of the 2020 financial year the systems saved circa 10,000 cubic metres of water.

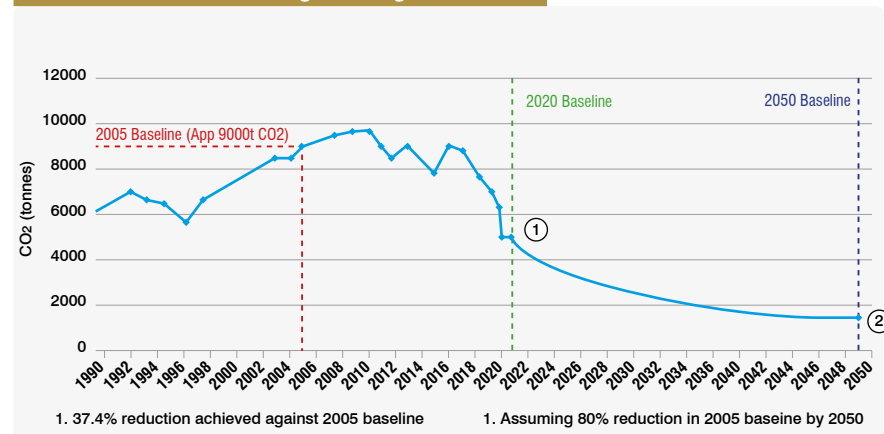
The water leakage systems have enabled the University to act upon and respond to water leaks in all manner of locations including faulty percussion taps, running taps and underground pipework leakage. A significant amount of water and budget has been saved. At an average of £2 per cubic meter over the period, an average of £30,761 per year has been saved.

## Energy monitoring

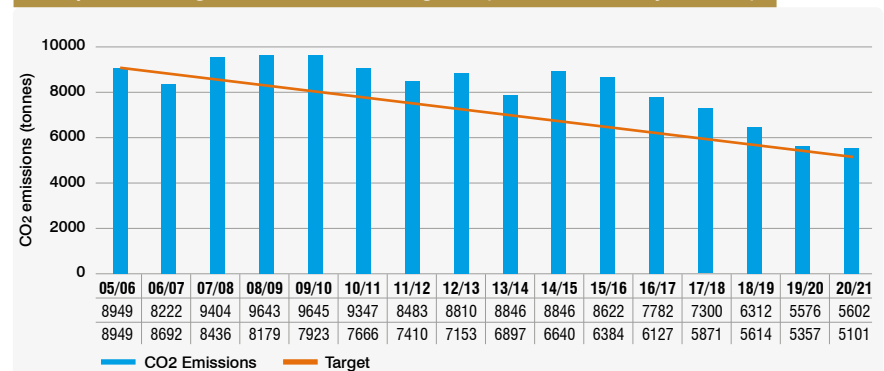
The aim of the University's monitoring and targeting (M&T) system is to provide a greater understanding of how energy and water is consumed across campus. In particular, it identifies if there are signs of avoidable waste and highlights opportunities to reduce consumption.

M&T can be used to quantify the savings achieved through implementation of energy saving projects and campaigns and provide feedback to inform staff awareness campaigns. It will also help to improve budget profiling and to support benchmarking exercises.

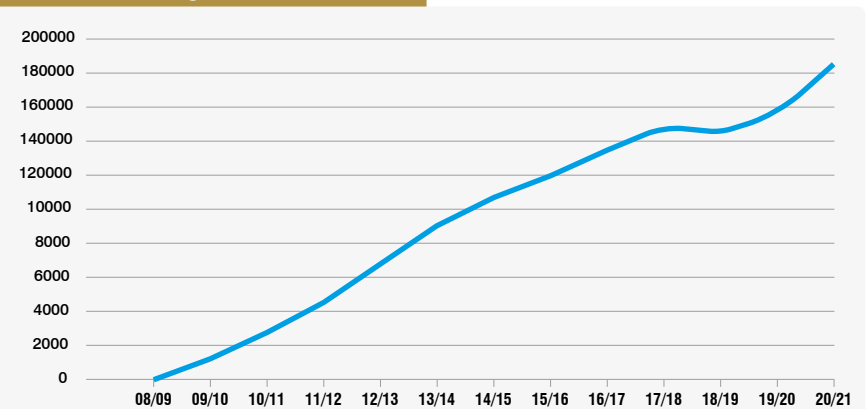
Teesside University Scope 1 & 2 CO<sub>2</sub> emissions baseline and climate change act targets



Scope 1 & 2 Target Emissions and Progress (43% reduction by 2020/21)

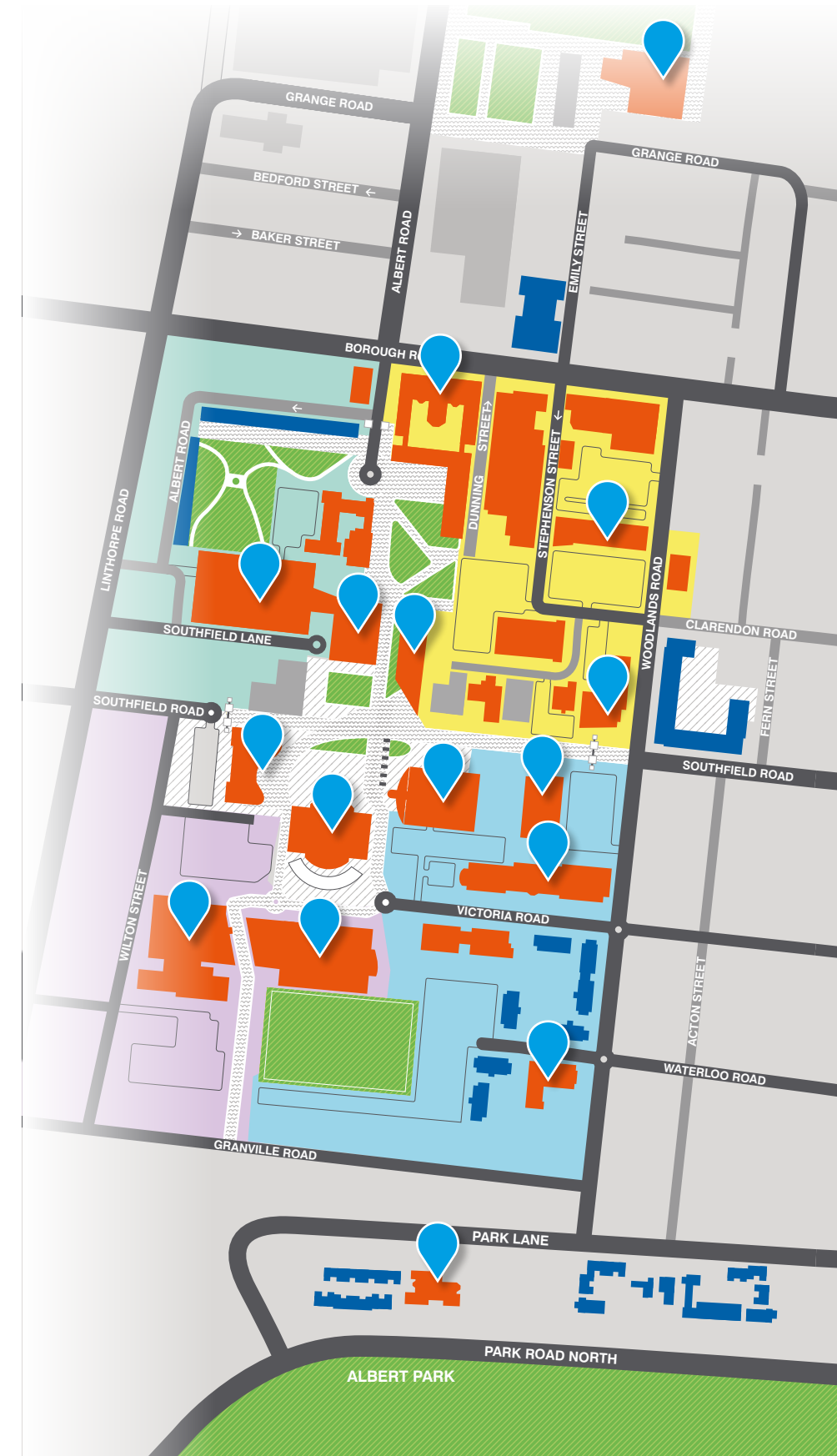


Total water savings from leak detection



Drinking water refill stations are continuing to be installed across campus to help reduce the amount of plastic waste generated from plastic bottles.

In the coming months several new locations will be added alongside the points already in place.



## Recycling and waste management

In 2020 we recycled on site over **50 TONNES** of cardboard, paper, plastic and cans. In addition, we recycled more than **20 TONNES** of glass. (3000 - 4000 glass bottles per tonne).

### ONE RECYCLED TIN CAN

would save enough energy to  
power a television for  
**THREE HOURS.**

Since 2018, **70 TONNES** of glass, in addition to **240 TONNES** of recyclable cardboard, cans, plastic and tins was recycled on campus.

**ONE RECYCLED GLASS BOTTLE**  
would save enough energy to power  
a computer for **25 MINUTES.**

### ONE RECYCLED PLASTIC BOTTLE

would save  
enough energy  
to power a  
60-watt light  
bulb for  
**THREE HOURS.**

### What happens to recycling and waste generated at Teesside University?

Waste is segregated on site and disposed of in the waste streams (general, recycling, glass, food).

General waste – is not sent to landfill. It is shredded and sent to Ferrybridge to be used as Refuse Derived Fuel (RDF) in an energy from waste plant (EFW).

Dry mixed recycling is brought back to the transfer station and sorted into the commodities by a picking line.

All other waste stream – glass, metal, green waste will go to Biffa's transfer station to be sorted and recycled.

Plastics are segregated very specifically and broken down and sent to the following:

HDPE PIPE – RIVERDALE PAPER, NEWCASTLE,
BALED PVC – WORLDWIDE WASTE, MANCHESTER
LDPE – EVERGREEN POLYMERS
RIGID PLASTICS - IP POLYMERS
PPE COREX – NEWPORT PAPER, SHROPSHIRE
LOOSE PVC FRAMES – ECOPLAS, SELBY

Biffa also have their own plastic processing plants in the North East at Wilton, Washington and Seaham, and all three are currently working on projects to make plastic processing more effective for our local area.





# Construction and refurbishment

## Construction waste

Construction waste from new and refurbishment works are streamed at source, on site, by each contractor and taken to local waste management depots for recycling. Any general waste produced by the project is sifted and sorted at the waste management depot by the waste contractor and categorised for land fill or recycling. Waste certificates for each project are provided by the contractor. General waste and recyclable skips for smaller in-house works will be introduced in the near future to better manage these waste streams.

## Construction materials

The estates team, wherever possible within the confines of the allocated budget, will specify materials that are manufactured from recyclable materials and/or manufactured within the UK to reduce the scope 2 and 3 emissions in manufacture and delivery.

## Cornell Quarter

Cornell Quarter is another welcome addition to the University's student accommodation portfolio and is a first-class facility at the heart of campus. This new development is a state-of-the-art, 300-bedroom residential complex for students, with 48 cluster apartments, each complete with communal facilities.

Sustainability was central to the development, which has already achieved a BREEAM excellent rating. A number of environmental initiatives, including green roofs, solar panels and energy efficient lighting and heating are all measures which have been implemented to ensure the development has minimal impact on the environment.

Throughout construction, Wates continued to deliver on its pledge to provide training and engagement opportunities for the local community, with a number of school children welcomed on the site during the development to get a closer look at how a building takes shape. In addition, Wates offset and carbon produced during construction with a local free planting scheme.

## Electricity

100% of the electricity used by the University is from green sources. This is verified by the REGO (Renewable Energy Guarantees of Origin) accreditation scheme.



## Key environmental and sustainability aspects of Cornell Quarter

- > 116 solar panels giving 28,630kwh of power which is the equivalent of boiling 286,000 kettles
- > 20 new trees planted
- > 84% of subcontractors came from within a 40-mile radius with 20% from within 10 miles.
- > Bat & bird boxes installed
- > BREEAM excellent rating achieved
- > Green sedum roof
- > Internal cycle parking & facilities
- > Solar panels on the roof
- > Sustainable urban drainage plan
- > Wates have offset all the carbon produced via on site plant (i.e. excavators, forklifts, generators etc.) this was achieved via tree a planting scheme and done locally as possible to site in the UK. We have certificated from each sub as they have offset their own carbon produced (they provided a break down each month)

## Green Roofs

In addition to the soft landscaping and planting to the perimeter of the development, and within the courtyard, there is also planting to the green roofs on the scheme.

The green roofs maximise the use of otherwise wasted roof space, establishing plants on a roof which bring a combination of benefits:

- > A green roof absorbs rainwater by the water buffering in the plants, substrate and drainage layer. This delays the discharge of rainwater to the sewage system, purifies the rainwater, and water also evaporates through the plants. This all helps to stabilize the groundwater level, reduces the peak load on the sewage system and reduces the risk of flooding.
- > A green roof protects the roofing material from external influences such as the sun, rain, wind and temperature fluctuations and increased lifespan of the roof
- > Improved views looking down on to the building and Increases the feeling of well-being
- > Increase biodiversity, the Sedums, grasses and host plants promote the habitat of birds, butterflies and insects on a previously concrete site
- > Plants absorb sunlight, 50% is absorbed and 30% reflected; so this helps to create a cooler and more pleasant climate.
- > Reducing the urban 'heat island' to make our cities more pleasant places to live in
- > The plants in a green roof filter particulate matter from the air and convert CO2 into oxygen, purifying the air





## Environmental management systems

### EcoCampus

EcoCampus is a national environmental system award scheme for the higher education sector. The scheme allows Teesside University to be recognised for addressing key issues of environmental sustainability including carbon reduction. The University is currently accredited at gold level and we are committed to maintaining this and working towards platinum standard.

### Policy

Teesside University's environmental policy is overseen by the Environmental Advisory Group and is reviewed annually. It is published on our Green Tees website and is available to staff, students and the public.

### Students' Union

Teesside University Students' Union continues to operate in a sustainable manner as possible, putting into place initiatives to reduce impact on the environment. Some of the key achievements of 2020/21 include:

- > 21% reduction of energy consumption in 2020/21
- > introduction of non-plastic packaging for TUSU-produced takeaway sandwiches
- > removal of plastic straws
- > The National Union of Students has launched Students Organising Sustainability, building on the work of Green Impact (formerly Sound Impact) which TUSU was involved in for over ten years.

## Pack for good campaign

British Heart Foundation and Teesside University

### Teesside University success story

**£42,986**  
**TOTAL**  
**RAISED**  
from your fantastic  
donations

**23.8**  
**TONNES**  
diverted from landfill – that's  
the equivalent of 242,538 Kg  
CO2 emissions!

**FUNDING**  
**LIFE-SAVING**  
**RESEARCH**  
into heart and circulatory  
diseases across the UK

### How your donations make a difference...

Heart transplants. Clot busting drugs. Pacemakers. Breakthroughs born from visionary medical research. Research you fund with your donations.

Heart and circulatory diseases kill 1 in 4 people in the UK. They cause heartbreak on every street. But if research can invent machines to restart hearts, fix arteries in newborn babies, build tiny devices to correct heartbeats, and give someone a heart they weren't born with – imagine what's next.

We fund research into all heart and circulatory diseases and their risk factors. Heart attacks, heart failure, stroke, vascular dementia, diabetes and many more. All connected, all under our microscope. Our research is the promise of future prevention, cures and treatments.

Partnering with us in our Pack for Good campaign enables our shops to receive a regular supply of donations during the summer period, a time typically, when donations can be lower than in other seasons. By joining our Reuse Revolution you're helping to save items from landfill, preventing unnecessary waste and carbon emissions being released into the atmosphere whilst also helping to fund research into new treatments for heart disease, stroke, vascular dementia and diabetes.





## MIMA community campus learning garden

Middlesbrough Institute of Modern Art (MIMA) has a civic agenda to put art into action. We connect art, people and ideas. We work with communities to address current issues within politics, economics and culture. Our programmes encompass urgent themes such as climate change, migration, inequality, ageing and wellbeing.

We offer exhibitions, learning activities, projects and community-focused initiatives that involve local and national artists. These programmes promote creativity for everyone, through education, debate and making. We play a key role in the cultural life of the Tees Valley and wider North East. Our ambition is that a range of publics shape who we are: a public site, open and accessible, diverse and inclusive and used by all.

MIMA has an on-site kitchen garden, which provides a safe, informative and creative space for nature-based activities, workshops, talks and tours including learning opportunities for schools connected to sustainable food production, growing and the local landscape.

Produce from the garden has been used in the MIMA Kitchen, shared with publics and used as the basis for the Thinking it Through summer family programme, mindful outdoor making sessions to wind down and refocus with family and friends through making and doing activities with the MIMA team and Barefoot Kitchen CIC.



### MIMA challenges, workshops, and fun

This summer we have reflected on the themes in the current exhibition Sonia Boyce, In The Castle of My Skin, inspired by the work of Flora Parrott and Lindiwe Matshikiza and the study of caves. We have introduced a new family programme that embraces the outdoors including the loan of Adventure Den Kits, a fun, creative kit to make your own imaginative space in the MIMA Garden with family and friends.

### MIMAMAKING

We have produced thousands of MIMAMAKING packs, for making and inventing with family and friends in the MIMA Garden and marquee. The packs are inspired by the ideas and themes in MIMA's current exhibition and displays.

### Word on the street

A new work by artists Suzie Devey and Carol Newmarch facilitated conversations and observations with people working, living and wandering in Middlesbrough, capturing their thoughts and feelings on living through a pandemic.

Key phrases from the conversations were turned into ceramic street signs, such as nature/nurture which you are displayed in the MIMA garden.

### Laura Wilson: To Tend To Kitchen garden conversations

In 2020 artist Laura Wilson collected hopes, ideas and possibilities for MIMA's Kitchen and Garden through a series of online conversations and produced their voices and ideas to a video - To Tend To.

Laura also developed a creative scoping document which will inform MIMA's future programme and will be the first MIMA Kitchen and Garden artist in residence from September 2021 to February 2022.

We hosted a series of amazing parties in the garden organised with MIMA School of Art & Design graduates and have welcomed back our community friends from far and wide. We recently loaned a marquee whatever the weather we can always meet up for our socials.

### Container commission no 2

This year's shipping container commission was imagined and produced by Teesside artist, Stephen Irving, and was influenced by the urban landscape of MIMA and Centre Square. The work was made in situ as part of summer garden party, if you stand in the centre of the work, your very own oversized wings appear by your side.

The MIMA Garden is managed sensitively, without chemicals and with permaculture principles embedded throughout.





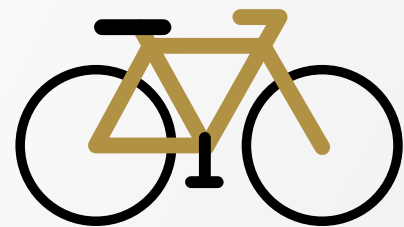
## Sustainable travel and cycling

The University offers a range of options to staff to assist with using sustainable methods of transport to travel to the University. These green travel initiatives, which continue to be popular with staff, not only help to reduce the University's carbon footprint but are also beneficial to staff from a wellbeing and cost saving perspective.

Currently around 70 staff are signed up to these initiatives.

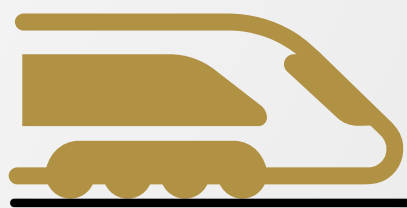
### Cycle to work scheme

Since 2017, over 130 staff have obtained bikes via this scheme.



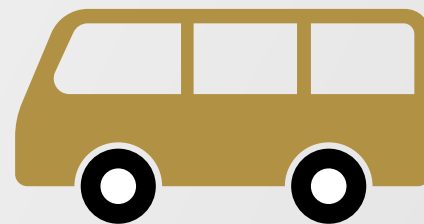
### Train season tickets

Since 2017, over 90 staff have purchased season tickets via the partnership scheme with Northern Rail and Teesside University.



### Bus season tickets

Since 2017, over 90 staff have purchased bus season tickets via the University's dedicated loan scheme.



### Cycling at Teesside University

Following an extensive audit by Cycling UK in July 2021, Teesside University has achieved the highest possible accreditation of gold standard, as a cycle friendly employer.

CFE-UK (cycle friendly employer accreditation) is awarded to organisations that have exemplary cycle-friendly facilities. With partners in nine European countries, CFE-UK enables measurement against the only international standard for workplace cycling.

Cycling UK has championed the cause of cycling for more than 140 years. They promote all forms of cycling, protect the interests of existing and would-be cyclists, and inspire people of all ages, backgrounds and abilities to discover the joys of cycling. As an independent, democratic and expert organisation, their activities reflect the commitment of members, volunteers and partners to make cycling mainstream, making a lasting difference to the lives of individuals and communities.

Find out more about the facilities available for staff and student cyclists on campus: [tees.ac.uk/cycling](https://tees.ac.uk/cycling).





## Sustainable procurement

Teesside University has a procurement manual, which includes a section on sustainable procurement. The University's sustainable procurement framework requires that sustainability and environmental issues are considered in the procurement of all goods, services and works supplied to the University.

It assists staff to comply with the policy through the following objectives, to:

1. Raise the environmental awareness amongst University purchases.
2. Ensure relevant environmental issues are considered as part of the procurement process.
3. Support and encourage suppliers to be compliant with any current and future environmental legislation and help where possible companies to attain environmental accreditation.
4. Encourage the use of suppliers who aim to adhere to greener policies.
5. Conduct whole life costing exercise where appropriate, taking into account factors affecting the environment.
6. Consider lease options where appropriate as an alternative to purchase in order to reduce waste.
7. Specify carbon and energy saving goods or services which are more environmentally friendly.
8. Encourage the purchase of recycled goods or goods with recycled content.
9. Minimise and regulate the amount of waste generated from University purchases by encouraging suppliers and contractors to return and re use packaging.
10. Promote and make full use of services offered by suppliers and contractors who will collect and recycle previously supplied used items.
11. Reduce the number of delivery vehicles entering and leaving site, by encouraging the use of contracted suppliers and scheduled deliveries.
12. Encourage the purchases of goods which are from a sustainable source and have the highest efficiency energy ratings.

### Environment in the curriculum

[BSc \(Hons\) Environmental Science](#)

[BSc \(Hons\) Environmental Science \(with Foundation Year\)](#)

[MSc Electrical Power and Energy Systems](#)

[MSc Electrical Power and Energy Systems \(with Advanced Practice\)](#)

[MSc Environmental Management](#)

[MSc Environmental Management \(with Advanced Practice\)](#)

### Research

In the academic year 2020/21 the University has dedicated funds totalling £475,355 to environmental and sustainability research.

Over the same period the University has had in the region of 50 scholarly publications on environment and sustainability published.

### University of Indonesia GREENMETRIC World University Rankings 2021

For the fourth time Teesside University has taken part in the GreenMetric World University Rankings. It is the first and only university rankings in the world to measure each participating university's commitment in developing an environmentally friendly infrastructure. The rankings consider six indicators of each university (setting and infrastructure, energy and climate change, waste, water, transportation and education). This year 780 universities in 76 countries participated, compared to last year when 719 universities in 75 countries took part.

Universities Indonesia (UI) released the result of UI GreenMetric World University Rankings 2020 in December 2020.

This year Teesside University are ranked 227th out of 911 worldwide institutions (12th in UK), compared to 128th out of 780 in 2019.

The full results of the metric can be viewed here:

<http://greenmetric.ui.ac.id>

Teesside University continued to participate in the metric.

The new rankings will be published in December 2021.





## Disclaimer

The information contained in this Report is, as far as possible, accurate and up to date at the time of publishing.

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This publication is available in alternative formats on request.

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