

ENVIRONMENTAL REPORT

2021
/22



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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.

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[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

Our vision is to embed sustainable development in all that we do at Teesside University – through our learning, and development, campus, culture and leadership.

We have made significant progress towards realising many of our goals and objectives by translating our strategic commitments into action.

The achievements of our employees and students, as well as our investments into improving the efficiency of our built environment, and our efforts to deliver activities that improve the environmental sustainability of the University and wider society, have given us a great deal of which to be proud of.

This report provides a summary of our performance and key achievements from 2021/2022.



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

16

NEW TREES

Planted as part of recent developments

A reduction of CO₂ emissions of

40.1%

against CO₂ peak emissions

THE UNIVERSITY USED

15,632,119 KWH OF GAS

12,779,338 KWH OF ELECTRICITY

67,232 M³ OF WATER

TOTAL SPEND ON UTILITIES WAS

£5,615,705.74

6,100

CUBIC METRES

of water saved – enough to fill three Olympic sized swimming pools

Up to 2022 donations of goods of over **90.2 tonnes** to the British Heart Foundation from staff and students diverted from landfill equivalent of 917,619 Kg of CO₂ emissions. This raised **£43,000** 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 2021 WE RECYCLED OVER **60 TONNES** OF CARDBOARD, PAPER, PLASTIC AND METAL

SINCE 2018 WE HAVE RECYCLED MORE THAN **100 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 CO₂ emissions of 40.1% against CO₂ peak emissions.

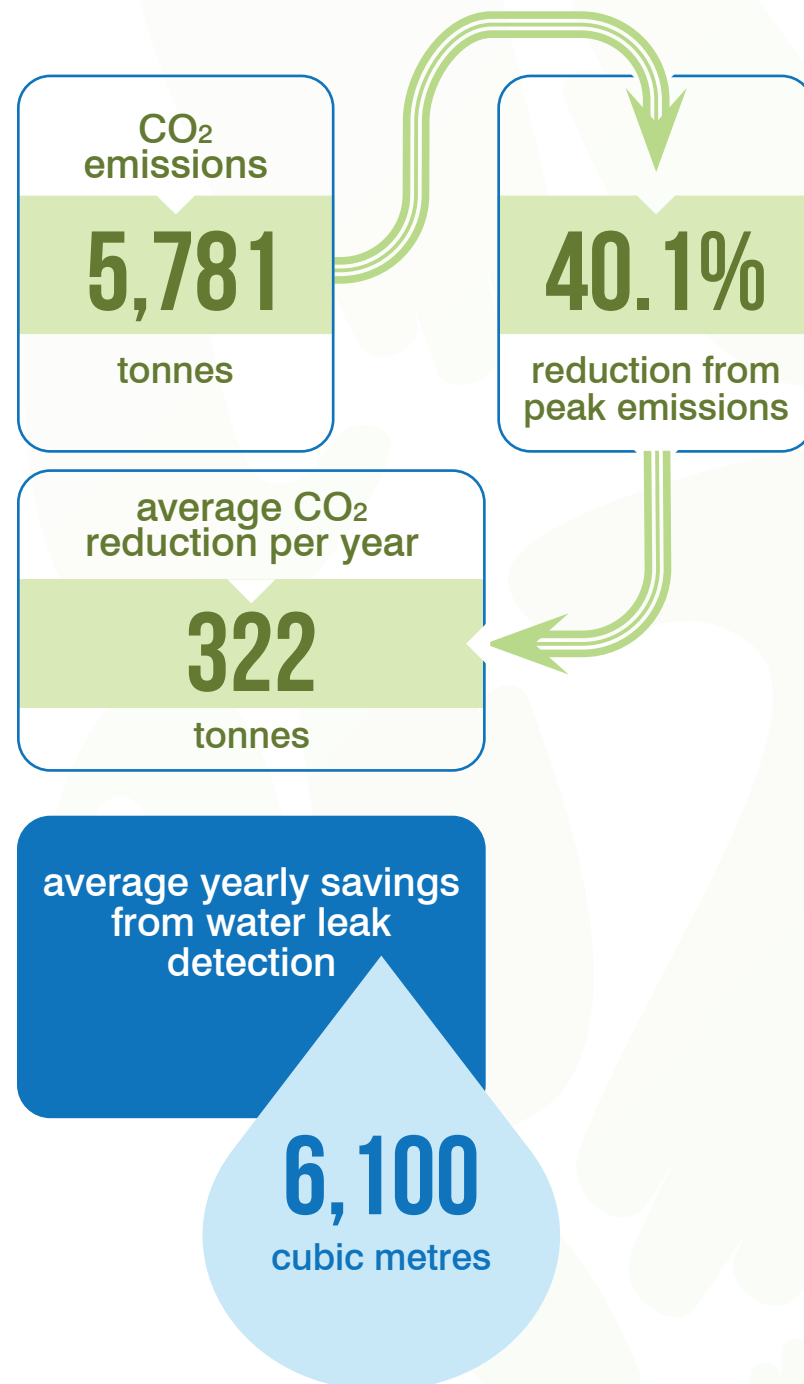
Since 2008 the University has progressively added water leak detection systems to all major buildings across the campus. Up until the end of the 2020 financial year the systems saved circa 10,000 cubic metres of water.

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.



External pressures

Recent global situations have resulted in significant increases to gas and electricity costs for the University.

A range of initiatives have been employed to mitigate some of this impact, and to minimise our environmental impact in line with our commitment to net zero, and to reduce energy costs.

Increased communications to staff via direct emails and environmental representatives to raise awareness and encourage behaviour change in relation to sustainability.

Innovative solutions to engage with our student community have also been employed.

HELP TU HELP THE PLANET



DID YOU KNOW?

- a ten-minute shower uses around 90 litres of water (almost 160 pints)
- 27% of water used in the home is in the shower.

That's why Campus Services launched a new initiative in September, as part of its Help TU, Help the Planet campaign, to encourage students in University accommodation to reduce their water consumption.

Four-minute shower timers have been installed in student bathrooms on campus to encourage people to use less water, save energy and reduce CO₂ emissions.

TUrn
off
lights

TUne
into saving
the planet

TUrn
down your
thermostat

TUrn
off your
monitor

The Queen's Green Canopy

The Queen's Green Canopy (QGC) is creating a living legacy with over a million trees planted in Her Late Majesty's name across the nation during the first planting season, October 2021 to March 2022.

The extension of the QGC initiative will build on this legacy and serve as a lasting tribute to Her Majesty's extraordinary service to her country and her people.

As a nationwide initiative created to mark the Platinum Jubilee, the QGC was due to conclude in December – the end of the Jubilee year. However, as the official tree planting season in the United Kingdom is from October to March, the initiative will now be extended to include the full tree planting season, beginning in October 2022 and concluding in March 2023.

Her Majesty and The Prince of Wales planted the first tree in the grounds of Windsor Castle in March 2021, to mark the launch of the QGC initiative.

Teesside University has taken part in this initiative by planting 16 trees across campus at Woodlands Halls, adjacent to Centuria and King Edward's Square.

The interactive map created by The Queen's Green Canopy to showcase the planting projects across the United Kingdom will also continue to the end of March 2023, giving people an opportunity to be part of this special legacy.

The map here shows the location details of the Queen's Green Canopy: [CLICK HERE](#)



DID YOU KNOW?

- British oak trees support an estimated 2,300 species, an incredible variety of wildlife
- a mature tree can absorb up to 150kg of CO₂ a year
- UK green spaces remove up to 1.3 billion kg of air pollutants each year
- well-placed trees can help cool the air between 2 and 8 degrees in urban communities.



Recycling and waste management

In 2021/22 we recycled on site over **60 TONNES** of cardboard, paper, plastic and metal

**ONE RECYCLED
TIN CAN**

would save enough energy to
power a television for
THREE HOURS

Since 2018 we have recycled more than **100 TONNES** of glass

**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 in an energy from waste plant.

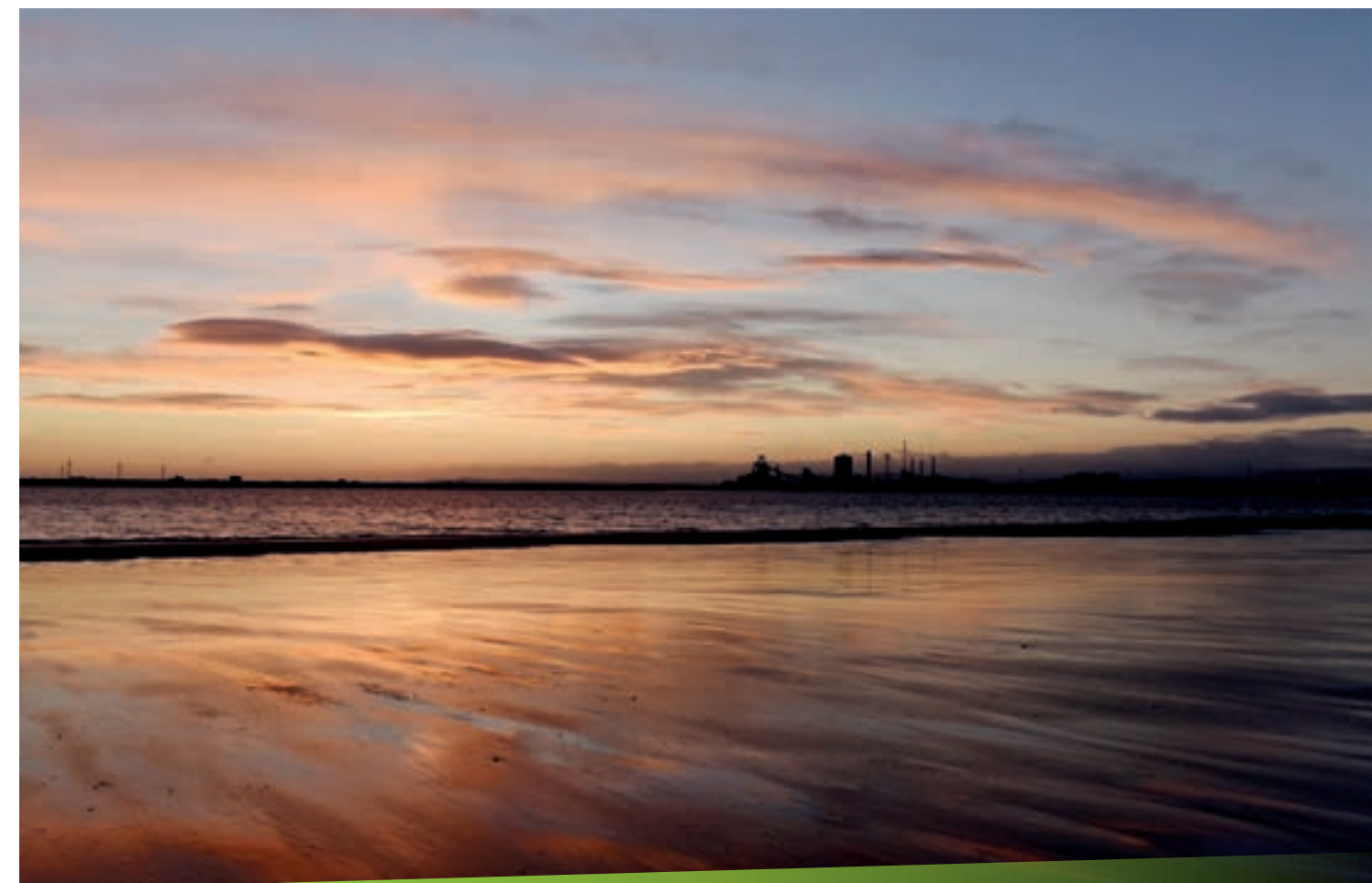
Dry mixed recycling is brought back to the transfer station and sorted into the commodities by a picking line.

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

Removal of ozone damaging refrigerant gases from campus

Campus Services is committed to the removal of all R22 refrigerant gas air conditioning systems and had been systematically decommissioning and removing all systems with the aid of an annual long term maintenance revenue budget.

- > Financial year 2022/23 will see the removal of the final nine R22 refrigerant gas air conditioning systems from campus.
- > Over £600,000 will have been spent by the University phasing out and removing all R22 systems over recent years.
- > Beyond 2022/23 and the removal of R22 refrigerant gas, Campus Services will review the global warming potential of the refrigerant gas within all remaining air conditioning systems on campus. They will prioritise the removal of those that have the potential to have the most damaging effect on the environment.

Artist's impression of Net Zero Industries Innovation Centre



Leading the transition to a net zero economy

Building work is progressing rapidly on the site of our new £13.1m Net Zero industry Innovation Centre (NZIIC), located at the expanding Tees Valley Net Zero Innovation Hub in Middlesbrough.

Net Zero is the commitment to ensuring the UK's total greenhouse gas emissions become equal to, or less than, the emissions the UK removed from the environment through a combination of emission reduction and removal.

We are determined to become a net zero institution by 2030, and our new NZIIC will support the UK's drive for clean energy and sustainability and position our region at the heart of the green industrial revolution.

An integral part of our Campus masterplan, the project is part-funded by the Tees Valley Mayor and Combined Authority and the European Regional Development Fund.

Sustainable construction

In ensuring that our campus and built environment is developed in as sustainable manner as possible, a number of initiatives have become standard practice in our construction and refurbishment projects including:

- > net zero aspirations in building technique and products offsets
- > refurbishment of the postgraduate hub to be completed to BREEAM excellent standard
- > new building projects to be constructed to BREEAM outstanding standard.
- > construction on the new BIOS building has commenced, with an aspiration of this being completed to BREEAM outstanding standard.



What is NZIIC?

The NZIIC will play a vital role in helping to achieve our net zero ambitions, by providing an industry-focused research, development and innovation offering for the Tees Valley and beyond.

A hub for industrial decarbonisation and a national centre of excellence for net zero technologies, the centre will position Teesside firmly at the heart of the UK's green industrial revolution, providing a focus for major investment.

The NZIIC will grow national net zero capabilities and opportunities, and create hundreds of clean energy jobs on Teesside, upon its completion in April 2023.

NZIIC objectives

- > The centre will specialise in the circular economy, hydrogen and decarbonisation, industrial systems and intelligent energy, and digital modelling and simulation.
- > It will specifically support the development and commercialisation of new low-carbon technologies and demonstrate the value of clean technology to encourage the shift away from fossil fuels.
- > The centre will enable small to medium enterprises to embrace the transition to a net zero economy and support them to turn innovative ideas into viable products and services.
- > This support will include technical workshops and dissemination events, expert advice on product development, and access to specialised equipment.



Artist's impression of NZIIC lab

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.

Student engagement and projects

During 2021/22 Campus Services worked closely with students from the environmental science course from the School of Health & Life Sciences.

The students completed three sustainability projects, with staff, to identify sustainability challenges and priorities. This initiative gave students real-life experience of working with clients and helped to identify potential sustainability actions for the University.

The projects completed were:

- > Biodiversity on a town campus: Teesside University biodiversity action plan: Adam Morris, Lisa Brougham and Aaron Preston
- > Sustainable travel around Teesside University: Harry Murphy, Joe Armstrong and Michael Davies
- > Recycling on campus: Kate Baxter, Michael Pitchers and Georgia Underwood.



Pack for good campaign

BRITISH HEART FOUNDATION AND TEESSIDE UNIVERSITY

TEESSIDE UNIVERSITY SUCCESS STORY

**over
£43,000
TOTAL
RAISED**
from your fantastic
donations

**90.2
TONNES**
diverted from landfill – that's
the equivalent of 917,619Kg
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 Middlesbrough Institute of Modern Art

About MIMA

MIMA connects art, people and ideas to empower creative lives and positively contribute to society.

It's an international art gallery and accredited museum that commissions, collects and re-thinks modern and contemporary art, building and celebrating creativity. MIMA is the artistic heart of the School of Arts & Creative Industries at Teesside University, dedicated to collaborative learning, research and innovation.

MIMA is home to the Middlesbrough Collection of 2,300 works of art and craft, which date from the 1870s to today. As a visitor attraction, it forms a key part of the Tees Valley's cultural ecology and tourism economy.

MIMA and climate responsibility

Building work is progressing rapidly on the site of our new MIMA's programme, and is driven by a mission to advocate for climate responsibility by activating research from Teesside University to make change with communities.

Since 2018, our exhibitions have focused on environment.

MIMA's Garden, developed with CIC Barefoot Kitchen and our Kitchen Garden artist residency, promotes biodiversity and wellbeing. We are a key partner in Natural Futures: a pilot programme with Tees Valley Nature Partnership, Natural England and Borderlands.

MIMA's environmental thematic

MIMA has narrated and explored the natural environment through a series of major exhibitions since 2018, including Chemical City (2021-22), which inspired the An Artist and a Planet podcast series developed in collaboration with academics from Teesside University, including environmental sciences, biology and design.



MIMA and Julie's Bicycle

Designed for Arts Council England National Portfolio Organisations, the Julie's Bicycle programme aims to reduce environmental impacts and drive action across the arts and culture sector.

Julie's Bicycle, first launched in 2012, builds literacy, confidence and leadership skills to give cultural professionals the agency to act on climate change and champion justice and fairness. The Arts Council England 2020-30 Strategy, Let's Create, is built around four investment principles, including environmental responsibility. Find out more here: <https://juliesbicycle.com/about-us/about-jb/>

Art + Social series

These programmed events bring our communities, staff and students together through a series of curated events and environmental themes, including showcasing research.

Art + Social 5 (August 2022) showcased Barefoot Kitchen, who care for the MIMA garden and kitchen, plus garden Artist in Residence Laura Wilson. Barefoot Kitchen celebrated and shared the magic of food through a simple, seasonal dish with ingredients harvested from the garden, carrying zero food miles from plot to plate, seed to flower.

Laura Wilson convened a game of PIT. Invented in 1904, PIT is a fast-paced card game based on the Chicago Board of Trade (also known as The Pit). Originally the game featured flax, hay, oats, rye, corn, barley and wheat. It has been updated over the last century to reflect contemporary commodities. Find out more here.

Black Lives and histories

A weekly reading, watching or listening recommendation is provided to all staff across MIMA and the School of Arts & Creative Industries. The broad purpose is to build learning about black lives and histories and equity, including a focus on black experiences with the natural world. For example, South Africa's first black free diver talked about growing up with warnings that the ocean was no place for black people, and black scuba divers search the wreckage of slave ships from the Middle Passage off the coast of North Carolina.

Borderlands

MIMA is a member of the Borderlands consortium, made up of MIMA, Tees Valley Nature Partnership, Middlesbrough Football Club Foundation, North Star Housing and Future Regeneration of Grangetown. Borderlands is a Creative People and Places project funded by Arts Council England, Tees Valley Combined Authority, Middlesbrough Council and Redcar and Cleveland Council.

The environment is one of Borderlands' key themes, encouraging communities to build creative engagement with physical and natural environments.

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 50 STAFF ARE SIGNED UP TO THESE INITIATIVES

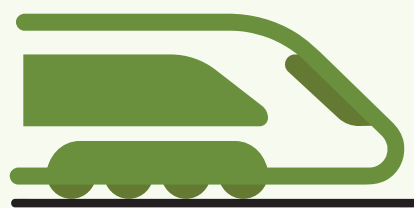
Cycle to work scheme

Since 2017, over 160 staff have obtained bicycles via this scheme.



Train season tickets

Since 2017, over 100 staff have purchased season tickets via the partnership scheme with Northern Rail and Teesside University.



Bus season tickets

Since 2017, over 100 staff have purchased bus season tickets via the University's dedicated loan scheme.



Cycling at Teesside University

Following extensive audit by Cycling UK, Teesside University continues to hold 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.

The University continues to make improvements to our facilities for student and staff cyclists. In recent months the Clarendon cycle store and shower facilities have undergone refurbishment to make them more attractive for users.

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



Sustainability in the curriculum

Half-million pound scholarship fund to develop clean energy solutions

A new scholarship fund is helping an energy infrastructure company develop the necessary talent to aid its transition to a net zero future. Valley's cultural ecology and tourism economy.

Aberdeen-based Kellas Midstream has donated £486,000 to the University to help create the next generation of engineers with the requisite skills to help industry transition to a net zero future.

The Kellas Midstream Clean Energy Scholarship will support 18 students by funding undergraduate and postgraduate courses in sustainable energy and engineering in the School of Computing, Engineering & Digital Technologies.

Kellas Midstream is an independent energy infrastructure company that owns and operates critical midstream infrastructure in the central and southern North Sea. The company is collaborating with Teesside University as it works to facilitate change in the energy industry and to build a new business around net zero.

Professor Stephen Cummings, Pro Vice-Chancellor (Research & Innovation) said, 'We are delighted to partner with Kellas Midstream. We all recognise the need to decarbonise our economy which will require new and evolving skills and it is fantastic that this partnership will help to develop the next generation of engineers who will be at the forefront of this critical role.'

Andy Hessel, Kellas Midstream Managing Director said, 'Teesside is being reinvented with energy transition firmly at the forefront. We are delighted to partner with the University and through the Kellas Midstream scholarship offer an opportunity for the area's emerging engineering talent to be a part of its contribution to net zero. There is a proud industrial heritage on Teesside, and we look forward to seeing this evolve through skills development into an important source of high-quality clean energy jobs.'

Teesside is being reinvented with energy transition firmly at the forefront. ”

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 \(with Advanced Practice\)](#)



UNIVERSITY OF INDONESIA GREENMETRIC WORLD UNIVERSITY RANKINGS 2021

For the fifth 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 956 universities in 79 countries participated, compared to last year when 780 universities in 76 countries took part.

Universities Indonesia (UI) released the result of UI GreenMetric World University Rankings 2021 in December 2021.

This year Teesside University are ranked 269th out of 956 worldwide institutions (7th in UK), compared to 227th out of 911 in 2020.

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 2022.

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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