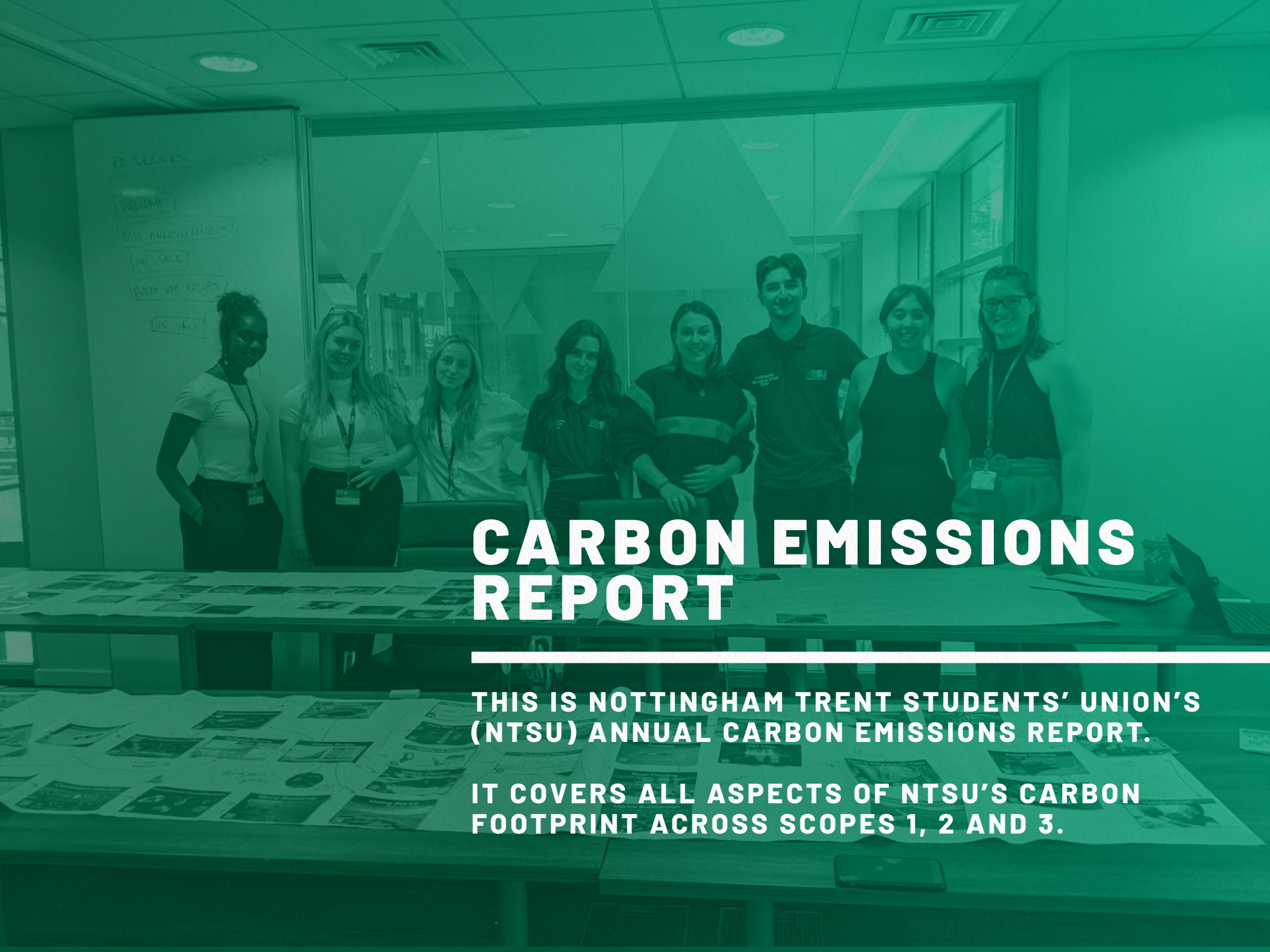
NOTTINGHAM TRENT STUDENTS' UNION

NET ZERO CARBON REPORT

2021-2022

NTSU
NOTTINGHAM TRENT STUDENTS' UNION

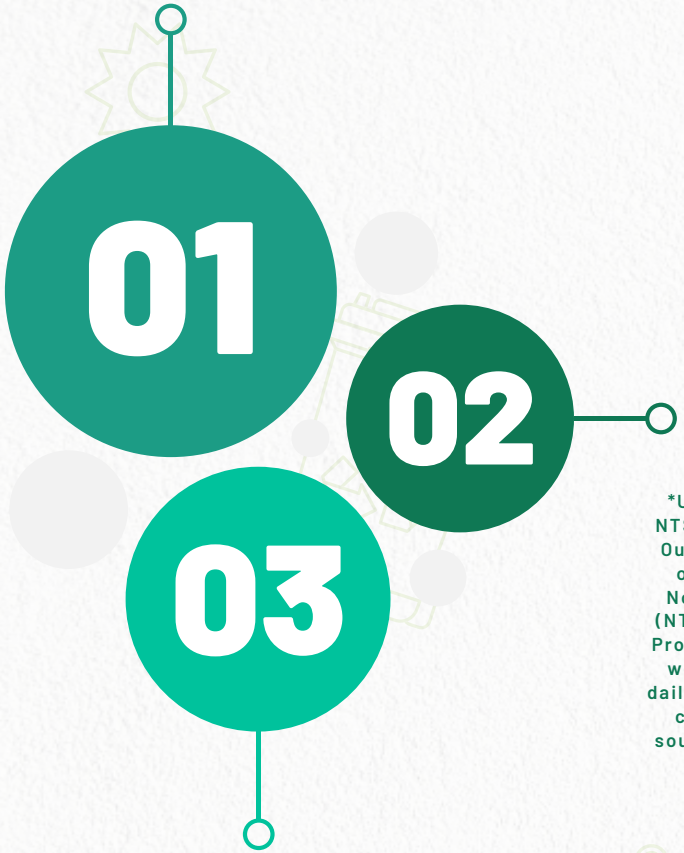


CARBON EMISSIONS REPORT

THIS IS NOTTINGHAM TRENT STUDENTS' UNION'S (NTSU) ANNUAL CARBON EMISSIONS REPORT.

IT COVERS ALL ASPECTS OF NTSU'S CARBON FOOTPRINT ACROSS SCOPES 1, 2 AND 3.

SCOPE 1
NTSU fleet vehicles, refrigerants, fuel burned on site (e.g. natural gas and biomass)



SCOPE 2
NTSU **does not** have a scope 2.

*Unlike other organisations, NTSU does not have a scope 2. Our buildings are leased from our partner organisations, Nottingham Trent University (NTU) and United Partnerships Programme (UPP). So, although we use energy and heat on a daily basis, we don't have direct control over the emissions sources. As a result, these fall into our scope 3.

SCOPE 3
Business travel and hotel stays, staff commuting, supply chain, upstream leased assets*, waste and water management, working elsewhere, WTT & Distribution

Figure 1: NTSU's Carbon Emissions Breakdown

CARBON EMISSIONS BREAKDOWN

CARBON EMISSIONS CAN BE BROADLY SPLIT INTO THREE CATEGORIES OR 'SCOPES'

SCOPE 1
Direct emissions from an organisation's vehicle fleet and fuel burnt on site.

SCOPE 2
Indirect emissions of 'purchased' energy such as electricity and district heat.

SCOPE 3
Other indirect emissions from sources outside of an organisation's control that are associated with their activities.

OUR BASELINE & OUR TARGET

OUR BASELINE FOOTPRINT HAS BEEN CALCULATED FOR THE 2021/22 ACADEMIC YEAR AND IS OUTLINED IN THIS REPORT

NTSU has a target of achieving net-zero carbon across all three scopes by 2040, as committed to in our sustainability strategy.

We are currently in the process of setting interim reduction targets on our journey to net zero. We are conscious of supporting global targets, such as those specified in the Paris Agreement, during this process. We are also consulting with our stakeholders and interested parties to gauge what wider support is available for us.

Our carbon footprint is one way of expressing our negative environmental impacts. In addition to our reduction aims, we are also engaging staff in positive actions for environmental improvement. This 'carbon avoided' is calculated using activity data from the NTU Green Rewards App, filtered to NTSU staff actions.

In 2021/22, our staff logged 1976.02 kg CO_2e avoided. This data is not reflected within our carbon footprint due to potential inaccuracies, but we still wanted to share positive steps taken on this journey.

OUR FOOTPRINT

OUR TOTAL EMISSIONS FOR THE 2021/22 ACADEMIC YEAR ARE 899.59 TONNES CO_2 EQUIVALENT (tCO_2e).

THAT'S EQUIVALENT TO...

DRIVING AROUND THE CIRCUMFERENCE OF THE GLOBE

135 TIMES

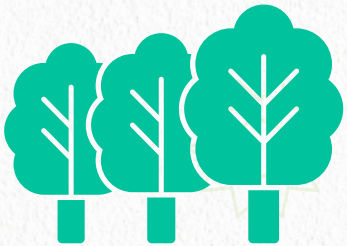
IN A DIESAL CAR (THAT'S 5,520,000KM)

OR

920 RETURN FLIGHTS

FROM PARIS TO NEW YORK (AVERAGE EMISSIONS, ONE PASSENGER)

OR



44,942 TREES

GROWING AND SEQUESTERING CARBON FOR A YEAR

OR

THE WEIGHT OF

898 GREAT WHITE SHARKS

NTSU CARBON FOOTPRINT 2021/22 (tCO_2e)

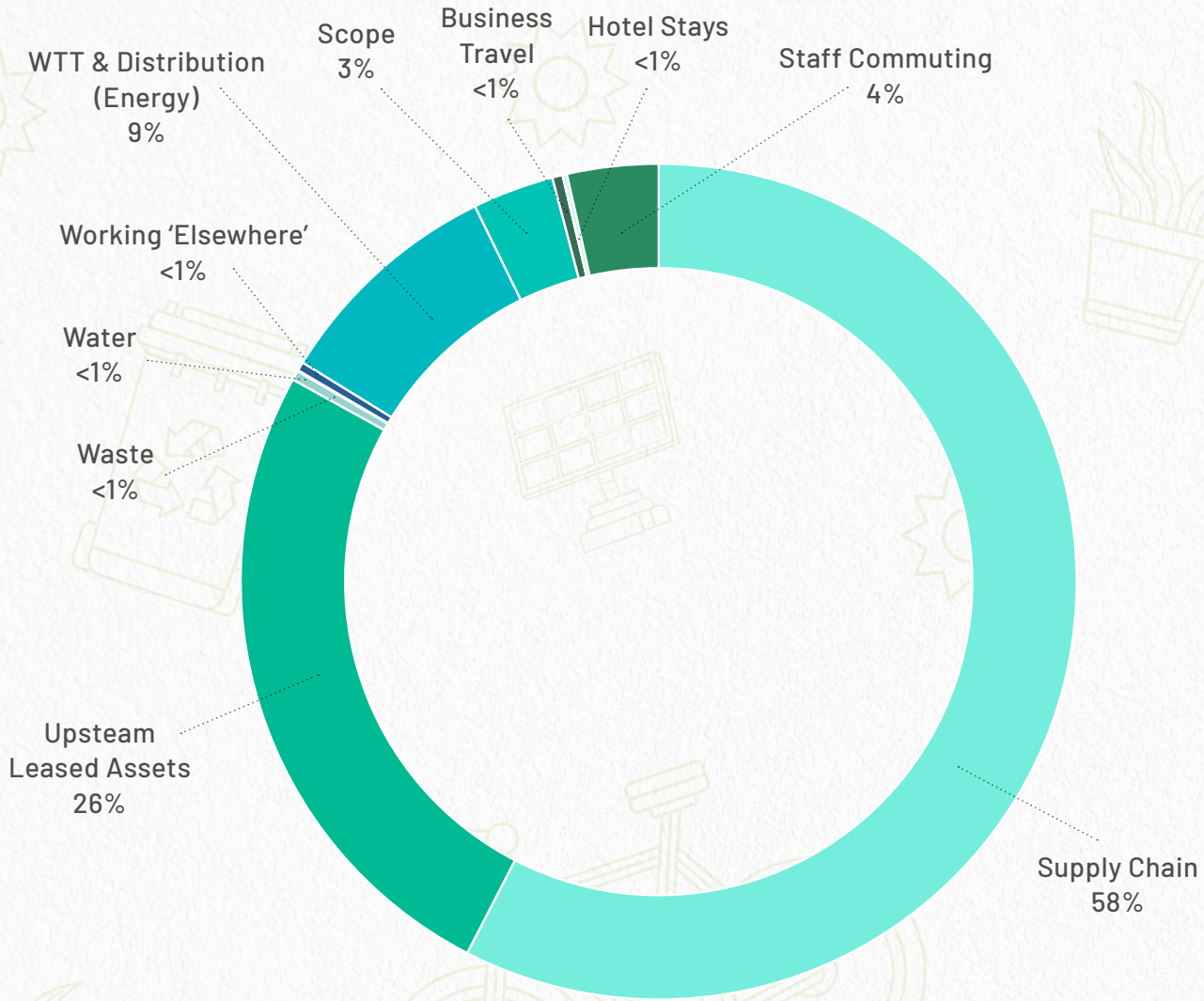


Figure 2: NTSU's Carbon Footprint (tCO_2e) Baseline Year 2021/22

SCOPE 1

Our scope 1 emissions are formed of emissions from our fleet vehicles and refrigerants usage.

Our absolute emissions for these were 28.27 tCO_2e, contributing 3.1% of our total carbon footprint.

FLEET (FUEL)

NTSU's fleet vehicles are used by NTSU staff, societies, and NTU sports clubs for moving gooçansport to/from events. For our footprint calculations, we calculated NTU's percentage use of our fleet and deducted their usage from our total emissions.

Total fuel consumption (litres): 3351.56 (8.58 tCO_2e)
NTSU fuel consumption (litres): 1273.59 (3.26 tCO_2e)

VEHICLE	TOTAL NUMBER OF MILES	NTU MILEAGE	NTSU MILEAGE	PERCENTAGE NTSU USE
9-seater (1)	8,069	7,510	559	7%
9-seater (2)	10,174	10,174	0	0%
12-seater mini-bus	34,099	33,349	750	2%
Large van	10,449	1,898	8,551	82&
Small van	5,717	0	5,717	100%
Average NTSU use				38%

REFRIGERANTS

NTSU uses refrigerants in our retail cooling units (fridges and freezers) and air conditioning units at City Campus (Byron building). Emissions are calculated according to the top-up amount.

REFRIGERANT LOCATION / TYPE	TOP-UP AMOUNT	TOTAL (tCO_2e)
Clifton Fridges - R410a	8.85	18.48
Byron Air-con	10% assumed loss	6.54

SCOPE 3

Our scope 3 emissions all come from sources outside of our direct control. They are wide-ranging and help to quantify the impact of our broader activities at NTSU.

UPSTREAM LEASED ASSETS

NTSU lease four buildings from NTU and UPP across three campuses. Utilities within these spaces are managed independently from NTSU.

NTSU does not have sole occupancy within these buildings. Therefore, our emissions are calculated according to percentage occupancy.

This category contributes 228.84 tCO_2e and is our second-largest contributor to our carbon footprint at 25.4%.

BUILDING NAME	TOTAL BUILDING AREA (m^2)	SU OCCUPANCY (m^2)	SU OCCUPANCY (%)
Byron (City)	6095.50	3050.99	50
Benenson (Clifton)	1841.90	1397.45	76
DH Lawrence (Clifton)	951.70	323.94	34
Main Hall (Brack)	2028.72	359.18	18

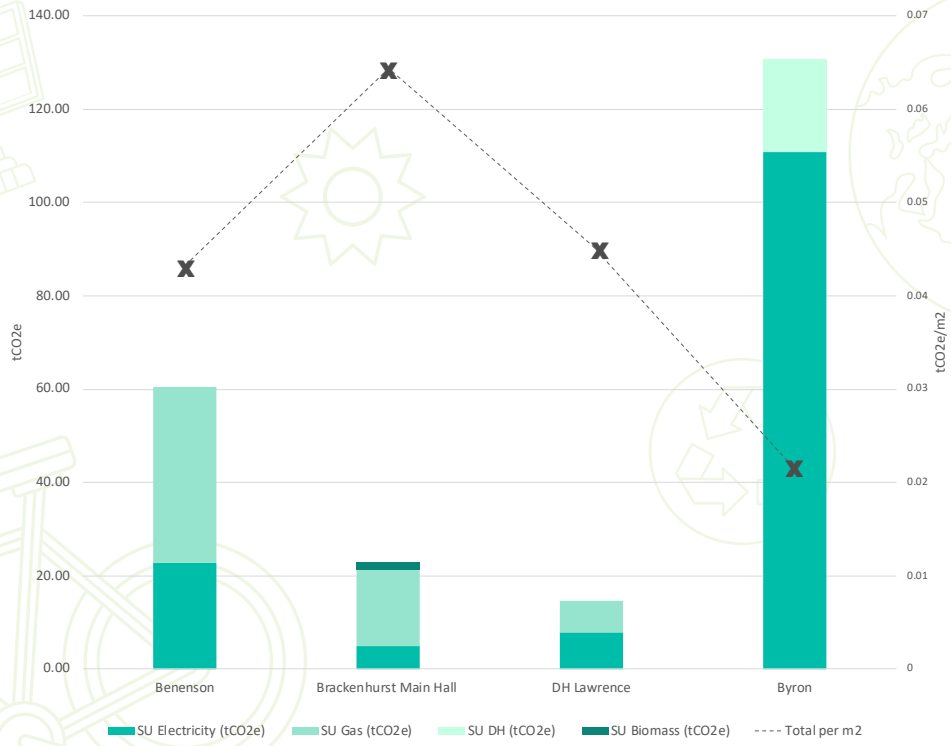


Figure 3: NTSU's Upstream Leased (tCO_2e and tCO_2e/m^2) for NTSU buildings across City, Clifton, and Brackenhurst campus

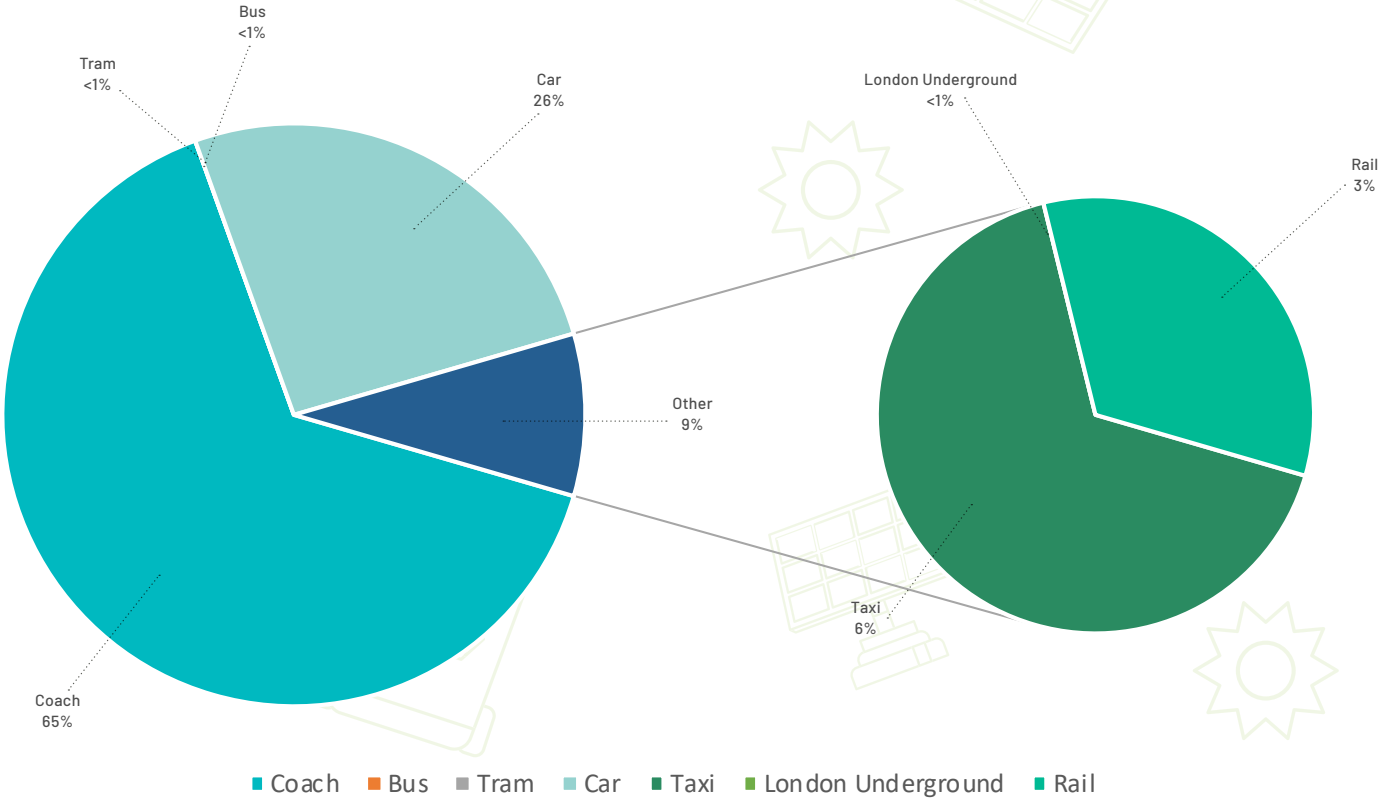


Figure 4: Business Travel

BUSINESS TRAVEL

Our business travel includes all journeys made by staff for work-related reasons (e.g. cross-campus travel or travel to an off-site event).

We also include late-night reimbursements for our staff and student staff in our footprint (e.g. when we cover the cost of safe travel home for staff working late shifts when public transport routes are inactive).

The final contribution to our business travel is our contracted coach supplier—used during Freshers to transport students to events.

Our business travel emissions contribute 0.4% of our total carbon footprint.

MODE OF TRANSPORT	tCO_2e
Bus	0.008
Tram	0.0001
Car	0.942
Coach	2.345
Rail	0.083
Taxi	0.223
London Underground	0.0003
Total	3.60

STAFF COMMUTING

NTSU is a multi-campus organisation and staff are encouraged to work across all sites. A recent staff travel survey (May 2023) showed that staff travel to City campus more than any other site (95% travel to City, 64% to Clifton and 26% to Brackenhurst). Overall, car travel is the primary method of commute used by full-time staff.

Recent survey data has calculated based on recent staff travel survey results. It has been assumed that 79% staff travel to work 5-days a week. The remaining 21%, on average, work from home 2 days a week.

This information has been taken into account when calculating the staff commuting carbon footprint data.

Staff travel to/from home for work contributes 31.70 tCO_2e, 3.5% of our total emissions.

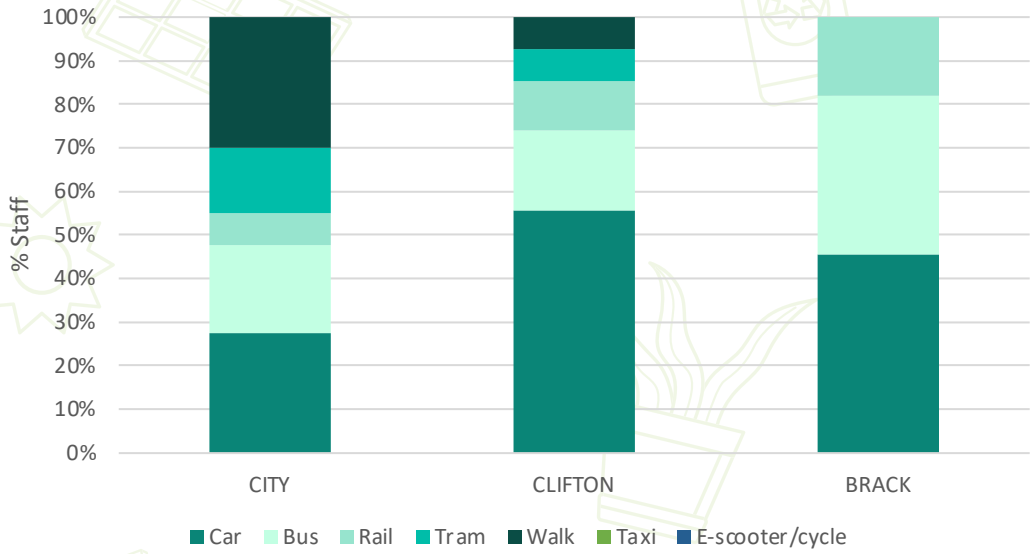


Figure 5: mode of staff commuting, by campus (%)

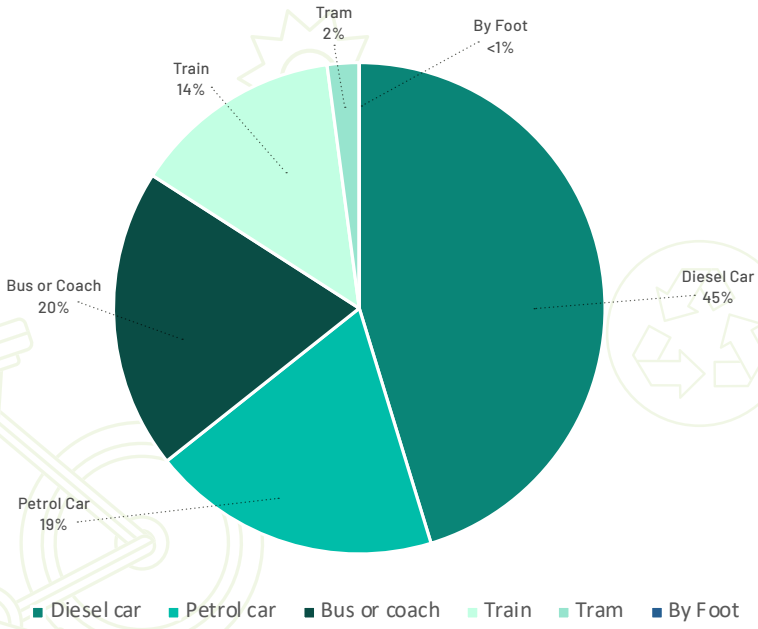


Figure 6: Staff commuting (tCO_2e)

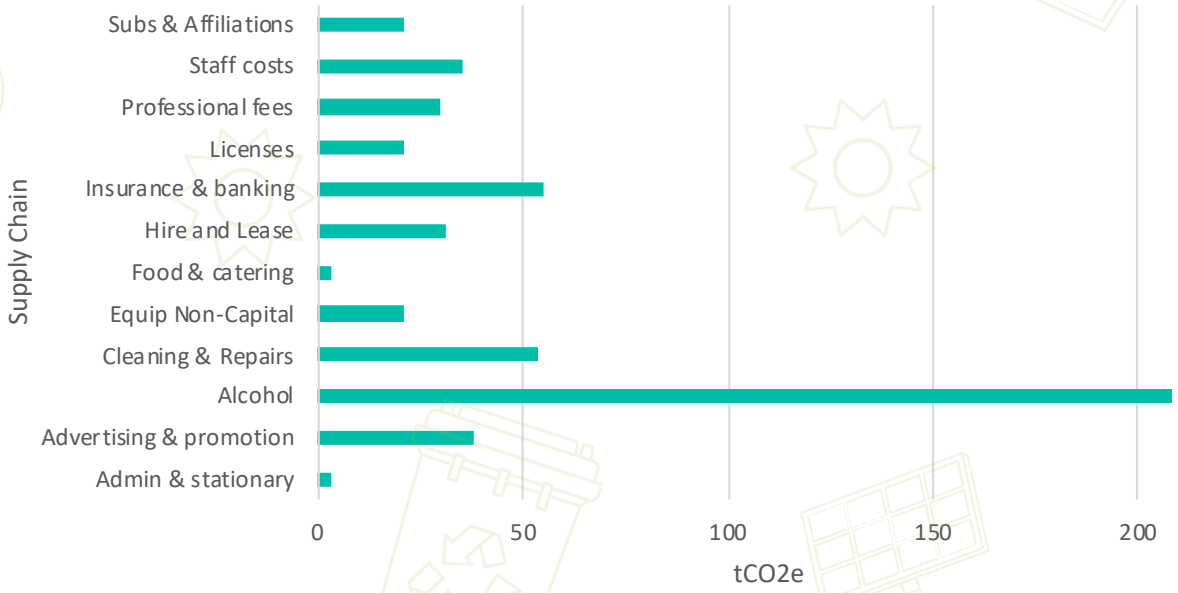


Figure 7: Supply chain (tCO_2e)

SUPPLY CHAIN

NTSU's supply chain is the biggest contributor of emissions in our footprint, at 57.6%. In 2021/22, NTSU spent approximately £1.3 million on goods and services. The data excludes business travel and accommodation to avoid double-counting of our scope 3 emissions. This spend is split into categories according to our expense reporting. The results of NTSU's spend analysis can be seen below.

The total emissions from our procurement activities is 517.50 tCO_2e. Alcohol purchases for our venue make up 40% of this.

WASTE

In 2021/22, NTSU produced approximately 108 tonnes of waste through our activities, accounting to 3.31 tCO_2e, 0.4% of our total emissions.

Our waste contractor successfully diverted up to 98% of waste from landfill through on-site and off-site recycling processes.

	CITY	CLIFTON	BRACKENHURST
LANDFILL	3%	3%	2%
RECYCLED	97%	97%	98%

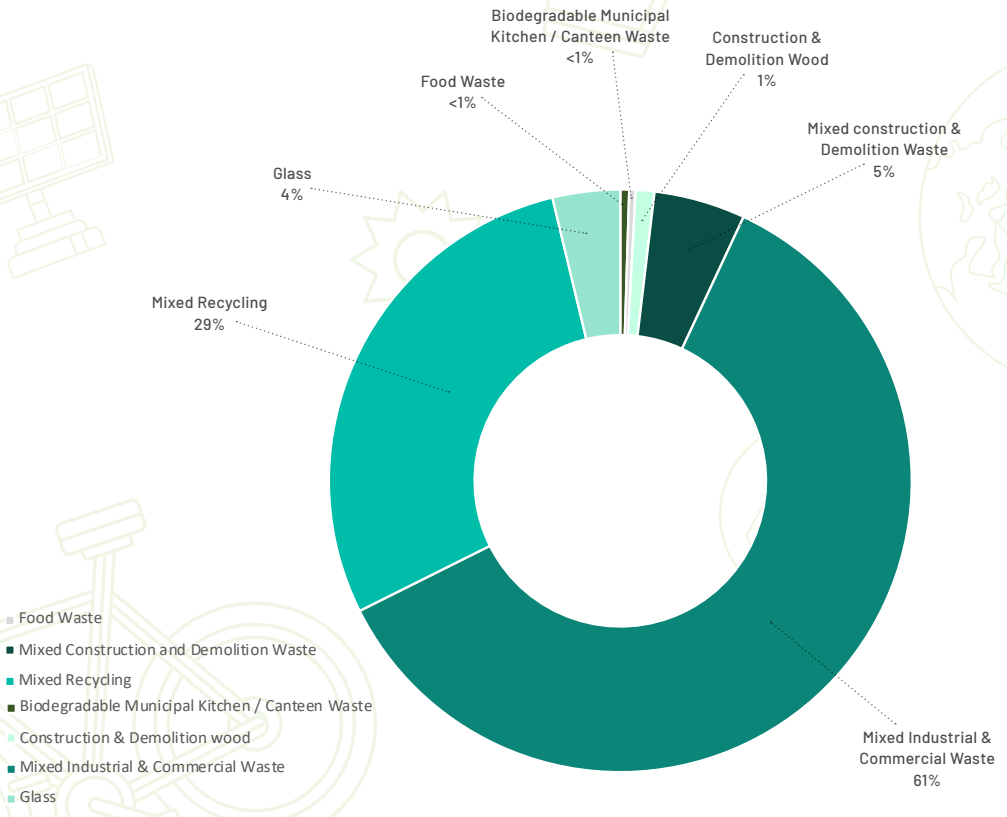


Figure 8: Waste (tCO_2e)

WATER

In 2021/22, NTSU used 5225 m^3 water in our buildings, which is equal to 0.34 tCO_2e. **This contributes 0.04% of our total carbon emissions.**

BUILDING	WATER SUPPLY (tCO_2e)
Clifton Fridges - R410a	18.48
Byron Air-con	6.54

HOTEL STAYS

Hotel stay emissions are calculated by multiplying number of rooms x number of nights x conversion factor*. Where this information was not available, emissions were calculated by inputting cost of stay into HESCET. The latter method was used for 5 out of 34 total hotel bookings.

Hotel stays for business purposes contribute 1.53 tCo2e; 0.2%of our total emissions.

*Conversion factors vary by country. In the UK, all locations except London have the same conversion factor.

TOTAL EMISSIONS BASED ON DETAILS OF STAY (tCO_2e)	TOTAL EMISSIONS BASED ON COST OF STAY (tCO_2e)	TOTAL (tCO_2e)
1.29	0.24	1.53

WORKING ELSEWHERE

NTSU is a multi-campus organisation and staff are encouraged to work across all sites. Some non-student facing staff members in the organisation have options to work from home where appropriate. According to a recent survey, 21% of full-time staff work from home an average of 2 days a week.

The electricity and heating associated with working from home for NTSU staff contributes 3.07 tCO2e - 0.3% of our total emissions.

ANNUAL ELECTRICITY (tCO_2e) FOR ALL STAFF	ANNUAL HEATING (tCO_2e) FOR ALL STAFF	TOTAL (tCO_2e)
0.27	2.80	3.07

WELL-TO-TANK AND TRANSMISSION & DISTRIBUTION

Well-to-Tank and Transmission & Distribution emissions account for the emissions related to the production of fuels and energy purchased and consumed by the Students' Union that are not included in scopes 1 and 2.

In 2021/22, this category was responsible for 80.67 tCO_2e, which contributes 9% of our total emissions.

WTT (SCOPE 1) tCO_2e	WTT AND T&D (SCOPE 2) tCO_2e	TOTAL (tCO_2e)
18.39	62.28	80.67

NEXT STEPS

NTSU ARE COMMITTED TO REPORTING OUR CARBON FOOTPRINT ANNUALLY.

WHAT WE HOPE TO ACHIEVE

THIS CARBON REPORT IS A KEY STEP IN OUR LONG TERM COMMITMENT TO ENVIRONMENTAL SUSTAINABILITY.

Through it we will integrate sustainability into everything we do right across our organisation from our day to day operations through to our organisational strategy.

Ultimately it will help the Students' Union achieve its net zero carbon target and wider goals by 2040.

The data and detail included enables us to understand our environmental impact, set firm targets in specific areas for reduction and create innovate solutions to play our part in tackling the climate crisis.

This report provides a clear and transparent record of our impact and shows how vital our wider partnerships, influence and leadership are in achieving our aims.

I thank colleagues across NTSU for their hard work in producing this document and Nottingham Trent University for their support and guidance.

For more information on how we are going to achieve our ambitions please see the NTSU Sustainability Strategy.

PHIL KYNASTON
NTSU CEO

WHAT WE HOPE TO ACHIEVE

THIS CARBON REPORT IS THE FIRST STEP THAT NTSU IS TAKING TO BE ABLE TO QUANTIFY AND BE MORE TRANSPARENT WITH OUR MEMBERS AND STAKEHOLDERS ABOUT OUR ENVIRONMENTAL IMPACT.

We've made every effort to report to the highest level of accuracy that we can, but we know there is still room for improvement. We are already looking at how we can streamline our reporting process, ensure continued data accuracy, and exploring the potential to bring society activities into our scope.

We hope you're as invested in this carbon reduction journey as we are.

If you have any questions about the process, don't hesitate to get in touch sustainability@su.ntu.ac.uk

HETTIE BAWDEN
SUSTAINABILITY OFFICER

DATA SOURCES & CALCULATIONS

EMISSIONS CATEGORY	SOURCES OF DATA
Scope 1 (Fuel and Refrigerants)	• Fuel Consumption (litres) downloaded from AllStar Businesses account • 2022 BEIS conversion factors used for each mode of transport
Business Travel	• Calculated using data from NTSU Financial reports (milage claims) and contracted coach and taxi accounts. • 2022 BEIS conversion factors used for each mode of transport.
Hotel Stays	• Calculated using data from NTSU Financial reports (accommodation claims). • 2022 BEIS conversion factors applied based on hotel location.
Staff Commuting	• Modal split for travel from the 2023 staff travel survey adjusted to take into account staff numbers in 2021/22. • 2022 BEIS conversion factors used for each mode of transport.
Supply Chain	• NUS Services Ltd. Purchasing Body. • Emissions (tCO_2e) are calculated using HESCET tool, associated with institutional procurement spend. • 2022 BEIS conversion factors applied.
Upstream Leased Assets (Energy Use)	• Electricity, gas and district heat consumption retrieved by NTUs Energy Team. • Converted to tCO_2e using the 2022 BEIS carbon conversion factors
Waste	• Waste composition and disposal methods from ENVA – NTSUs waste contractor. • Converted to tCO_2e using the 2022 BEIS carbon conversion factors for each waste type.
Water	• Water consumption in m^3 provided by NTU Energy Team. • Converted to tCO_2e using the 2022 BEIS carbon conversion factors
Well-to-Tank, Transmission & Distribution	• Electricity, gas, district heating, fuel & biomass consumption for managed estate retrieved. • Converted to tCO_2e using the 2022 BEIS carbon conversion factors.
Working Elsewhere	• Staff working from home calculated based on 2022/23 Staff Travel Survey and applied retrospectively to the number of full-time staff employed for the 2021/22 academic year. • Staff working from home estimated at 60% over 47 weeks, with 19 weeks considered to be 'heating weeks'. • Converted to tCO_2e using the 2022 BEIS carbon conversion factors

FOR MORE INFORMATION ON HOW OUR EMISSIONS ARE CALCULATED, PLEASE SEE NTSU'S CARBON REPORTING PROCESS DOCUMENT.

IF YOU HAVE ANY QUESTIONS ABOUT OUR WORK ON SUSTAINABILITY, PLEASE DON'T HESITATE TO GET IN TOUCH

SUSTAINABILITY@SU.NTU.AC.UK

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