

Net Zero Ambitions and Plans

September 2023

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Pro-Vice Chancellor

THE  TIMES
THE SUNDAY TIMES
**CANLLAW
PRIFYSGOLION
DA
2019**

PRIFYSGOL
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**GOOD
UNIVERSITY
GUIDE
2019**

UNIVERSITY
OF THE YEAR
FOR TEACHING
QUALITY

The Rapid Need to Reduce CO₂ Emissions

International Commitments

- The **2015 Paris Agreement** pledged countries to prevent the increase in the global average temperature to below 2°C and pursue efforts to limit the increase to 1.5°C.
- **IPCC Report 2018** stated that there are “only 12 years for global warming to be kept to a maximum of 1.5°C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people.”

Welsh Government and HEFCW Targets

- WG Target is Net Zero by 2050. [Climate Action Wales \(gov.wales\)](https://www.gov.wales/climate-action-wales)
- In 2019 WG committed to achieve a zero carbon public sector by 2030 - includes University CO₂ Emissions.
- The University Executive and Council voluntarily pledged to try to be Carbon Neutral by 2030.

The Role of Students

- Incorporating and involving the student body is critical to successfully delivering our Net Zero Strategy.
- SU commented on Net Zero Strategy at various stages

Net Zero Strategy



Aberystwyth University

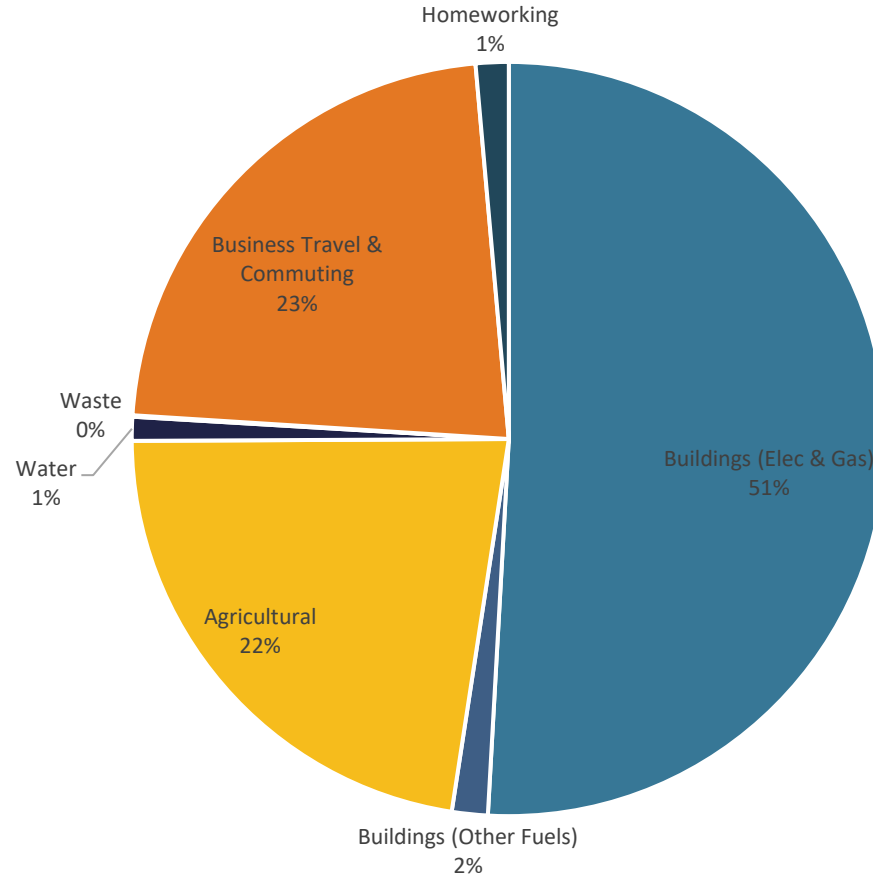
Draft Towards Net Zero Carbon 2030 Strategy

Emissions Scope

Key Themes	Scope	Emission Sources
Buildings & Estate	Scope 1	Natural Gas Gas Oil Liquefied Petroleum Gas Kerosene Biomass
	Scope 2	Grid Electricity Renewable Electricity Well-to-Tank Emissions
	Scope 3	T&D Water (Treatment & Supply) Homeworking
Transport & Travel	Scope 1	University Vehicles
	Scope 2	University Pool Car (EV)
	Scope 3	Employee Commuting Business Travel
Agriculture	Scope 1	Livestock Farmland Soils
Sequestration	Scope 1	Land based emissions and/or sequestration
Waste Reduction & Minimisation	Scope 3	waste generated by university operations
Homeworking	Scope 3	GHG emissions associated with staff working at home

Base Year Emissions

2019/20 Baseline emissions



2019/20 Total Net 18,345 tCO₂e.
Sequestration of **2,828 tCO₂e (13%)**

Aberystwyth University targets

1. **Renewable Energy** - At least 25% of the Universities total electricity to come from renewable sources by 2030.
2. **Decarbonise Heat** - Seek to convert at least 85% of annual gas demand to renewable heat sources by 2030.
3. **Energy Efficiency** – seek to reduce total energy usage (natural gas and electricity consumption) by at least 15% by 2030.
4. **Construction and refurbishment** – ensure stringent sustainability standards for all new and refurb projects to improve energy efficiency and minimise embedded carbon by 2024
5. **Travel** – reduce total business travel and commuting emissions by at least 54% by 2030.
6. **Waste** – reduce general and DMR waste by at least 25% by 2030
7. **Water** - reduce water consumption by at least 25% across our estate by 2030
8. **Procurement** – Ensure sustainability is a key consideration in the procurement process by 2025

Key Actions

Circa 50 actions identified in our Net Zero Action Plan

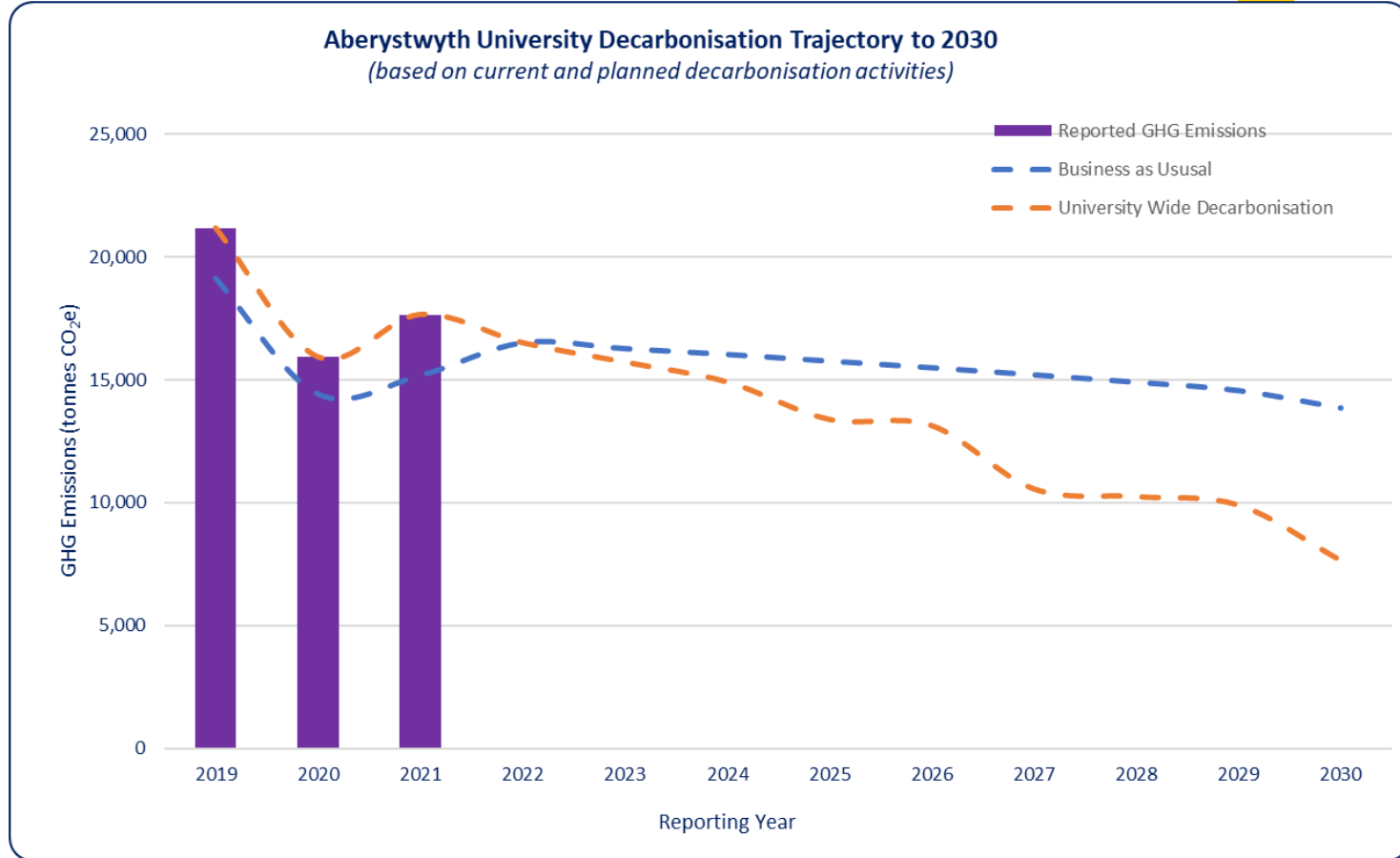
- Large scale heat decarbonisation at Penglais Campus and Gogerddan
- Additional renewable Energy projects – Potentially at Gogerddan, Trawscoed and Fferm Penglais
- Further Energy Efficiency Projects – REFIT Phase 3 planned for 2024
- Reduce business mileage, commuting and flights by approx. 25-30%
- Support transition to EVs among staff
- Fully EV fleet by 2030 (excluding specialist vehicles)
- Identify further opportunities to reduce emissions in agriculture
- Embed sustainability in procurement process

Behaviour change critical! – Net Zero can't be delivered without changes to the way we operate

Further measures will be required to achieve net zero

Strategy Model

At least a 60-70% reduction if we deliver all projects in the action plan



Solar Farm Project

- £2.9M Project
- 2.5MW array (4,500 panels)
- delivering annual CO₂e emission savings of more than 516 tonnes
- Will provide >25% of the annual electricity requirements of Penglais Campus
- Will save us >£450,000 per annum in Electricity costs
- Fully operational since 2nd Feb 2023

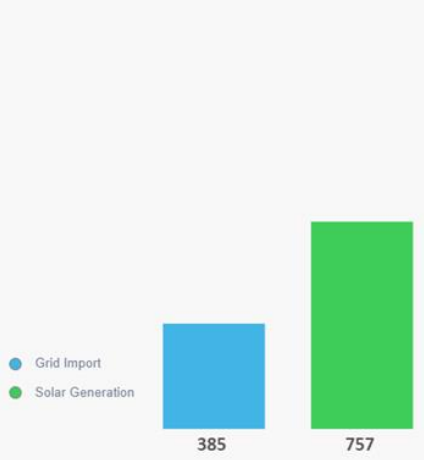




SOLAR ARRAY OVERVIEW

As part of Aberystwyth Universities commitment to becoming net zero by 2031, a £2.9M solar array was completed in February 2023. The array of over 4,500 panels is expected to provide over 25% of the annual electricity needs of Penglais campus and reduce CO2 emissions by 500 Tonnes per annum.

Penglais Campus live power (kW)



Total cost savings since installation (£)



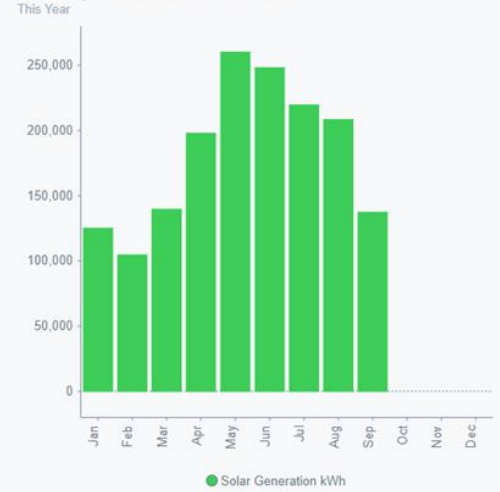
Cost Saved Daily (£)



CO2 Emissions saved since Installation (TCO2e)

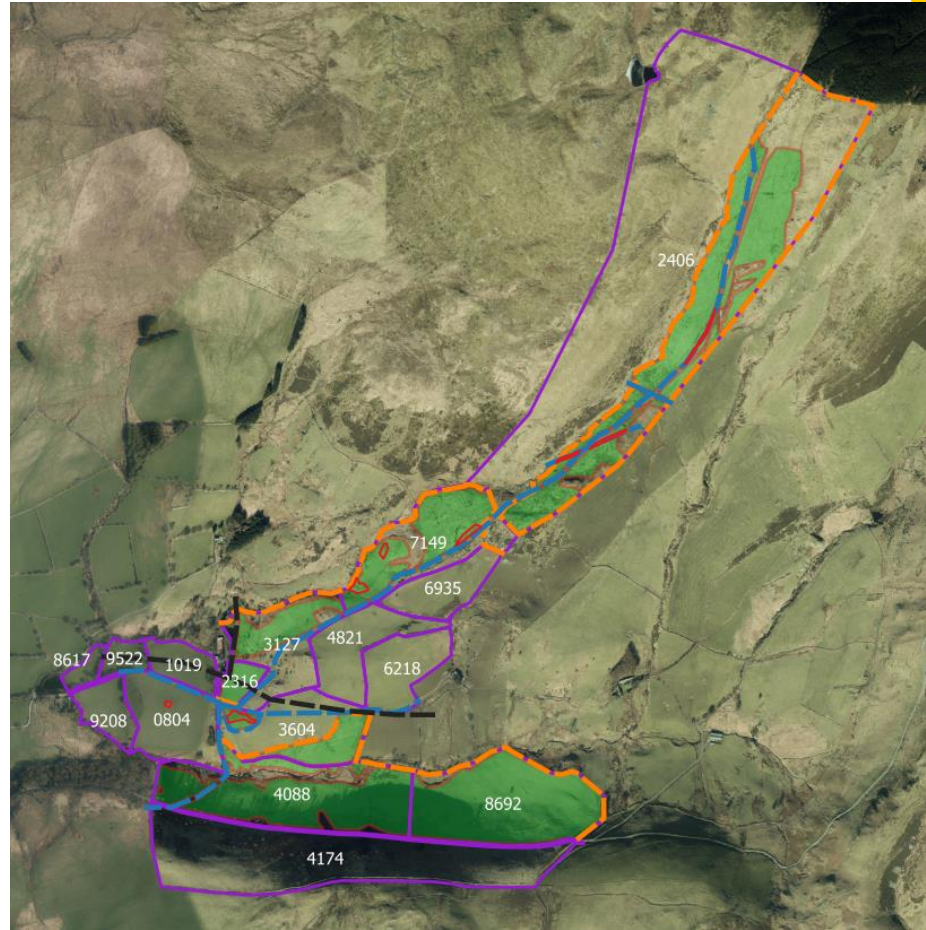


Monthly Generation This Year



Tree Planting Projects

- Planted approx. 20,000 trees 2022/23
- Plan to plant between 90,000 – 120,000 trees across 4 sites of unproductive agricultural land
- Predominantly native broadleaf trees
- Biodiversity enhancement species mix
- Will be predominantly funded by Welsh Government / NRW grants
- Sequesters approx. 150 tonnes of CO₂ per annum
- Works likely to be phased over 2-3 winters



Other Updates

REFIT Phase 3 – developing a business case for a multi-million project for further efficiency measures in the next 12 months includes the following measures:

- New LED lighting throughout 18 buildings
- Rooftop Solar on William Davies Building
- Improved pipework insulation and heating controls

Renewable Energy

Feasibility work underway for a large-scale renewable energy scheme at Gogerddan campus

How can I get involved?

Key contacts

- Neil Glasser: nfg@aber.ac.uk (Pro-Vice Chancellor)
- Dewi Day: ded17@aber.ac.uk (Sustainability Advisor)
- Ash Sturrock: ais13@aber.ac.uk (Campaigns and Democracy Coordinator)
- Zoe Hayne zoh6@aber.ac.uk (Academic Representation Coordinator)

How can I get involved?

- Clothes Swap (in the Student Union Building). Volunteers welcome.
- suvolunteering@aber.ac.uk
- Community Fridge Project:
https://www.abersu.co.uk/organisation/community_fridge/
- Green Team: <https://www.abersu.co.uk/organisation/greenteam/>
- We also have one-off action days advertised throughout the year.
<https://www.abersu.co.uk/teamaber/volunteering/actiondays/>

SU Environmental Societies

- Aberystwyth Conservation Society (ACV): <https://www.abersu.co.uk/society/acv/>
 - Agriculture Society: <https://www.abersu.co.uk/society/aberagrisociety/>
 - Bee Conservation Society: <https://www.abersu.co.uk/society/abcs/>
 - Ornithological Society: <https://www.abersu.co.uk/society/10635/>
 - Phyte Club: <https://www.abersu.co.uk/society/8414/>
- Other Students Union Initiatives:
- Green Impact.** Last year the SU won the excellence award. There are many sections to Green Impact and any student who wishes to get involved is highly welcome.