

## **Carbon Management Plan**

### **Path to Zero**

#### **Strategic principles and plan for the delivery of a net-zero carbon footprint**

Bangor University declared a climate emergency in June 2019, at a time when the Welsh Government acknowledged the challenge of climate change which threatens our health, economy, infrastructure, and our natural environment.

As a part of the global effort to tackling climate change, Bangor University, in line with all public sector employers, seeks to play its part in reducing adverse impacts on the environment through reducing emissions of CO<sub>2</sub>e<sup>1</sup> and promoting positive behaviour.

Consistent with the spirit of the University Sustainability Strategy and as we transition to a low and then zero carbon future, the University will seek to deliver net zero in conjunction with an ever-improving relationship and understanding between staff, students, and academic and professional services, sharing information, ideas and developing new knowledge.

Our 2005 Scope 1 and 2 baseline emission rate was calculated as 13,850 tonnes CO<sub>2</sub>e, and we have already achieved a significant reduction in energy usage, down 42% per m<sup>2</sup> in 2020/21. The University is committed to achieving net zero and playing its part in ensuring a sustainable and safe environment for the wellbeing of future generations.

In pursuance of delivering a net-zero future, Bangor University will:

1. seek to achieve a 20% CO<sub>2</sub>e reduction in Scope 1&2 emissions in 2021/22 compared to 2018/19<sup>2</sup> and will develop CO<sub>2</sub>e reduction targets for 2023-2025, and thereafter produce an achievable, clear, and measurable plan for fully attaining Scope 1 & 2 net zero CO<sub>2</sub>e by 2030 and for significantly reducing Scope 3 impacts.
2. properly consider carbon impact and environmental implications of all major institutional decisions. Ensuring initiatives, strategies and major projects are in line with the University's carbon zero targets and environmental and sustainability commitments.
3. for the built environment and in line with the University Estate Strategy, emphasise commitment to net zero and deliver practical ways of achieving this through the implementation of a three stage Reduce-Produce-Living Lab approach and by adopting Fabric-First, Bio-First and Zero-Carbon approaches to all new builds and major refurbishments from 2022 onwards. As a minimum the University will design all new builds to BREEAM Excellent Standards.
4. increase, year-on-year, its on-site electricity generation. To deliver this and to reduce demands on the National Grid, the University will develop feasibility studies to significantly increase on-site energy generation and agree a measurable delivery plan and energy generation targets for 2025-2030.
5. develop feasibility studies and implementation plans, and commence a programme of replacement for:
  - a) all fossil fuel gas and oil boilers, replacing with alternative low or zero carbon heat sources. No new or replacement fossil fuel gas or oil boiler or heating system will be installed at the University after 2025.

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<sup>1</sup> A carbon dioxide equivalent, abbreviated here as CO<sub>2</sub>e, is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

<sup>2</sup> Pre Coronavirus pandemic levels

- b) room and location air conditioning systems. Such units will, where practicable, be replaced by air moving and other building modifications. All existing units will be reviewed between 2022 and 2025 and unnecessary or inappropriate units adapted, removed, or replaced, and from 2025 no new system will be installed without a clear and defensible case for their installation.
6. work with staff, students, Colleges, Schools, Research Teams and Services to evaluate and reduce energy and water use. To aid understanding, the University will:
    - a) provide each School and major Service with a breakdown of their energy and water usage.
    - b) promote energy and water awareness and encourage staff and students to be energy and water conscious.
    - c) work with high energy and water users, identifying efficiencies and changes that will reduce energy and water consumption.

*Reducing demand is seen as key to achieving net zero and each facet of the University has a role to play in this.*

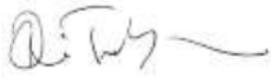
7. work with staff, students, Colleges, Schools and Services to decrease waste through reducing consumption, increasing reuse of equipment and materials, increasing recycling, and promoting good behaviours at the University and beyond.
8. better quantify and then plan for reducing adverse carbon impact of Scope 3 activity, including:
  - a) investments, procurement, purchased goods and services.
  - b) staff and student commuting.
  - c) further encouraging the use of electronic communications to reduce the need to travel, be this regional, national, or international journeys.
  - d) producing targets for year-on-year real reductions in business travel.
9. address any Scope 1&2 off-setting and work towards being fully net-zero, including Scope 3 emissions, before 2050: in line with the Intergovernmental Panel on Climate Change (IPCC) recommendation and the Welsh Government's net zero pathway.
10. work with Local Authorities and the Students' Union to develop an Active Travel Strategy that will encompass health, wellbeing, and sustainability, supported by appropriate facilities.

The Sustainability Strategy Group will annually monitor this Plan and take a lead on the delivery of a net zero future.

**Scope 1** – Direct Green House Gas (GHG) emissions from the consumption of fossil fuel through direct use and operations e.g., our buildings and University vehicles

**Scope 2** – Indirect GHG from consuming purchased gas, oil, and electricity

**Scope 3** – Indirect emissions such as the goods and services we buy, transportation, waste generation and removal, water supply and sewage treatment, investments, leased assets and other

Approved by: 

Date: 13<sup>th</sup> April 2022

Professor Oliver Turnbull, Deputy Vice-Chancellor, Chair of the Sustainability Strategy Group

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