

Carbon Neutral Roadmap

2021 - 2050

FOREWORD

This Carbon Neutral Roadmap supports the University's Sustainability Strategy to present a bold vision of becoming carbon neutral for Scope 1 and 2 carbon emissions by 2050.

Since the first Carbon Management Plan 2010-2020/21 was written, the University has been a leader in the sector in reducing its carbon emissions and becoming known as one of the most sustainable universities in the UK. This is evidenced with our high position in the People and Planet Green League, being one of only three universities to be in the top 12 since 2010. Furthermore, the University has already reduced its Scope 1 and 2 emissions by 52%, as reported in 2019/20, based on its 2005/06 baseline year. The achievements were reflected by the University being named the Guardian's University of the Year 2020, which included metrics on how sustainability is integrated into the University.

The University is engaging with its stakeholders and beneficiaries, both within the University and externally, to work towards our goals of reducing carbon in order to support the global challenges to address climate change. Our goal is to become Net Carbon Zero at the earliest opportunity and this document sets out our roadmap to strive towards our commitment to achieve this.



Professor Alec Cameron
Vice-Chancellor & Chief Executive

INTRODUCTION

The University recognises that climate change is one of the most significant global challenges of the century. The United Kingdom, along with more than 170 other countries, officially signed the Paris Agreement in 2016. The Paris Agreement sets out a global target to reduce greenhouse gas emissions, and a decisive call to action to mitigate dangerous climate change caused by human activity. In 2019, the UK government passed legislation to reduce the UK's net emissions of greenhouse gases by 100% by 2050.

To meet this challenge and to support the UK and the world's transition to a low carbon economy, Aston University has set out these ambitious, but what it believes to be achievable targets. Mitigation and adaptation open up opportunities to apply new technologies, increase efficiency and reduce costs while reducing emissions.

This Carbon Management Roadmap (CMR) lays out a comprehensive approach to climate change mitigation and adaptation in order to achieve our ambitious targets. It focuses on actions around the operational estate and supports the Sustainability Strategy, which takes a whole institute approach to climate change.

Our Vision

Aston University commits to a 78% reduction in scopes 1 & 2 emission by 2035 and to be carbon neutral by 2050. To deliver this commitment it has developed an engagement plan with students, staff and other stakeholders.

Scope

This CMR identifies key drivers as electricity, gas, heat and our fleet usage. There are generally three scopes of emissions referred to according to the Greenhouse Gas Protocol Initiative, "A Corporate Accounting and Reporting Standard". This CMR targets Scopes 1 and 2 as follows:

Scope 1: Direct emissions produced from sources that are owned or controlled by the University, which includes the combustion of fuels (such as natural gas, oil and fuel used by the vehicle fleet) and fugitive emissions (such as refrigerants from air conditioning systems).

Scope 2: Indirect emissions caused through the purchase of electricity and heat.

STRATEGIC THEMES

Since 2005, the University successfully reduced its Scope 1 and 2 emissions by 52% by 2020, exceeding the original sector target set by HEFCE. The following strategic themes have been the foundation to the University surpassing its previous target, and have informed this CMR:

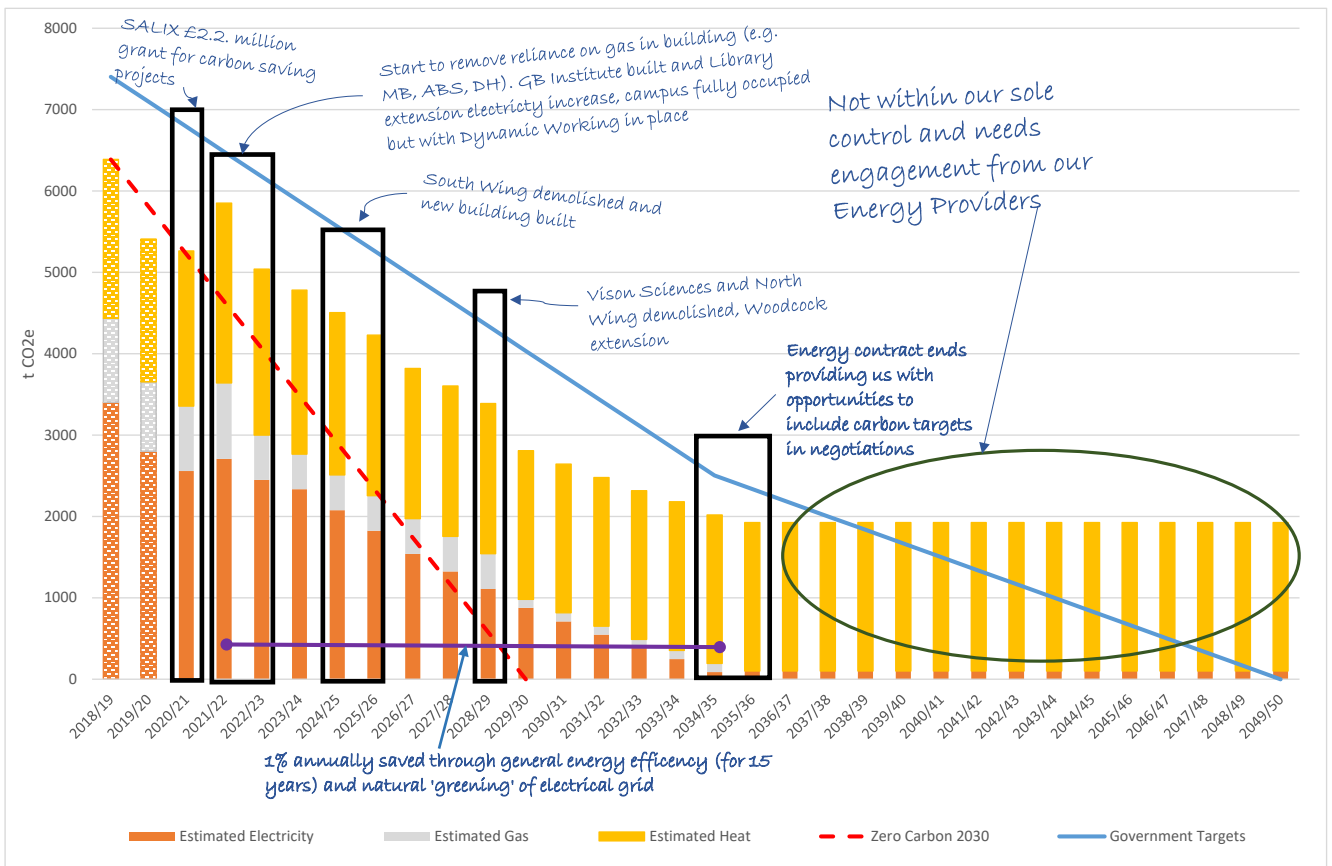
1. **Space utilisation and dynamic working** – The University will heat, ventilate and light spaces endeavouring to use less energy per person and m² through an agile working environment, with staff only using on site energy as and when required.
2. **Reduce usage** – The University will take steps to ensure that heating, lighting and equipment are only utilised when buildings are in use supported by the 'Go Green Champions' in relation to staff and the Students' Union in relation to students.
3. **Use energy efficiently** – The University will take steps to utilise energy efficiently, for example through the installation of SMART LED lights and use of air quality sensors.
4. **Building physics design principals** – The University will endeavour to incorporate energy efficient solutions into any new buildings and refurbishments to optimise energy consumption and minimise carbon emissions where practical to do so.
5. **Generate our own heat and power** – The University will endeavour to generate its own low carbon energy by using a mixture of renewable and low carbon technology, including solar panels or air sourced heat pumps.
6. **Connect to local low carbon networks** – The University will investigate, wherever possible, connections to neighbouring systems with the objective of increasing network resilience and supporting the availability of low carbon technologies to the University and the region.
7. **Move away from Fossil Fuels** – The University will endeavour to discontinue the usage of gas fired boilers and heating schemes and instead utilise alternative low carbon scheme.
8. **Carbon Removal** – The University will continue to support research into biochar for carbon sequestration within the campus at the Energy and Bioproducts Research Institute, which targets the reduction of nitrous oxide and methane emissions. The University will also look to take steps to offset its greenhouse gas emissions through the implementation of relevant schemes.

Governance

The Executive sponsor of this CMR is the Chief Operating Officer and the senior management owner is the Director of Estates. This CMR will be monitored and managed by the Sustainability Strategy Steering Group in accordance with the Sustainably Policy. The Sustainability Strategy Steering Group will report performance against this CMR in January and July each year to the Executive Operations Group. Such reports on approval by the Executive Operations Group will be reported to the Executive Committee.

ROADMAP

Aston University commits to a 78% reduction in scopes 1 & 2 emission by 2035 and to be carbon neutral by 2050, based on the strategic themes and taking account of the University's forecasted emissions set out in the following roadmap:



The University will continue to engage with the appropriate stakeholders and business partners to design and implement appropriate solutions to achieve our goals.