Sustainable Construction and Refurbishment Policy - Updated Feb 2022

Introduction

The University of Worcester is committed to developing, maintaining, and enhancing its built infrastructure in a manner that promotes sustainability, protects, and enhances natural resources and biodiversity, prevents pollution, and provides opportunities for the local economy. The University of Worcester declared a Climate Emergency in July 2019 and is committed to **reducing carbon emissions to net zero by 2030** in all three scopes from a baseline 2018/19. Construction, refurbishment, and infrastructure projects must be reviewed through a full carbon lens that encompasses the inter-relationship between embodied and operational carbon and emissions from the use of infrastructure and buildings and be placed within the context of overarching carbon budgets. All sources of carbon therefore need to be at the forefront of infrastructure and construction decision-making in the context of the overarching carbon budgets, and with an understanding of the inter-relationship between embodied, operational, and use emissions of different assets.

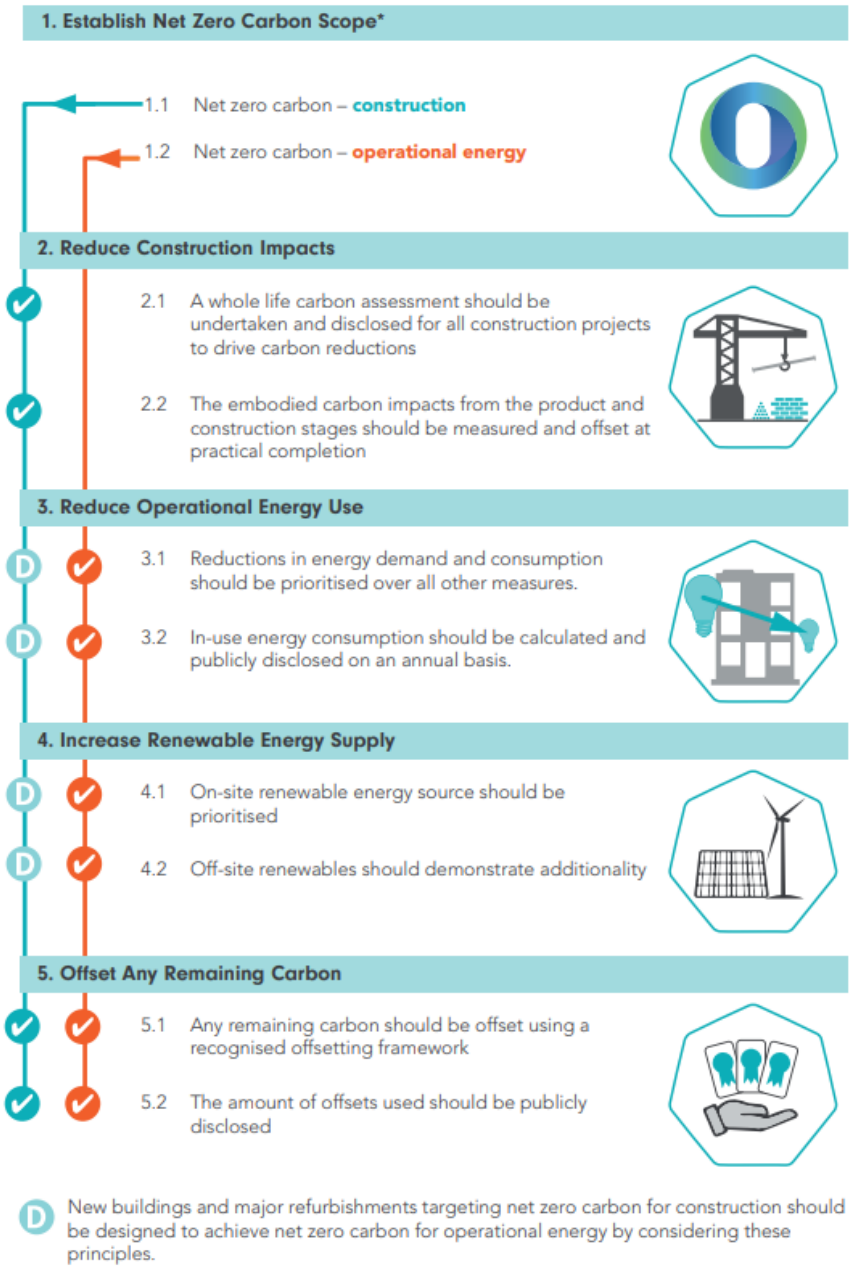
This policy seeks to support and complement the University's Sustainability Policy and the Sustainability Strategic Plan. This policy should also be read in conjunction with the University's Energy & Water Management Strategy 2021-31 The application of the principles within this Policy are subject to resource availability.

Impact on local communities and the local environment

The University, its Project Teams and Contractors will aim to be consultative and responsive to the internal and external communities. Where it is deemed appropriate, projects will be registered under the Considerate Contractor Scheme and will aspire to a Gold Award. The University will also encourage the Contractor, and its supply chain, to bring added social impact (Social Values Act) through the project. This may include providing apprentice opportunities, use of local suppliers and labour force, undertaking works for local charitable organisations or providing education opportunities for local groups. The University's Medium Works Contractor Framework has established several Key Performance Indicators to monitor this work – this will continue to be followed and reported regularly.

Biodiversity Net Gain is an approach – Environment Act 2021, that aims to leave the natural environment at least 10% measurably better state when development occurs. During the design and the delivery stage of a project the University, the wider Project Team, and the Contractor (and its supply chain) will look for opportunities to provide and protect and enhance habitats undertaking Net Gain impact assessments. The University of Worcester has a legal obligation to conserve biodiversity and has made policy commitments accordingly. The Natural England and Rural Communities Act (2006) requires all UK public bodies to have regard for the conservation of biodiversity. Biodiversity is a key part of the University's Sustainability Policy and Environment Management System. Where appropriate, biodiversity advice from the Strategic Biodiversity Management Group can be sought (as set out in the University's Biodiversity Strategy and Biodiversity Action Plan) to set out how the scheme will both protect existing habitats and species and give details of mitigation, enhancement, or compensation plans.

Net Zero Carbon by 2030



In 2019 The UK Green Building Council published the Net Zero Carbon Building Framework [1] and in 2020 they published a report September 2020 on the feasibility into the design, delivery and cost of new net zero buildings[2] and a 'Renewable Energy Procurement & Carbon Offsetting Guidance for net zero carbon buildings' in March 2021[3] In November 2021 the 'Net Zero Whole Life Carbon Roadmap - A Pathway to Net Zero for the UK Built Environment' was published. [4] This Roadmap identified two key priorities which the University needs to support and implement: -

- **Adoption of a design for performance approach**. To shift away from the theoretical building' approach and to focus on how energy intensive buildings will be built in practice, alongside other key net zero enablers such as peak demand limits.

[1] https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2019/04/05150856/Net-Zero-Carbon-Buildings-A-framework-definition.pdf

[2] https://ukgbc.org/wp-content/uploads/2020/09/Building-the-Case-for-Net-Zero_UKGBC.pdf

[3] https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2021/03/05144141/Renewable-Energy-Procurement-Carbon-Offsetting-Guidance-for-Net-Zero-Carbon-Buildings.pdf

[4] https://www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf

- **Whole life carbon measurements and agreed limits.** To start with mandatory measurement, followed by the phased introduction of embodied carbon limits for new buildings to reduced demand, alongside changes to planning and VAT to incentivise the re-use of existing buildings.

Fig 1. Steps to achieving a net zero building. (Source: Net Zero Carbon Buildings – A framework definition[5]. UK Green Building Council 2019 https://www.ukgbc.org/)

These sources demonstrate how designs for residential and workplace buildings can be influenced to improve resource efficiency, reduce running costs, and achieve net zero carbon. The studies showed that the increased capital investment in net zero buildings needn't cost the earth. All stages and processes in the design and refurbishment / construction and operation of buildings can contribute towards excellence in sustainability and the University will use these steps as a framework for delivering new build and refurbishment projects with any new building or refurbishment seeking to be a Net Zero Carbon Building – the University recognises it will not always be possible to follow all steps for its smaller schemes, however the key themes and priorities will be followed.

[5] https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2019/04/05150856/Net-Zero-Carbon-Buildings-A-framework-definition.pdf

The following will form the framework to move the University of Worcester's Built Environment towards Net Zero Carbon:

 **Establish Net Zero Scope**	 **Reduce Construction Impacts**	 **Reduce Operational Energy Usage**	 **Increase Renewable Energy Supply**	 **Offset any remaining Carbon**
Construction and Operational • Net Zero Carbon in scopes 1, 2 and 3 from a 2018-2019 baseline Agreed September 2020.	• Undertake full option appraisals - including Do Nothing – Can existing resources work more efficiently • Modern construction techniques – less resources used – eliminate waste • Careful selection of materials – FSC wood, VOC free paints • Undertake Whole Life Carbon Assessments Initially at RIBA Stage 2 and then at Practical Completion (end of RIBA stage 5) • Maximise social value opportunities – TOMS targets	• Building fabric and passive design • System monitoring and efficiency • Energy and water usage, management, and efficiency • Occupant wellbeing. • End user training, awareness, and use • Biodiversity • Low and Zero Carbon (LZC) technologies • Soft landings	• Minimum of 15% of on-site renewable energy. On-site generation - currently 1.4% • Continue to purchase 100% renewable energy	• Agreed 50% of total carbon – all 3 scopes- removed by 2030 and 50% offset with credible sector scheme

Measuring our success

Refurbishment Projects

All refurbishment projects will aspire to achieve a SKA HE rating of Gold. Minor refurbishment projects will follow the SKA principles but will not be put through an assessment.

SKA HE Rating is a Royal Institute of Chartered Surveyors (RICS) environmental assessment method, benchmark and standard for the higher education sector. The SKA HE assessment has been designed to meet the requirements of higher education refurbishments to meet clear sustainable good practice. The SKA HE schemes consists of more than a hundred 'good practice' measures covering energy and CO2 emissions, waste, water, materials, pollution, wellbeing, biodiversity, project delivery and transport

New Builds

The University will seek an EPC Rating of A on all new builds. Targets will be set for the following areas: renewable energy installed, energy in use, CO2 emissions, waste, water, materials, pollution, wellbeing, biodiversity, project delivery and transport performance of the development.

Updated: Approved - SSG 28 February 2022