



Sustainability Sub-Strategy Bitesize

Priority 10: Sustainable Buildings

Authors:	Sustainability
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Introduction

Our Sustainability Sub-Strategy outlines our commitment to acting in response to the climate and ecological emergency, while supporting the University's mission of excellence in education and research, for the benefit of individuals and communities.

Priority 10: Sustainable Buildings

The University of Essex comprises three campuses, with built environments providing the space for the majority of our activities in support of the University mission of excellence in education and research.

The Colchester campus sits within the historic Wivenhoe Parkland and houses the Grade II listed Wivenhoe House and Constable Building, originally constructed in the 1700s. The heart of the University campus was developed in the 1960s, using the valley to create a series of central squares and interweaving buildings formed from concrete in brutalist architecture. Six residential towers sit tall in the skyline, visible from miles around. The built environment has expanded substantially since the 1960s, with the addition of further academic buildings, sports facilities, student residential accommodation, and the recent development and growth of the Knowledge Gateway.

The Southend campus comprises mainly modern buildings set in the heart of the town centre. The Gateway Building, The Forum, University Square and the Clifftown Theatre sit in close proximity to each other to form the basis of the campus, with public space forming the areas external to the buildings.

The Loughton campus comprises part of the former grounds of the Grade II listed Hatfield house and incorporates the Grade II listed Corbett Theatre, a re-built 15th century barn. Academic and extra-curricular spaces have been added to the campus over a period of years, with the extension to the Corbett Theatre building being the latest addition, alongside an expansion to the Loughton campus boundary.

Our physical infrastructure requires the provision of electricity, heat and water to service our facilities and activities. Buildings represent our greatest energy users and scope 1 and 2 carbon emitters. Minimising our environmental impact will be optimised through physical technological solutions to our infrastructure and buildings.

Objective: To minimise the environmental impact of our physical estate, through enhancement to the sustainability credentials of our built environment and through behavioural change of our campus community.

- We will reduce energy consumption per m² of built environment and reduce energy consumption per head.

- Technology, digital solutions and intelligent building management systems will allow smart use of energy, resource and water across our physical estate.
- Through focusing on value for money building fabric improvements and low energy and carbon infrastructure we will minimise our energy, water and resource use within the existing estate and where any estate growth does happen it will be to the highest possible environmental standards have the lowest carbon impact.

Key Performance Indicators

KPI 30: By 2035, energy consumption for the built environment reduced by 76% from 2019 baseline

Action Plan

Type	Year	ID	Objectives and deliverables	Objective Owner
Priority 10		Sustainable Buildings		
Aim			To minimise the environmental impact of our physical estate, through enhancement to the sustainability credentials of our built environment and through behavioural change of our campus community	
Objective		SSS46	Optimise intelligent building management systems and the nature of building use to reduce energy use	
Deliverable	2024/25	SSS46.1	Further implement occupancy sensors / smart sensors within the estate for heating / lighting purposes	Director of M&CD
Deliverable	2024/25	SSS46.2	Further develop Building Management Systems (BMS) infrastructure, zoning and set-up	Director of M&CD
Deliverable	2023/24	SSS46.3	Develop a Sustainable Building Design Policy and Guide for new buildings and refurbishments in order to set sustainability standards / credentials	Director of ECS
Deliverable	2021/22	SSS46.4	Produce policy and guidelines to ensure energy efficient use of campus buildings by our campus community	Head of SAG
Deliverable	2021/22	SSS46.5	Moderate heating temperature within all buildings during core hours and further reduce temperature during limited use periods	Director of M&CD
Deliverable	2022/23	SSS46.6	Limit spaces available during non-core hours / low occupancy periods and close down / switch off energy for spaces not in use	Director of M&CD, HOD's, Faculty Managers
Objective		SSS47	Optimise infrastructure to reduce water use	
Deliverable	2024/25	SSS47.1	Further implement water efficiency infrastructure through refurbishments and programme of replacement / maintenance	Director of M&CD
Deliverable	2022/23	SSS47.2	Develop and implement infrastructure to manage legionella risks whilst reducing the level of flushing required	Director of M&CD
Objective		SSS48	Enhance low energy infrastructure to minimise energy use	

Type	Year	ID	Objectives and deliverables	Objective Owner
Deliverable	2024/25	SSS48.1	Further implement the replacement programme for LED / low energy lighting installations	Director of M&CD
Deliverable	2024/25	SSS48.2	Scope energy efficient heating and ventilation system solutions for future consideration when existing infrastructure reaches end of life	Director of M&CD
Deliverable	2022/23	SSS48.3	Develop an energy efficient equipment policy for implementation and compliance by Departments / Sections	Head of Energy and Carbon Reduction
Deliverable	2022/23	SSS48.4	Research and review technology advancements in low / efficient energy infrastructure and develop a plan for incorporation within capital and maintenance plans	Director of M&CD, Head SAG
Objective		SSS49	Improve building fabric to reduce energy use, focused on value for money investment solutions	
Deliverable	2024/25	SSS49.1	Review building fabric upgrade options to reduce energy loss at optimal return on investment and develop a plan for implementation	Director of M&CD
Objective		SSS50	Increase buildings heated by low carbon energy, focused on value for money solutions	
Deliverable	2025/26	SSS50.1	Further enhance maintenance regimes for low carbon energy infrastructure in order to optimise performance and return on investment	Director of M&CD
Deliverable	2022/23	SSS50.2	Scope new low carbon infrastructure options for energy supply to buildings and produce a development / funding plan	Director of M&CD, Head of SAG
Objective		SSS51	Minimise the environmental and carbon impact of estate growth	
Deliverable	2023/24	SSS51.1	All essential new buildings to be designed to minimise carbon impact whilst contributing a range of priority sustainability benefits	Director of ECS