



The SDG Accord

The University and College Sector's Collective Response to the Global Goals

Integration of SDGs in

- Institutional governance/strategic level
- SDGs in research
- SDGs in campus operations
- SDGs in curriculum development
- SDGs in student engagement activities
- SDGs into community activities
- SDGs at a whole-institution level

Focus on

- Goal 1 - No poverty
- Goal 2 - Zero hunger
- Goal 3 - Good health and wellbeing
- Goal 4 - Quality education
- Goal 5 - Gender equality
- Goal 6 - Clean water and sanitation
- Goal 7 - Affordable and clean energy
- Goal 8 - Decent work and economic growth
- Goal 9 - Industry, innovation and infrastructure
- Goal 10 - Reduced inequalities
- Goal 11 - Sustainable cities and communities
- Goal 12 - Responsible consumption and production
- Goal 13 - Climate action
- Goal 14 - Life below water
- Goal 15 - Life on land
- Goal 16 - Peace, justice and strong institutions
- Goal 17 - Partnerships for the goals

Our Carbon Management Plan

Carbon usage is linked explicitly to the university estate. The number of buildings, their age and condition, geographical distribution and energy procurement policies and practices, vary considerably across the sector. The University of Northampton makes an interesting case study as we can compare emissions across a 15-year period that includes the transition to a completely new estate, the Waterside Campus, designed with reducing its environmental impact in mind. Analysis Fig 1. is broken down into three time periods – (1) 2005 (when we became a University) to the opening of Waterside in August 2018, (2) the three-year period to 2020/21, and (3) projections to 2030.

Our 2017 – 2020 Carbon Management Plan exceeded our three-year carbon reduction target of 30% (approximately 3,000 tonnes) by 9%. This significant result is due entirely to the construction of Waterside campus (Fig. 1). Prior to the move our yearly average energy consumption (combined gas and electricity) was c. 27,000 MWh. Average emissions over the same period were 7703 tonnes CO₂/year, with a cumulative total of 100,000 tonnes. For comparison, the UK (2017) average is 5.8t per person, equivalent to c.17,000 students over the 13-year period.

Post Waterside, energy reduction comes primarily from design and construction. For example, we deliberately chose low embodied carbon materials with high resilience and durability, combined with smart energy monitoring software and lighting solutions. Local (on-site) energy production is also a major benefit. The installation of the 1MW biomass boiler provides low carbon heat energy, generating 80% of the heat requirements at Waterside. Procurement played an important role too, with local materials sourcing in the supply chain a purposeful choice.

Director of Estates & Campus Services, Becky Bradshaw, said: “We have already exceeded our 2020 target to reduce Scope 1 and 2 [gas and electricity] emissions, but this reduction does not go far enough. It is widely acknowledged that universities are uniquely positioned to affect change through education, research, operational delivery and collaboration with their local communities, and it is vitally important we drive this change through our own commitment to net zero.”

- 1.** Reducing the UON environmental impact on the built environment (locally & nationally). Given the University an opportunity to work with partners in Northampton, to see how we can support and learn from each other; best practice, sustainability considerations during construction; opportunities to link up heat networks.
- 2.** In addition to environmental benefits, the development involved the remediation of ex-industrial land and includes a number of pedestrian and cycle paths which connect Northampton town centre with Delapre Abbey.

CONCLUSIONS

Going forward, we will prioritise low carbon energy through a mix of onsite renewable energy generation and low carbon technology. It will include continued investment in green energy tariffs for both gas and electricity, optimisation of our biomass boiler, solar PV panels on our halls of residence at Waterside (roughly 2000 m²), and air sourced heat pumps. The trajectory, mapping out historical emissions and future energy mix, is shown in Fig 1.

This investment and others across all aspects of the SDGs supports our strategic goal of being Future Focused; The energy sector is an ever-evolving market in a changing World where we thrive to be efficient. Waterside is our source of innovation and embracing smart technological solutions make us forward thinking, innovative and ambitious. Old models of relying on fossil fuel combustion and high carbon sources of energy are no longer acceptable.