

BE A GOOD NEIGHBOUR

Project: Decarbonisation Plan and Local Environment Considerations When Redeveloping Brundtland Building

The Bedford College Group is a step closer in its efforts to be a net zero carbon organisation by 2050 as environmental issues have moved to the forefront of our planning. Following a feasibility study to assess where carbon emissions could be cut across several sites in Bedfordshire and Northamptonshire, the Group identified that its Bedford College campus in the town centre would benefit best from improvements to buildings, of which some have been on the site for almost 70 years.

As part of the Group's groundbreaking decarbonisation plan for the 2021-2022 academic year, steps were taken to save over 350 tonnes of carbon (the equivalent to driving 253 passenger vehicles for one year*) following major infrastructure upgrades and the opening of its brand new Connolly Centre for Modern Construction. This specialist Centre, the latest to be opened by the Group in September 2021, is expected to receive an official A+ on its energy performance certificate. This will be the Group's first Net Zero Carbon building.

Once the feasibility studies were complete, the Finance team set to work in gaining financial support to make planned improvements into reality. The team were successful in securing £2.8 million of grant funding from the Public Sector Decarbonisation Scheme (PSDS) delivered by Salix Finance via the Department for Business, Energy and Industrial Strategy (BEIS).



Picture shows The Bedford College Group's Ian Pryce CBE, Neil Hart of SEMLEP and Vanessa Connolly of the Connolly Foundation.

The grant was used to install a Water Source Heat Pump (WSHP), Genius Controls, highly efficient Mechanical Ventilation and Heat Recovery, Hot water efficient taps, photovoltaic (PV), roof insulation and water heaters at the Bedford College campus. Three other sites benefitted from PV panels: the Zoological Education Centre at Shuttleworth College near Biggleswade; Tresham College's Wellingborough campus in Northamptonshire and the Trinity buildings which are part of The Bedford Sixth Form campus on Bromham Road, Bedford.

Two of the more unusual technologies used in the Group's Heat Decarbonisation Plan included:

Water Source Heat Pump (WSHP):

A river water powered heating system for the installation of its WSHP. The College focused on its Brundtland building which had a license to take water from the river Ouse to power its heating system – the licence permits the extraction of 240,000,000-litres of water a year enabling the Group to replace old boilers and decarbonise the building.

The WSHP is set to save just under 96 tonnes of carbon and £3,978 annually.

Genius controls to manage heating systems across all the sites

Due to the layout of the Bedford College campus many buildings are south facing and get extremely hot on one side and cold on the other, so the College also wanted to look at improving the comfort of its staff and students. With this in mind, they set to install Genius Controls which operate similar to movement sensors.

These Genius Controls are expected to save the College just under 80 tonnes of carbon and £13,913 annually.

Longer term, the Group will continue to make improvements to all of its campuses across Bedfordshire and Northamptonshire to improve the energy efficiency of the whole of its estate. By opening the new Connolly Centre for Modern Construction as the Group's first net zero carbon building, it sets a path for all future developments and will be a key factor to consider for the improvements due to be made for the Bedford College Tower Block in the near future.

In 2021-2022, The Bedford College Group launches its Social Responsibility Strategy and will invite staff and students to participate in the many aspects of this strategy including the plan to decarbonise the built environment.

Patricia Jones, Executive Director of Finance at The Bedford College Group said: "We are fortunate to have the River Ouse flow by our Bedford College campus, it is through the use of this new renewable heating system that we can save 96 tonnes of carbon, which is a tremendous start to our decarbonisation journey."

She continues: "We have many campuses so it's going to take quite a bit of focus to decarbonise them all in a consistent way but we remain committed to our promise for 2050."



Picture shows The Bedford College Group's Ian Pryce next to the River Ouse

Justin Morris, Programme Coordinator for Colleges and Universities at Salix, said: "Working with The Bedford College Group has been an immense pleasure of mine. I was truly impressed by their levels of enthusiasm and determination to orchestrate and deliver these innovative projects in such a tight timeline. Their passion to improve the College's carbon and financial savings through these projects was evident and ultimately a huge success to the College."

* <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



Picture shows The Bedford College Group's Ian Pryce and David Wilkins, Judith Barker - SEMLEP, Mark Farmer - Cast Consultancy, Andrew Rowe - Connolly Foundation and Charles Whitbread - Wixamtree Trust