

## Nottingham Trent University Built Environment

To be Green or not to be Green,  
that is the question.

### About the project

#### Summary

In 2012, 50 Shakespeare St, which was built in 1887, was in a terrible condition; NTU took on this building and renovated it thoroughly, turning this once dilapidated Grade II listed building into the crown jewel of our City Campus.

#### Project partners

All of the funding and financing for this project was arranged internally by Nottingham Trent University.

### The results

#### The problem

50 Shakespeare Street, a Grade II listed building, was in a terrible state of disrepair when NTU decided to take on the challenge of renovating it, situated next to the university directorate; this building had the potential to become a keystone in the university's identity. The building contained a great deal of asbestos and was completely unsuited to any form of use.

#### The approach

NTU invested £900K in replacing mechanical and electrical services in the building, including the installation of a 150kW biomass boiler. Where possible the university retained original fittings and furnishings, endeavoring to maintain the building's previous features whilst updating the building to make it as sustainable as possible, the use of FSC certified wood for flooring and the upgrading of energy efficiency from class F to class A, are but two examples. Concerning economic sustainability the university made heavy use of local trade and craftspeople, ensuring high quality. NTU also successfully connected the building to the Nottingham District Heating Scheme, installed a BMS interface for temperature control, a heat pump system and lighting upgrades. The installation took 9 months.

#### Our goals

The goals of the 50 Shakespeare St renovation was to create a building NTU could be proud of, as a symbol of our continuing endeavors to create a sustainable university for the 21<sup>st</sup> century. We have successfully reduced the energy costs at the building by 30% and made it one of the most energy efficient, sustainable buildings on any of our 3 campuses.

NOTTINGHAM  
TRENT UNIVERSITY

#### Profile

- HEI
- 23,440 students (includes full and part time students)
- 2500 staff
- Urban

## Obstacles and solutions

|   |   |
|---|---|
| Cold and Damp on the Lower ground floor due to glazed bricks      | The walls were cladded with insulation without damage to existing features to improve heat retention.   |
| The Building was Inefficiently Heated                             | The building was connected to the Nottingham District Heating Scheme, receiving heated water from Eastcroft Waste Incinerator and a 150kW Biomass boiler was installed. |
| The Grade II listed building needed to have new windows installed | NTU consulted Conservation heritage on how best to install double glazing at the building.  |
| Some external brickwork was damaged and needed replacing          | Reclaimed bricks from demolished buildings were used.   |

## Performance and results

The building has performed well in the years it has been operational. The Biomass boiler has reduced energy costs by 30%, saves almost 63 tonnes of carbon dioxide a year. The BMS system allows for faults to be found and repaired efficiently. The lighting upgrades alone have reduced carbon emissions by 30.3%. Overall the building is exceeding expectations and is widely appreciated by its users.

## The future

### Lessons learned

That it is possible to take a building built in the 19<sup>th</sup> century and upgrade it to be sustainable, comfortable and efficient. The building fits in perfectly with the wider NTU estate and acts as a yardstick by which other renovation projects can be measured.

### Sharing your project

When the building opened we held talks to celebrate its opening. NTU presently communicates this project through sustainability talks we hold as well as via awards we enter.

### What has it meant to your institution to be a Green Gown Award finalist?

Being a green gown finalist means that NTU is being recognised for its continuing efforts to improve its sustainability credentials. As a finalist we know we are among the top educational establishments within this field.

### Further information

NTU Environment Team

T: 01158482320

E: [environment.team@ntu.ac.uk](mailto:environment.team@ntu.ac.uk)

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