



# CHP case study

# University of Liverpool

# The Site:

The University of Liverpool main campus

30,000 FTE students and 4,700 members of staff

Undergoing an expansion as part of a capital development programme

Heat provided throughout the campus via existing district

Location: Liverpool

Date Operational: 2014

CHP Installed Capacity: **4.0 MWe** 

Investment Cost: £7.3 million

Annual Cost Saving: £1.5 million

Project Objective: **Provide heat** and power to an expanding campus at the University of Liverpool in a way which would reduce the energy bill and decrease carbon emissions

# The Need:

- The size of the campus is increasing leading to a higher energy demand
- The university required a solution which reduced their energy bill to offset the expansion of the estate
- University wanted to decrease their carbon emissions

#### **Implemented Solution:**

- The university had an existing 3.4MWe CHP unit in the energy centre
- 2 x 2MWe CHP units were installed in a disused Grade II listed boiler house
- The units feed into an existing district heating network which provides space heating and hot water to the campus

## The Benefits:

- The scheme has projected annual cost savings of £1.5 million per year
- Lifetime savings are expected to be £22.6 million
- 4.1 year payback period for the £6.1 million loan taken out
- Carbon emissions savings are 5,730 tonnes CO<sub>2</sub> per year

### **'Our new CHP** engines have delivered fantastic financial and carbon savings for the **University. Without** the support and funding from Salix Finance we would have been unable to implement such a large scale project. We look forward to continuing to work with Salix on future energy efficiency projects in order to achieve the objectives in our **Carbon Management** Plan.'

#### **Peter Birch**

Engineering Services Manager



