

# CaseStudy Leisure Centre Sussex

Date : April 2009

Company: Leisure Centre

Cost savings: £94,977 per annum

Services: energy survey, post survey briefing

This particular site is a leisure centre run by the local authority. The site, originally built in 1939 as a sports centre was extended in 1983 to include the swimming pool.

The centre has been threatened with closure and redevelopment, but recently this decision has been reversed and it is now planned to stay open for another five years.

The site is split into two areas; firstly the original 1939 era dry recreation areas which consist of the main sports hall as well as other smaller recreation areas, used for yoga class's fitness suites and boxing club etc. There is a function room used for hosting parties and wedding receptions etc.

- ▶ **an annual saving of £94,977**
- ▶ **an annual saving of 589 tonnes of CO2**
- ▶ **The cost of implementing these measures would be £259,500 with a payback period of 2.7 years.**

Secondly, the wet area consists of the main swimming pool hall and the changing room areas. The main plant is sited within the wet area and consists of the three boilers that are providing heating to the whole site; this includes the heating of the pool, as well as heating to the older dry areas from a pump within the old calorifier room. There are air handling units for the changing room areas as well as the main pool hall these have recently had inverters fitted to the fan motors.

The control for all plant in many cases is the original fit and quite old.



Domestic hot water services are provided from three large calorifiers, two for the wet areas and another to provide DHWS within the older dry area calorifier plant room.

There was once a CHP fitted however, this was removed some time ago. The pipe work and electrical infrastructure is still fitted for this however.

The main electrical supply has a half hourly telemetry facility that is sent to the supplier to compile the sites billing invoices.

The leisure centre is open from 07:00-23:00 weekdays and 08:00-21:00 on weekends.

The area of the site is approximately 4,000 m<sup>2</sup>.

Because of the earlier threatened closure, very little capital investment in the infrastructure had occurred leading to the request for the survey.

The surveys main findings were :-

- Create an energy policy
- Increase staff awareness for energy
- Extend current energy monitoring and targeting system
- Extend lighting controls
- Install new heating control system
- Check the controls of the newly installed motor inverters
- Reduce the electrical base load
- Improve heating pipework insulation
- Install double glazing
- If all of these measures were implemented, it was estimated that there would be :
  - an **annual saving of £94,977**
  - an **annual saving of 589 tonnes of CO<sub>2</sub>**
  - The cost of implementing these measures would be £259,500 with a **payback period of 2.7 years.**