South Tyneside Indoor Bowls & Social Club

Services adopted

- Account Care
- Energy Health Check
- Energy Audit
- Ecofit

Introduction

South Tyneside Indoor Bowls & Social Club was founded 30 years ago. The club has one full time and two part time employees and operates between 1000 and 2200, seven days a week and 52 weeks per year. The building occupies a floor area of 2,375 m² and was opened in 1982, and is constructed from corrugated steel and red brick with no windows.

The building has two main meters, one a Half Hourly meter for electricity which is read remotely and the other for gas which is read monthly.

Utilitywise first contacted them in March 2012, at which time we performed an Energy Health Check (EHC). The EHC compares a site's energy use against a national database of buildings of the same type, with similar hours of operation. The EHC provides a snapshot of the energy efficiency of the client's site. Armed with this data we decided to investigate their energy use further and search for way to reduce their consumption. We performed an Energy Audit, an on-site survey of the property which includes a detailed audit of all the energy use across the site.

	Existing Consumption			
Utility	£	CO_2e(kg)	kWh	Water m³
Electricity	£12,199.96	79,191.02	145,246.00	N/A
Gas	£13,790.04	65,281.35	352,434.00	N/A
Water	£1,387.00	N/A	N/A	1,321.00
Total	**£27,377.00**	**144,472.37**	**497,680.00**	**1,321.00**

The Audit showed ways to save the site 33,753 kWh energy per annum, a reduction of 7% and a reduction of their carbon footprint of 13%.

The Energy Audit report highlighted a number of energy saving projects (Ecofit projects) that would reduce the Club's energy consumption. The key Ecofit project highlighted was a large scale change in the lighting technology used.

	Estimated Savings per annum				
Lighting	£	CO_2e(kg)	kWh	Estimated Cost	Payback Period (Years)
Identified Savings by Behavioural changes	£.00			0	0
Identified Savings by Fitting changes	£3,246.83	15,075	27,711	£15,683.78	4.83
Total	**£3,246.83**	**15,075**	**27,711**	**£15,683.78**	**4.83**

The Energy Audit gave a full breakdown of the fittings and lamps that should be changed, the energy saving and payback period on each.

							Estimated savings per annum				
Room	Proposed Modification	Existing Product	Proposed Product	Proposed Quantity	Current Operating Hrs	Proposed Operating Hrs	£	CO_2e(kg)	kWh	Estimated Cost	Payback Period (Years)
Balcony Bar Area	Behavioural	1 x 18W PL-C - ULT118H	-	0	4,368.00	4,368.00	£.00			£.00	0.00
	Fitting (Non behavioural)	T12 x 100W	1 x 35W T5 - TLSF135/C2	2	4,368.00	4,368.00	£88.03	409	751	£155.06	1.76
	Sub Total			**2**	**8,736.00**	**8,736.00**	**£88.03**	**409**	**751**	**£155.06**	**1.76**
Bar Cellular	Fitting (Behavioural)	T12 x 100W	1 x 35W T5 - TLSF135/C2	4	4,368.00	4,004.00	£182.71	848	1,559	£310.12	1.70
	Sub Total			**4**	**4,368.00**	**4,004.00**	**£182.71**	**848**	**1,559**	**£310.12**	**1.70**

Given the nature of the activity at the site, the use of motion-detecting sensors to automatically turn light off and on was ruled out as too disruptive. This left the option of changing old lamps and light fitting to modern energy efficient designs and instigating behavioural change projects to ensure that lights and equipment are turned off when not in use.

The majority of T12 lights found on site were 8 feet in length. These fittings will require replacing as 8 feet tubes are no longer available. The newer fittings also have a longer life and produce better light levels. T12 tubes last for about 9,000 hours and T8 tubes last for about 20,000 hours. The new T5 tubes have an expected life of 24,000 hours. T5 tubes only lose 5% of light output over the increased lamp life compared to 20% loss for T12 or 10% loss of T8 tubes.

With the Energy Audit carried out at the before the energy procurement it was possible to bundle in the cost of the lighting upgrades into the unit cost of the energy.

The club was extremely happy with the energy deal signed and the energy reduction work carried out.

Geoff Driver, Secretary STIBC wrote*:* “I wish to record our thanks at a job well done. As you were aware we only had a small window of opportunity to complete the major part of the works which comprised the removal of the existing lighting and the installation of the new diffusers and tubes above the bowls arena.
Gary's attention to the planning of the project from the initial assessment to delivery of the parts and subsequent installation was to say the least, impeccable. His team carrying out the installation of the diffusers worked non-stop and we suffered no down time as a result.
Whilst the prime aim of this project was to reduce our energy consumption we have also gained a far superior lighting system over the bowls arena than before the project commenced. Without exception our members which number over 400 have been more than complimentary.
The secondary part of the project which comprised the changing of all other lighting in the building to low energy format was completed swiftly when we re-opened after the Christmas Holidays.”