

Appendix 2 – Leisure Centres

Executive Summary

This report presents the results of a Multi-site Opportunities Assessment survey of Gedling Borough Council carried out by Energy Management Solutions Limited. This survey and report are provided by the Carbon Trust¹.

The agreed objectives of the Assessment were to identify and prioritise up to 20 actions, meeting a 5 year payback criteria that can be taken by the organisation to save carbon.

The 5 sites visited are all sports or activity centres within the Gedling Borough Council district.

A summary of the 20 point Action Plan is presented in the table below.

If all the prioritised measures are implemented, the aggregated savings from the measures identified represent a 19.3% reduction in energy consumption and a 26.4% reduction in cost or £73,581 which translates into direct cost savings. This is the equivalent of saving £201 per day.

The estimated basic carbon footprint for Gedling Borough Council is 2,194.8 tCO_{2e} p.a.

The impact of the Climate Change Levy on Gedling Borough Council is estimated as £7,448 / year.

¹ The Carbon Trust helps businesses and public sector organisations cut their energy costs through the provision of fully funded and part funded, professional advice and assistance. Previously known as Action Energy, the programme has helped many organisations save up to 20% of their energy bills, which equates to total UK energy savings of around £800 million a year.

Action Plan

Energy Management Improvements

Priority	Recommendations	Estimated annual savings					Estimated cost (£)	Payback period (years)	Timescale for implementation and by whom
		(£)	CO ₂ (tonnes)	(kWh)					
		1	Write an Energy Policy applicable to all Gedling sites	1,409	11.0	41,118			
2	Raise awareness to all staff	5,637	43.9	164,472	3,000	0.53			
3	Nominate local energy wardens for each site and form energy committee	5,637	43.9	164,472	10,000	1.77			
4	Nominate person to act as Energy Manager	2,818	21.9	82,236	6,000	2.13			
5	Improve monitoring and targeting	5,637	43.9	164,472	14,000	2.48			
TOTAL		21,138	164.6	616,769	33,500	1.58			

Opportunities that are Generally Applicable to all sites across the Organisation

The recommendations listed below are prioritised according to payback.

Priority	Recommendations	Figures below assume implementation across all sites					Timescale for implementation and by whom	May be eligible for ECA*	May be eligible for loan*
		Estimated annual savings			Estimated cost (£)	Payback period (years)			
		(£)	CO ₂ (tonnes)	(kWh)					
1	Improve control of drinks chiller in bars, vending machines etc.	1,104	7.7	18,000	1,000	0.91			
2	Convert 50mm mains halogen and low voltage dichroic to compact fluorescent	2,252	16.2	37,590	2,360	1.05			
3	Convert T12/T8 switch start fluorescent fittings to T5 high frequency with conversion kit	1,994	15.0	34,976	3,240	1.62	Yes		
4	Fit insulation to exposed heating valves and joints	935	9.4	48,000	1,700	1.82	Yes		
5	Convert discharge luminaires to electronic control and down rate lamps to 320 watt	2,857	9.6	22,356	5,360	1.88			
6	Fit controls to lighting	2,522	16.5	38,380	5,600	2.22	Yes		
7	Fit V.S.D's to large pumps	10,664	71.5	166,200	25,400	2.38	Yes		
8	Consider fitting voltage optimisation transformers	16,265	113.5	263,866	47,800	2.94	Yes		
9	Consider renewing old lighting schemes	4,045	23.6	54,963	13,950	3.45	Yes		
TOTAL		43,574	283.0	684,330	106,410	2.44			

* Please refer to the Site Survey Publication for eligibility details or visit www.carbontrust.co.uk/loans and www.eca.gov.uk/etl

Opportunities that are site specific

Priority	Recommendations	Figures below assume implementation across all sites					Timescale for implementation and by whom	May be eligible for ECA*	May be eligible for loan*
		Estimated annual savings			Estimated cost (£)	Payback period (years)			
		(£)	CO ₂ (tonnes)	(kWh)					
1	At Carlton Forum – Replace small pool cover	660	6.9	36,345	1,200	1.82			
2	At Carlton Forum – Consider fitting V.S.D's to pools supply and extract fans	1,617	12.0	27,900	3,000	1.85	Yes		
3	At Redhill Leisure Centre – Improve control of air conditioning	324	2.7	6,300	650	2.01	Yes		
4	At Richard Herrod – Improve drinks chiller room insulation, doors and control	396	2.6	6,000	1,000	2.52	Yes		
5	At Calverton Leisure Centre – Replace old radiator system and improve control	3,840	31.2	120,000	10,000	2.60	Yes		
6	At Calverton Leisure Centre – Consider replacing old fuel oil boiler for high efficiency boiler	2,880	23.4	90,000	8,000	2.78	Yes		
7	At Carlton Forum – improve control of gym heating and cooling system	87	0.6	1,500	250	2.87	Yes		
TOTAL		9,804	86.6	288,045	24,100	2.46			

* Please refer to the Site Survey Publication for eligibility details or visit www.carbontrust.co.uk/loans and www.eca.gov.uk/etl

