

## 2022-23 Carbon Reduction Capital Programme

Estimated Cost £6m. Estimated energy saving 2.2million kWh. Estimated payback 12 years for a mix of measures.

			pV	EM	retrofit	total	pV	EM	retrofit	total	pV	EM	retrofit
			annual save kWh	annual save kWh	annual save kWh	kWh	project cost £	project cost £	project cost £	project cost £	annual benefit pV	annual benefit EM	annual benefit Retrofit
1	Bolsover Adult Education Centre	1037-01		12038	540	12578	0	36000	36000	72000		2528	113
2	Newbold Library	1098-01	6400	2,030	220	8650	34560	27000	36000	97560	1984	426	46
3	Ripley Library	1591-01		5,722	1100	6822	0	27000	36000	63000		1202	231
4	New Bassett House HOP	1604-01	16000	34200	3200	53400	86400	0	0	86400	4960		672
5	Briar Close House HOP	1608-01	24000	32400	1900	58300	129600	0	0	129600	7440		399
6	Grange HOP,	1621-01	16000	30000	14495	60495	86400	27000	54000	167400	4960	6300	3044
7	Rowthorne HOP	1637-01	16000	27600	3800	47400	86400	0	0	86400	4960		798
8	Thomas College HOP	1643-01	24000	24000	10040	58040	129600	27000	54000	210600	7440	5040	2108
9	Whitestones HOP	1647-01	40000	38200	14800	93000	216000	27000	54000	297000	12400	8022	3108
10	Brimington Hostel	1687-01	8000	17000	17436	42436	43200	36000	54000	133200	2480	3570	3662
11	Charnos Family Support Centre	1716-01	12000	4664	343	17007	64800	36000	36000	136800	3720	979	72
12	Alfreton Library	1842-01	6400	6,325	728	13453	34560	27000	36000	97560	1984	1328	153
13	Ilkeston Library	1872-01	3200	7,245	817	11262	17280	27000	36000	80280	992	1521	172
14	Staveley Library	1889-01		4,719	350	5069	0	27000	36000	63000			
15	Eckington Library	1891-01	6400	3,979	459	10838	34560	27000	36000	97560	1984	836	96
16	Chesterfield Library	2444-01	0	430,000	330900	760900	0	90000	180000	270000		90300	69489
17	County Hall	2642-00	24000	239,830	20000	283830	129600	54000	180000	363600	7440	50364	4200
18	Chesterfield Support Network	2725-01	16000	7847	600	24447	86400	36000	54000	176400	4960	1648	126
19	Petersham Centre	2754-01	8000	21363	2826	32189	43200	36000	54000	133200	2480	4486	593
20	Castle Court HOP	2777-01	40000	30000	13391	83391	216000	27000	54000	297000	12400	6300	2812
21	Lea Green Centre	2778-01	9600	51274	3608	64482	51840	90000	180000	321840	2976	10768	758
22	White Hall Centre	2781-01		26976	1879	28855	0	90000	180000	270000		5665	395
23	NE Derbys Area Social Services Office	2847-01	8000	9700	969	18669	43200	36000	54000	133200	2480	2037	203
24	Hasland Resource Centre	3167-01	16000	3941	432	20373	86400	36000	54000	176400	4960	828	91
25	Hunloke Centre	3374-01	8000	12650	7846	28496	43200	36000	90000	169200			

26	Swadlincote Learning Centre	3461-01	8000	8483	527	17010	43200	36000	36000	115200	2480	1781	111	
27	Shand House	3535-01	32000	42,909	11300	86209	172800	54000	90000	316800	9920	9011	2373	
28	Alice's View Children's Centre	3539-01	20800	7383	70650	98833	112320	36000	360000	508320	6448	1550	14837	
29	Outlook Centre	3598-01	16000	11124	1075	28199	86400	36000	54000	176400	4960	2336	226	
30	The Bungalow	3612-01	8000	18811	2159	28970	34560	36000	54000	124560	2480	3950	453	
31	Staveley Residential & Comm Care Centre	3631-01	24000	28400		52400	69120	27000	0	96120	7440	5964	0	
32	Peak Lodge, Chinley	3683-01	12800	13805	1833	28438	69120	27000	54000	150120	3968	2899	385	
33	Fairfield Community Centre	4109-01	16000	26526	861	43387	86400	54000	90000	230400	4960	5570	181	
34	Derbyshire Record Office	4118-01	16000	13,550	3470	33020	86400	54000	36000	176400	4960	2846	729	
			<b>461600</b>	<b>1254693</b>	<b>544554</b>	<b>2260847</b>	<b>2423520</b>	<b>1242000</b>	<b>2358000</b>	<b>6023520</b>	<b>143096</b>	<b>263485</b>	<b>114356</b>	<b>520938</b>
														<b>total annual benefit</b>

#### NOTE

The total cost of the project programme is £6million. The total energy saving is 2.26 million kWh. The annual saving is £520k at current energy prices. The overall payback therefore is estimated to be 12 years.

This simple assessment does not include the cost of the loan, but nor does it include the increasing cost of energy.

5% interest over 12 years increases costs by a factor of x1.8

The increase in the cost of energy over 10 years rose at its peak in 2022 by a factor of x7.2

Since then, energy prices have fallen, but the overall rise as of April 23 was still a factor of x 2.12.

Any calculation model which seeks to factor in the additional cost of the loan should also include a factor for the increasing cost of energy.

And the increasing cost of energy > the cost of the loan