Case Study: Luton 6th Form College

The challenge we faced at Luton College was to develop applications that not only served as important facilities tools but also display student learning resources. With this in mind we created a multi functional 'live' energy dashboard that resides on the onsite BMS supervisor which can be accessed throughout the college, and have installed 40″ reception based lcd screens which automatically update with the latest received values upon rotation.

The Abstraction License & Discharge License apps are important to the college as they must submit annual reports detailing the usage amounts. The college can be shut down if government targets are exceeded.

"Luton sixth form college : Abstraction Licence : Period ending 31st March "

View:	Period Start :	Meter Reading at start of period:	Period End :	Meter Reading at end of period :	Used in period :
	1st April 2010	0 m3	31st March 2011	284274 m3	284274 m3

"Luton sixth form college : Abstraction Licence : Daily Log Viewer "
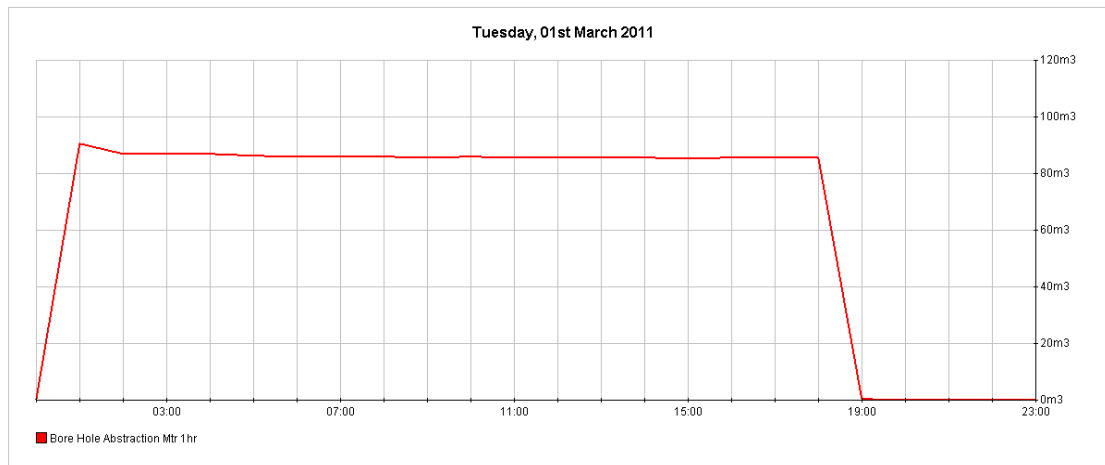
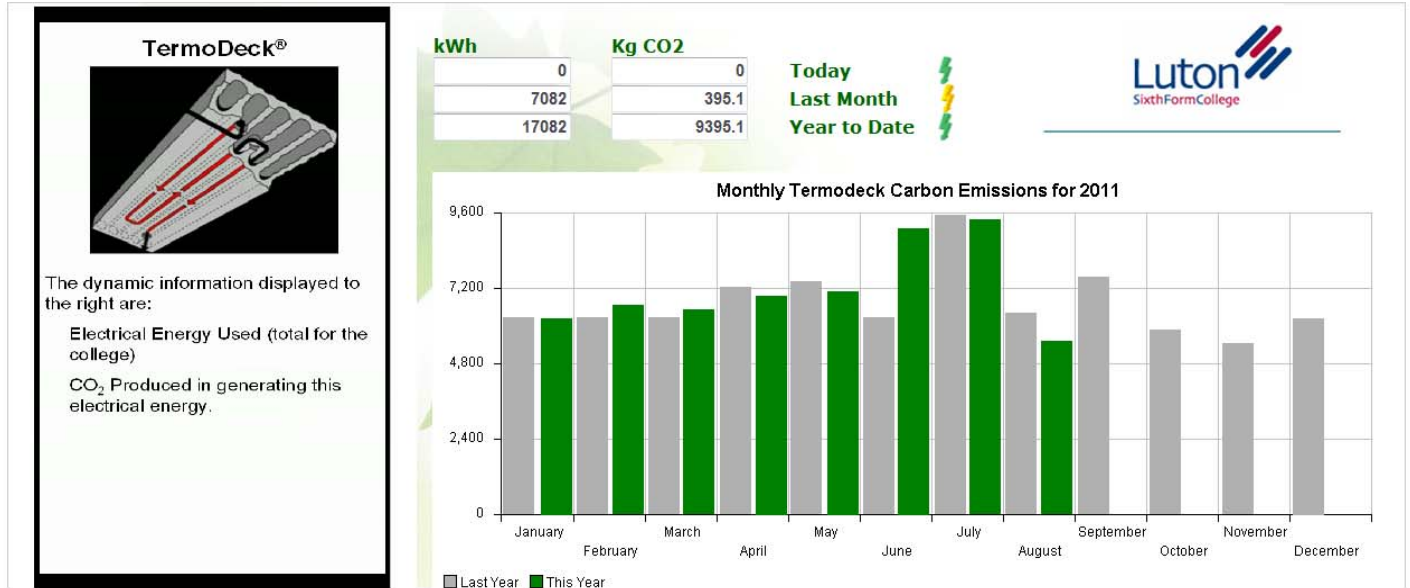The Building Energy Performance app is used to display the Co2 impact generated by the college. These screens run through a sequence of events displaying live data information as well as tutorial movie clips, each graphic updates the live values and rotates automatically which are installed on reception based monitors.
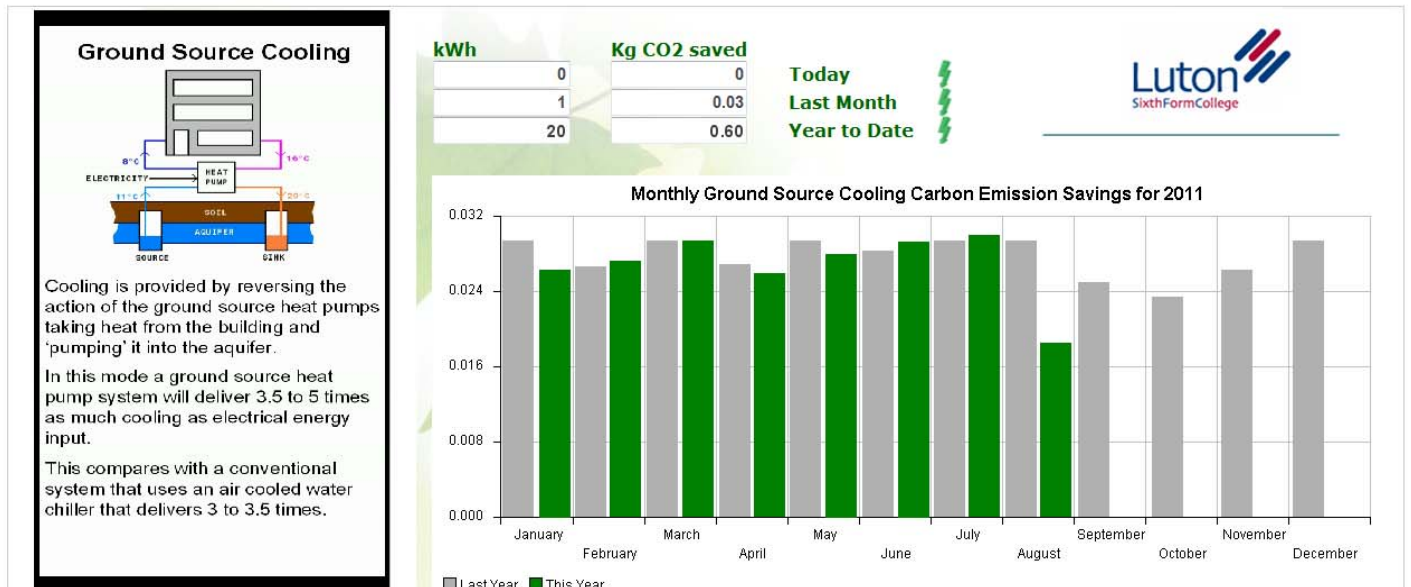
"Luton sixth form college : Building Energy Usage: **Rainwater Harvesting"**

Rainwater Harvesting

Water saved (m3)

0	**Today**
0.9	**Last Month**
2.7	**Year to Date**

What is Rainwater Harvesting? Simply put, rainwater harvesting is the accumulation and storage of rainwater for domestic use. It involves collecting rainwater from natural surfaces or rooftops, and using the collected precipitation for various purposes.
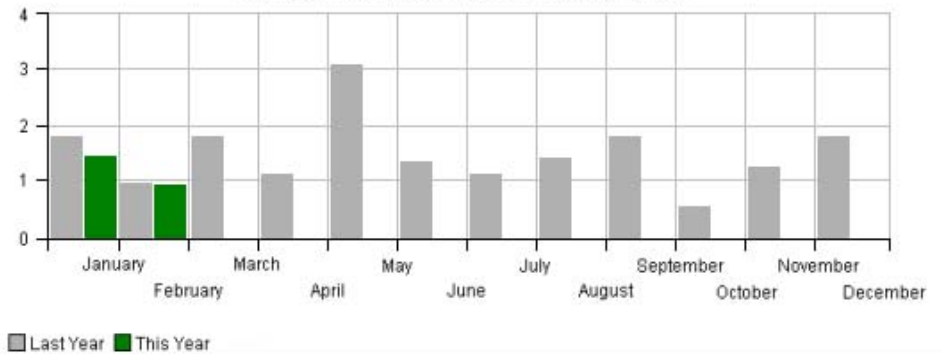
At the college, the rainwater is collected from the roof and stored in an underground tank below the sports field, from there it is pumped around the college and used for flushing toilets.

Monthly Rainwater Harvesting Usage 2012

☐ Last Year ■ This Year

The performance summary application 'Data Mining' is designed to display a summary of all logged data points, they can view individual logs or multiple logs - up to six on one graph

Select:	Outstation ID :	Sensor Label :	Value :	Avg :	Max :	Min :	High :	Low :
☐	MCC1	Boiler Gas Meter Total	1120 M3	539 M3	1120 M3	0 M3		
☐	MCC3	CAT 5 Water Meter Total	4583 M3	2169 M3	4583 M3	0 M3		
☐	ACTIVITY SUITE	Energy used in Total	50135 kWh	48692 kWh	50135 kWh	47402 kWh		
☐	Dist Board ESS	Energy used in Total	3976 kWh	3947 kWh	3976 kWh	3918 kWh		
☐	Dist Board EXT	Energy used in Total	3722 kWh	3674 kWh	3722 kWh	3623 kWh		
☐	Dist Board G/0/1	Energy used in Total	61850 kWh	60447 kWh	61850 kWh	59051 kWh		
☐	Dist Board G/0/2	Energy used in Total	37390 kWh	35584 kWh	37390 kWh	34292 kWh		
☐	Dist Board G/0/3	Energy used in Total	31472 kWh	30608 kWh	31472 kWh	29821 kWh		
☐	Dist Board G/0/4	Energy used in Total	1422 kWh	1422 kWh	1422 kWh	1422 kWh		
☐	Dist Board G/1/1	Energy used in Total	40503 kWh	39220 kWh	40503 kWh	38065 kWh		
☐	Dist Board G/2/1	Energy used in Total	18948 kWh	18303 kWh	18948 kWh	17767 kWh		
☐	FIRST RISER F 1	Energy used in Total	37261 kWh	36141 kWh	37261 kWh	35152 kWh		
☐	FIRST RISER G 2	Energy used in Total	40546 kWh	39261 kWh	40546 kWh	38103 kWh		
☐	GROUND RISER F 1	Energy used in Total	89398 kWh	85752 kWh	89398 kWh	82500 kWh		
☐	GROUND RISER F 2	Energy used in Total	7267 kWh	6996 kWh	7267 kWh	6727 kWh		
☐	GROUND RISER G 2	Energy used in Total	47660 kWh	46061 kWh	47660 kWh	44618 kWh		

Selecting the 'view' button will automatically display a graph of the current day values
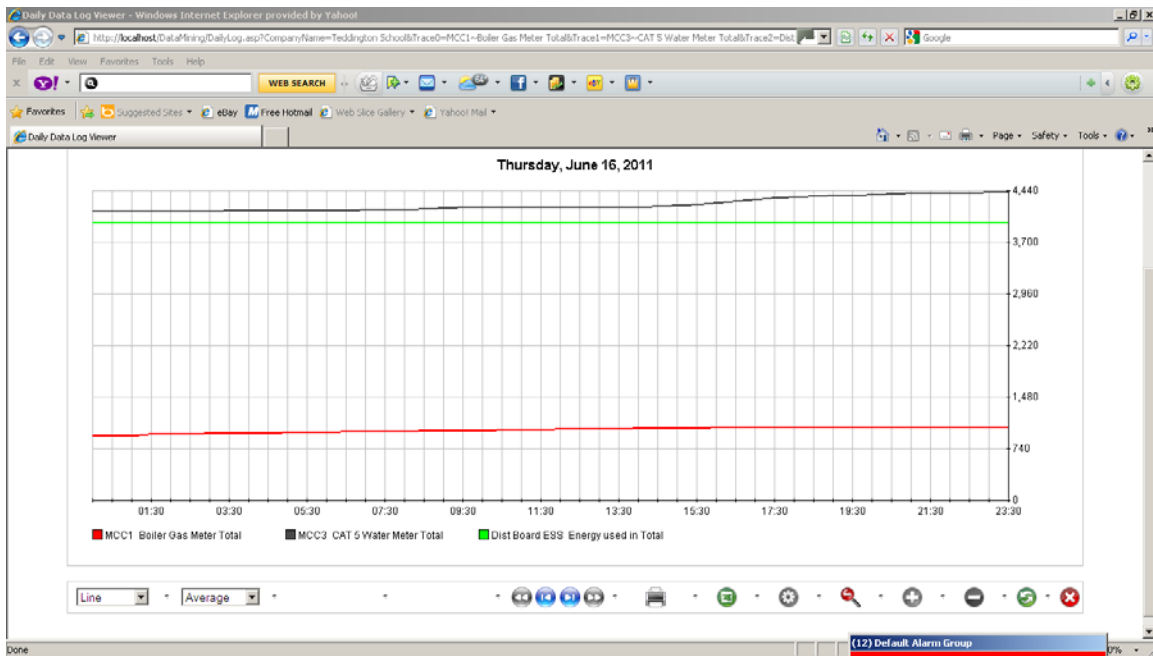
Selecting the 'zoom out' button will automatically display a graph of the current month's values; zoom out again to display the current year's data.

The excel link will convert the graphed data into a spreadsheet format ready for the college to analyse

	A	B	C	D
	A1 ▾ ƒx Log Title			
1	Log Title	Value	Units	Date /Time
2	Energy used in Total	3934.5	kWh	01/06/2011 00:00:08
3	Energy used in Total	3938	kWh	02/06/2011 00:00:05
4	Energy used in Total	3940.4	kWh	03/06/2011
5	Boiler Gas Meter Total	0	M3	04/06/2011 10:30:03
6	CAT 5 Water Meter Total	0	M3	04/06/2011 10:30:03
7	Energy used in Total	3942.8	kWh	04/06/2011 00:00:01
8	Boiler Gas Meter Total	0	M3	05/06/2011 00:00:03
9	CAT 5 Water Meter Total	66	M3	05/06/2011 00:00:03
10	Energy used in Total	3945.2	kWh	05/06/2011 00:00:03
11	Boiler Gas Meter Total	66	M3	06/06/2011 00:00:09
12	CAT 5 Water Meter Total	135	M3	06/06/2011 00:00:09
13	Energy used in Total	3947.9	kWh	06/06/2011 00:00:09
14	Boiler Gas Meter Total	170	M3	07/06/2011 00:00:01
15	CAT 5 Water Meter Total	595	M3	07/06/2011 00:00:01
16	Energy used in Total	3950.4	kWh	07/06/2011 00:00:01
17	Boiler Gas Meter Total	259	M3	08/06/2011 00:00:02
18	CAT 5 Water Meter Total	1055	M3	08/06/2011 00:00:02
19	Energy used in Total	3952.9	kWh	08/06/2011 00:00:02
20	Boiler Gas Meter Total	363	M3	09/06/2011 00:00:05
21	CAT 5 Water Meter Total	1513	M3	09/06/2011 00:00:05
22	Energy used in Total	3955.4	kWh	09/06/2011 00:00:05
23	Boiler Gas Meter Total	452	M3	10/06/2011 00:00:09
24	CAT 5 Water Meter Total	2035	M3	10/06/2011 00:00:09
25	Energy used in Total	3957.9	kWh	10/06/2011 00:00:09
26	Boiler Gas Meter Total	547	M3	11/06/2011 00:00:03
27	CAT 5 Water Meter Total	2508	M3	11/06/2011 00:00:03
28	Energy used in Total	3960.4	kWh	11/06/2011 00:00:03
29	Boiler Gas Meter Total	630	M3	12/06/2011 00:00:09
30	CAT 5 Water Meter Total	2597	M3	12/06/2011 00:00:09
31	Energy used in Total	3962.9	kWh	12/06/2011 00:00:09