

Salix Programme

Newsletter



Leicester
City Council

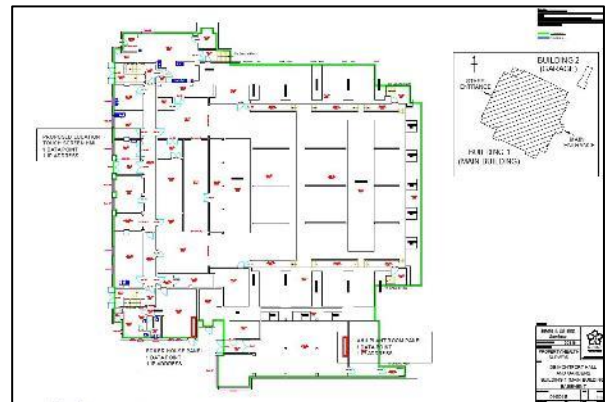
Late November 2021

Welcome to the latest edition of the Salix Programme newsletter. This time learn about Building Energy Management Systems, and see recent progress at project sites across Leicester.

In the spotlight: Building Energy Management Systems (BEMS)

What is a BEMS and why is it used?

A Building Energy Management System, or BEMS, is implemented in buildings with mechanical, heating, ventilation and air conditioning (also known as HVAC), lighting and electrical systems to enable energy-efficient control of the internal environment. Buildings with a BEMS can vary widely in size and function.



Example of a plan for developing a BEMS

The term Building Energy Management System is sometimes used interchangeably with Building Management Systems (BMS) which can be used to monitor a range of building systems such as fire, smoke detection, CCTV and security, however BEMS relates specifically to energy related systems.

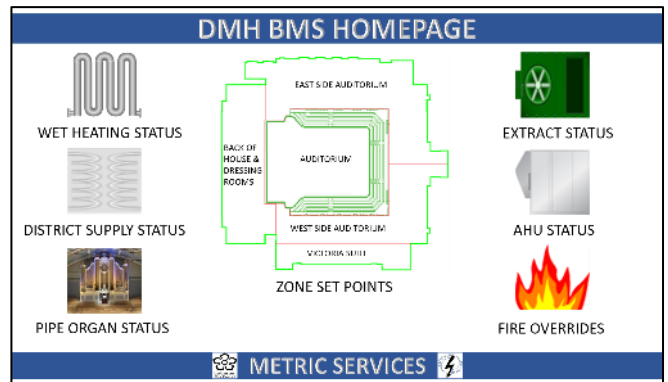
BEMS are used to optimise your building's energy performance and reduce energy use. It is a smart computer system that looks at all of the energy demands and use patterns in your building and figures out smarter ways to do things. BEMS are typically designed for large buildings, factories or warehouses, and also for organisations that have multiple buildings spread around an area.

How do they work?

There is a central computer system that is connected to all of your building's energy components. This sends and receives information in order to optimise energy use. For example, it can get information from boiler temperature sensors, internal and external temperature sensors, humidity sensors, and so on. Sensors are integral to a BEMS and are required in order to make the system as efficient as it can be. The data generated by the sensors is used for real-time monitoring of the building(s) and energy appliances and can also be stored for later analysis.

The system can be set up so that it sends alarms when parameters or thresholds are breached. For example this could be an indicator that something's gone wrong, or a piece of equipment is in need of maintenance.

If a BEMS is internet-based, it can be accessed and controlled from computers, tablets and smart phones. They are useful for building up a historic picture of energy use in a building. They can generate reports and visualise the data to help you see what's happening.



An example of a BMS homepage on the user interface

Advantages of a BEMS

- Once users are trained on how to use a building energy management system, it is relatively simple to operate.
- Enables control over the whole estate remotely, and allows you to adjust settings for different zones.
- The system enables a quick response if there is a fault with an appliance, or if a setting needs to be changed, e.g. increasing the internal temperature of the building.
- Enables reduced energy consumption by allowing you to monitor energy use in all areas of the building, in turn helping you to save on your energy bills.
- Graphical representation of the systems' operating conditions which provides a simple understanding of the information presented on screen.
- Improved management information such as historical records and trends in the building's energy use.

Disadvantages of a BEMS

- Any BEMS will have a cost associated with it. These costs are not only from the initial design and installation, but also the operation and maintenance costs.
- To optimise internal conditions and make ongoing savings, the energy management system needs to be maintained regularly, and the settings need to be reviewed on a regular basis so you can see if the settings match the actual building energy use.
- Physical maintenance will also need to be carried out, for example checking cabling, connections, and making sure sensors are accurate.
- To ensure maximum efficiency, the operators must be trained on how to use the system properly.
- Unless the system is correctly specified to your building, and installed and operated properly, the BEMS has the potential to increase costs and negative environmental impacts.

Feedback survey

We would love to get your feedback! Our fortnightly Salix Programme newsletters bring you a variety of information, and so we would love to hear about your experiences with the newsletter so far, and what you would like to see more of. All responses are anonymised and your feedback will help to shape the future of Salix newsletters and communications. [Fill out our short survey here.](#)

Completed works

Works have recently been completed to install new windows at Marriott Primary School. See some photos of before and after installation below.

Old windows



New windows



Works are also now complete at Herrick Primary School, where asbestos containing materials were safely removed from old window panels, followed by the installation of new windows.

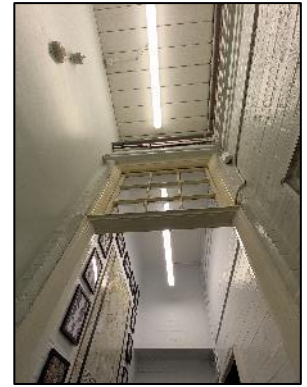
Old windows



New windows



Last week, works at Inglehurst Junior School took place to replace old existing lighting with brighter, more efficient LED lighting. These works are now completed and were carried out by Energy Saving Lighting (ESL).



"The lads that came to do the work were extremely efficient, professional and completed the job in three days. They have changed the lighting throughout the school building for the better and we instantly saw the difference it had made." - Paul Williams, Site Manager – Inglehurst Junior School



Salix promotional banners

We recently invited all stakeholders to request a Salix banner to display on their site. Each banner has now been allocated to a different site, and we are in the process of distributing them. Banners will stay in place until January 2022, after which they will be passed on to another set of sites to be showcased. If you would like to display a banner at your site in the new year, please get in touch and we will add you to our January waiting list.



Contact us

Each site has a dedicated project manager (Alan Evans or John Squires), however if you have a general question or need to get in touch with the Salix Project Team email us at

Salix.Project.Team@leicester.gov.uk