

Salix Programme

Newsletter



Late August 2021

Welcome to the latest edition of the Salix Programme newsletter. This time, find out how windows can affect your building's energy efficiency, and read about recent progress at Salix project sites in Leicester. Also, we are asking for your feedback! Read on to find out more.

In the Spotlight: Fenestration (Windows)

You may have come across the word 'fenestration' used in Salix communications. The term fenestration refers to the openings and/or entryways found in a building's structure, including windows, doors and skylights.

Heat loss through windows

Windows are a notorious source of unwanted heat loss. All windows lose a certain amount of heat, and older windows are generally less energy efficient. Windows lose heat in a number of ways:



- **Around two-thirds of the energy lost from a standard window is through radiation through the glazing.** The inside pane of a double-glazed unit absorbs heat from the room, and transmits it through conduction and convection to the cooler outside pane, and so to the outside.
- **A small amount of heat is lost through convection within the glazing cavity** - Air within the cavity is warmed by the inner pane. The warm air rises and is replaced by cooler air. This sets up a convection current, transferring heat from the inner to the outer pane.
- **Heat is conducted through the window frame.** The rate of this depends on the frame material.
- **Air leakage** – old windows which were poorly fabricated and installed are the biggest contributor to heat loss, after radiation, particularly around the window frame.

Choosing efficient windows

Window manufacturers show the energy efficiency of their products using an energy-rating scale from A++ to E. The entire window is assessed to allow for heat loss, draughts and solar gain, giving a rating that indicates the overall impact of fitting that window in your building. Windows that have an energy rating will have a 'u-value' displayed on the energy label, which is a measure of how easily heat passes through a material. The most energy efficient type of glass for double and triple glazing is low emissivity (low-E) glass. Low-E glass has a microscopically thin coating of metal oxide on one of the internal glass surfaces, which reflects heat back into the room while still letting in light from outside.

Benefits of new windows:

- Energy efficient glazing reduces heat loss through windows and means fewer draughts and cold spots. This will help to reduce your energy bills and lower your carbon footprint.
- Energy efficient windows insulate your building against external noise.
- Reduced condensation on the inside of windows.

Potential challenges:

- If your building is in a conservation area, or it is a listed building, an application will need to be made to the city council's planning department, who may or may not approve your window replacement works.

Works Carried Out

In recent weeks, ESL (Energy Saving Lighting) has been working to install new LED lighting at Leicester's De Montfort Hall. Pictured below is newly installed architectural lighting on the front of the building in different colours.



Coloured LED lighting at De Montfort Hall

Work is progressing at Herrick Primary School to replace old windows with those which are more energy-efficient. Pictured below are the school hall's old and new windows.



Old windows



Newly installed windows

Feedback Survey

Through our fortnightly Salix Programme newsletters, we have brought you information about progress at project sites in Leicester, introduced the Salix project team and our contractors, and most recently, introduced a new feature where we put a decarbonisation technology into the spotlight. 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 invaluable feedback will help to shape the future of Salix newsletters and communications. [Fill out our short survey here.](#)

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