Salix Programme

Newsletter

Leicester City Council

Mid - October 2021

Welcome to the latest edition of the Salix Programme newsletter. This time, find out how air source heat pumps work, and see recent progress at Salix project sites in Leicester.

In the spotlight: Air source heat pumps

What is an air source heat pump?

Air source heat pumps (ASHPs) absorb heat from the outside air to heat your building. They are able to extract heat when air temperatures outside are as low as -15°c. Air source heat pumps need electricity to run, but because they are extracting renewable heat from the environment, the heat output is greater than the electricity input. This makes them an energy efficient method of heating your building.

How do ASHPs work?

Heat from the air is absorbed at low temperature into a fluid. This fluid them passes through a compressor, increasing the temperature, and transfers that higher temperature heat to the heating circuits of the building. Watch this short video to see how an air source heat pump would heat a home, which would be similar to how an ASHP would heat a larger building.

When installing an air source heat pump, the energy device needs to be registered with the Distribution Network Operator (DNO). The DNO is the company responsible for bringing electricity to your building, and registering will be done by the installer (for Leicester City this is Wester Power).

Benefits of air source heat pumps

- **Lower fuel bills.** The savings made on fuel bills depend on the existing heating system and what it is being replaced with. If the existing heating system is inefficient, it is likely that there will be lower running costs with a new heat pump installed thus saving you money.
- **Lower carbon emissions.** Although they use electricity to run, ASHPs are considered highly efficient and clean as they do not depend on the burning of fossil fuels to create heat, and have the ability to continue to perform well in low temperatures.
- **Air source heat pumps can provide cooling during the summer, effectively making it an air conditioner.**
- **Long lifespan and low maintenance.** ASHPs have a very long lifespan of over 20 years, making them extremely reliable and a steady source of heat. They are also low maintenance, though it is recommended that servicing and maintenance should be done by a technician once a year.

Key considerations:

Air source heat pumps require plenty of space around them in order to get a good flow of air. ASHPs need to be installed outside your building where a unit or multiple units, depending on the size of your building, can be fitted to a wall or placed on the ground. The external units are connected to an internal unit containing circulation pumps and hot water.

As air source heat pumps work best when producing heat at a lower temperature than traditional boilers, it is important that your building is well insulated, and draughts are minimised to prevent heat loss. ASHPs will continue to operate at temperatures of around -15^{o}c but will be most efficient at higher temperatures.

The ASHP system is more likely to pay for itself if it is replacing an expensive system like electric heating. If it is replacing a mains gas heating system, it is unlikely that as much money will be saved on heating bills.

Air source heat pumps must be installed outdoors, and so the unit will be visible from the outside of your building. As the unit is above ground, it will produce a noise similar to that of an air conditioning, which may affect you, and users of surrounding buildings. Therefore, in many instances, planning permission from the city council's planning department may be required.

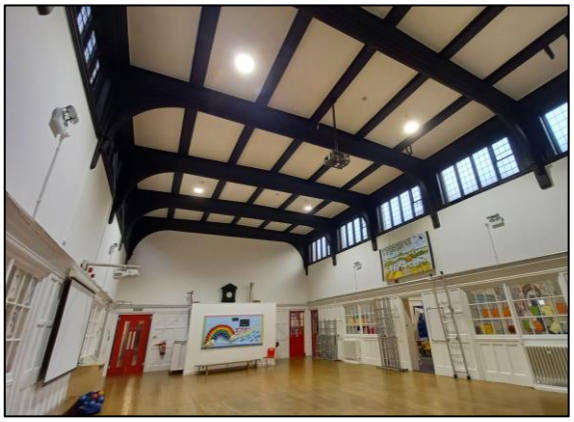
For an in-depth guide to heat pumps see the Energy Saving Trust website

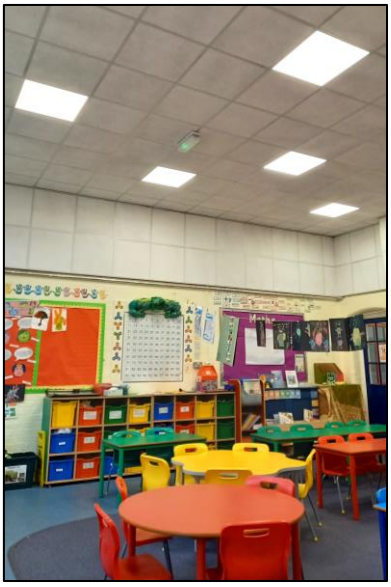
Feedback survey

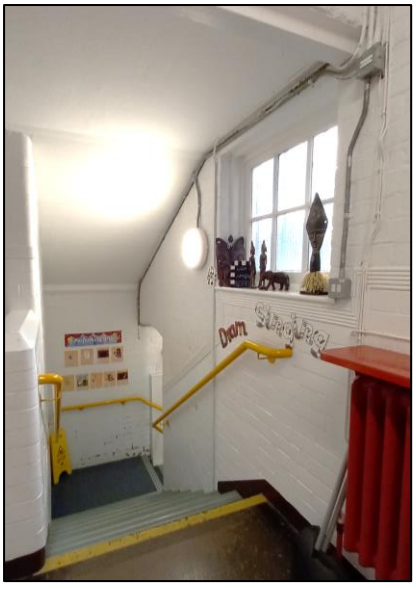
We would love to get your feedback! Our fortnightly Salix Programme newsletters bring you a variety of information, and so we would love to hear about your experiences with the newsletter so far, and what you would like to see more of. All responses are anonymised and your feedback will help to shape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

Completed works

ESL (Energy Saving Lighting) have recently completed the installation of LED lighting installation at Rushey Mead Primary School. This new lighting is much more energy efficient than their existing lighting, and will both save the school money on their energy bill, and reduce their carbon footprint. Check out the new lighting in the school's hall, studio, classrooms and corridors.







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