

# Ramp heating for residual waste facility

**Heat Mat**  
Ice & Snow Systems



Advanced Ice & Snow  
Systems



Ramp & Slab  
Heating



Fully Programmable  
Thermostats



The system ensures the ramp can be used all year round...

## The Goal

A Heat Mat ramp heating system has been specified and installed at the Greatmoor Energy from Waste Facility currently under construction in Edgcott, Buckinghamshire.

The facility, commissioned by Buckinghamshire County Council, is intended to convert 300,000 tonnes of residual waste to energy at an existing landfill site in Calvert, Buckinghamshire. The household waste will be burned inside the plant to generate electricity and hot water year round. The structure incorporates a concrete pavement and steep ramp for refuse vehicles to drive up, carrying waste to the enclosed reception area. This ramp must be accessible 365 days a year to maximise the plant's efficiency.

Contractor Sir Robert McAlpine approached Heat Mat to supply and oversee the installation of a robust slab heating system (ramp heating) for the entrance to the reception hall. The purpose of this system is to ensure the site remains accessible in any weather conditions.

## Heat Mat's Solution

A high output 7mm In-screed cable system was specified to heat the ground beneath the asphalt. A loose cable was chosen over a mat system as this suited the driveway construction and also allowed the output of the heating to be varied across the ramp as required.

The system has an output of around 270W/sqm. Due to the steepness of the drive and the power of the heating, there was no requirement to heat the drainage channels as the melt water temperature would be high enough to keep them ice free.

A fully automated timer/thermostat was installed utilising a ground-level sensor that monitored the driveway temperature and local moisture levels. The intelligent sensor ensures the system is only turned on when there is a genuine risk of icy conditions. The output is sufficient to heat the area and ensure it remains ice and snow free in temperatures down to approximately -25°C, however it is in temperatures around freezing that there is the greatest risk of precipitation. The sensors also recognise when the system is no longer required and switch off once the area is clear of melt water. This minimises running costs, which are projected to be less than £150 a year in a 'cold' winter.

## The Result

Once calibrated to the local conditions the system performed its task efficiently ensuring the driveway was free of ice and snow, remaining safe for residents and their vehicles.

## Project in detail

**Date Installed:**

June 2015

**Location:**

Greatmoor near Calvert, Edgcott Buckinghamshire

**Client:**

Sir Robert McAlpine on behalf of Waste Recycling Group (WRG) and FCC Environment

**System Supplied Through:**

Electrical Distributor

**Installer:**

Heat Mat specialist installation partner

**System Specifications:**

- 7mm In-screed ice and snow melting cable system
- 270W/sqm output
- Automatic monitoring and control equipment including ground and air temperature and moisture sensors

**About Sir Robert McAlpine:**

Sir Robert McAlpine were commissioned by FCC Environment as civil engineers to work on the project for Buckinghamshire County Council.

## About Heat Mat

With more than 1,000,000m<sup>2</sup> of underfloor heating installed and 19 years experience of the UK underfloor heating market, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements. This is why we are the Professionals' Choice, the number one underfloor heating supplier to the professional installation market.

## Contact us

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## Ice & Snow Systems

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