

Tools to help you plan and record
(and remember to celebrate success)

The steps above will help you decide what actions to take. You also need to decide who will be responsible for getting the job done. Here is a simple way to plan this.

Example action plan

Investigation	Action needed	Desired outcome	Who's responsible/ deadline
Where are our main sources of heat loss on site?			
How effective is our insulation?			
What is our insulation maintenance regime?			
Are we insulating at the appropriate thickness? Who is our preferred insulation supplier?			

Example recording chart

Who	Action taken/when	Impact

Remember

Reduce heat loss by improving the efficiency of your insulation to save 20% of the energy used in heating on your site!

HOW-TO GUIDE

Keep plant well-insulated to prevent heat escaping



HOW-TO GUIDE

What this guide is about

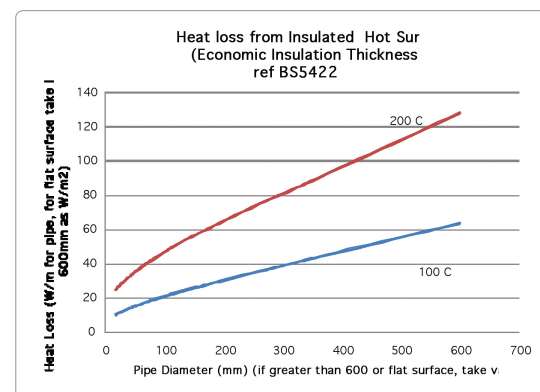
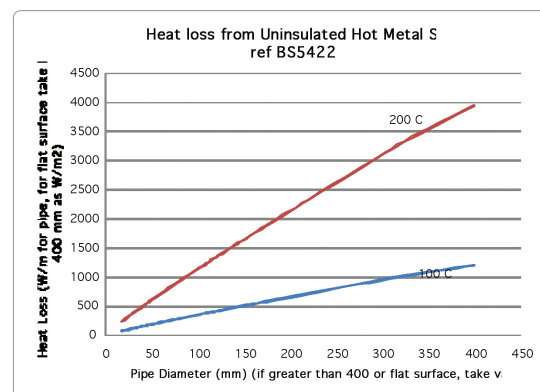
This guide is designed to complement the insulation toolbox talk. It focuses on:

- Why it makes sense to save energy through good insulation
- Practical steps to reduce heat loss and insulate effectively
- Tools to help you plan and record

The purpose of the guide is to help you use and maintain the most effective insulation regime for your site, as well as create a specific site action plan. Keep the guide as a reminder for yourself, hand it out to the person on your site who may take charge of this action plan, or simply write on it to keep a record of all actions taken.

Why it makes sense to save energy through good insulation

- Heat loss from piping, bitumen storage and asphalt plants accounts for up to 20% of the heat load on a site – reducing heat loss means less fuel is required and your site will save money.
- We use energy to heat bitumen tanks and lines, the aggregates dryer, and hot stone and asphalt for discharge and delivery. Part of this supplied heat is lost through convection and radiation from hot surfaces. The hotter the surface, the higher the rate of heat loss. More heat input is required to overcome this heat loss and to maintain temperatures.
- You might think that more insulation costs more money, but over one year, good insulation will save you more money on energy than you spent to install it.
- The graphs below give an idea of how much heat can be lost from an uninsulated pipe surface versus an insulated pipe surface.



Practical steps to reduce heat loss and insulate effectively

Every site's action planning will differ. Please consider the steps below as a suggested route and adapt the actions under each step to your site's specific needs.

Step 1: Work out where you use and lose heat.

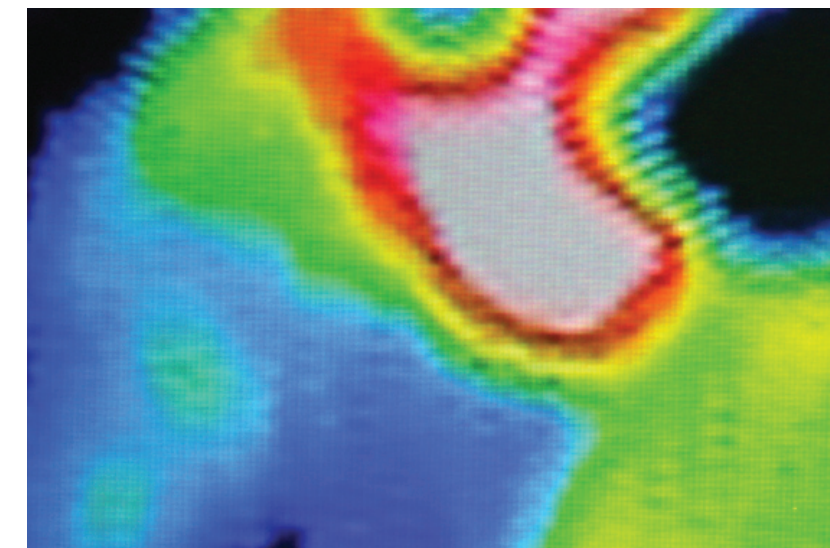
- List the main users of heat on your site, e.g., asphalt dryer, bitumen storage tanks.
- Measure the surface temperatures to identify where you are losing too much heat. A rough guide is: if they are too hot to touch, you are losing too much heat.
- Check if hot surfaces are insulated.
- Determine whether you can lower temperatures, e.g., when your bitumen tanks are kept at a higher temperature than necessary.

Step 2: Take action to insulate.

- List all insulated areas, then repair or replace damaged or missing insulation. Check current insulation thickness against manufacturer's recommendations, increasing or replacing where necessary. (You can find this information on the manufacturer's website or ask your supplier.)
- Insulate any pipes or surfaces above 50°C with the effective thickness of insulation.
- Make sure hot flanges or valves are boxed or have insulating jackets.

Step 3: Maintain effective insulation.

- Keep a record of all insulated areas and perform regular checks for damaged or missing insulation or cladding.
- Check that the outside of all insulation or cladding is no more than warm to the touch.
- You may need to perform thermographic studies to highlight where insulation has failed underneath cladding.



Insulation reading: the darker the colour, the colder it is.