THERMOSHIELD®

thermal insulation coating

HERITAGE

Fine Chocolates

Insulation coating and performance report

heat reduction | energy savings

CORROSION control

Waterproof

THERMOSHIELD PROUDLY MADE IN AUSTRALIA

10 YEAR warranty IF APPLIED BY THERMOSHIELD APPROVED APPLICATORS

ISO 9001 & 14001 Certified

Heritage Chocolates is a Victorian based chocolate manufacturer.

With competition in the industry fierce & margins very tight, the company explored its energy consumption data to see if there were areas to lower their ever rises utility costs.

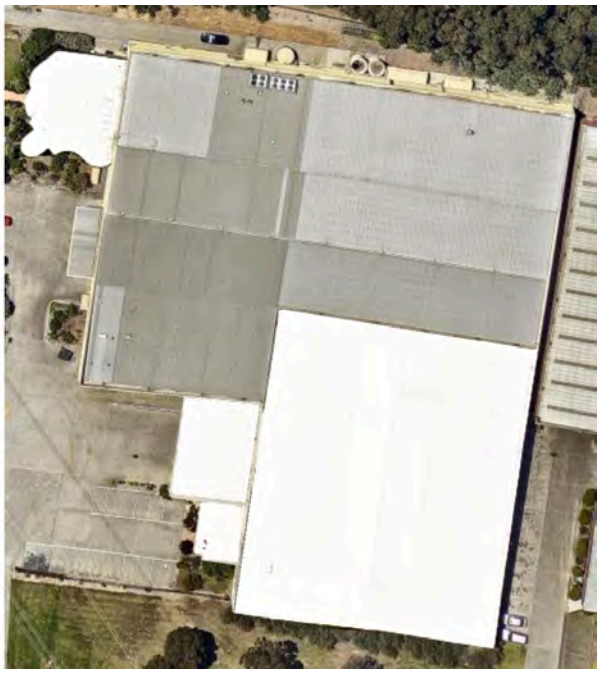
From the review, it was noted that the finished goods warehouse required a significant amount of cooling during summer months to avoid the risk of chocolate melting prior to it ever making its way to the shelves.

As a result, Thermoshield was chosen to coat key roofs in an attempt to reduce peak A/C usage due to extreme solar radiation in summer months.

Below is a aerial photo of the Heritage Chocolates site – before & after coating:

Before:

After:



The benefit of having a mix of coated versus uncoated is that we are able to review the effect the coating has by measure & compare the heat ingress & surface temperatures between the roofs.

In a few months time, we will also be able to review the energy usage, which we look forward to.

The coating process consisted of the below process:

- Power washing (zincalume sheeting) at 3,500psi
- Etch primer coating
- 2 coats Thermoshield ceramic membrane (500 micron wet film)

Below are a series of photos showing the coating process:

Etch primer:

Before:

After:

Completed coating on finished goods warehouse:

Before (office area):

After (office area):

Before (finished goods warehouse):

Mid point of first coat:

Finished coating (2 x 500micron coats of Thermoshield):

Following the application we measured the temperature variation between meeting point of the below coated roof & un-coated roof:

At the time of the temperature readings [12:50pm], local temperature was 25 degrees:

Uncoated temperature – 65 degrees:

Coated in Thermoshield – 31 degrees:

Outside:

Uncoated temperature – 65.7 degrees

Coated in Thermoshield – 31 degrees

52.8% reduction in [outside] surface temperature.

The following week when we returned to install temperature loggers, we again re-tested surface temperatures on the edge of the coated office roof & uncoated production roof:

At the time of the temperature readings [3:25pm], local temperature was 29 degrees:

Uncoated temperature – 85.8 degrees:

Coated in Thermoshield – 33.9 degrees:

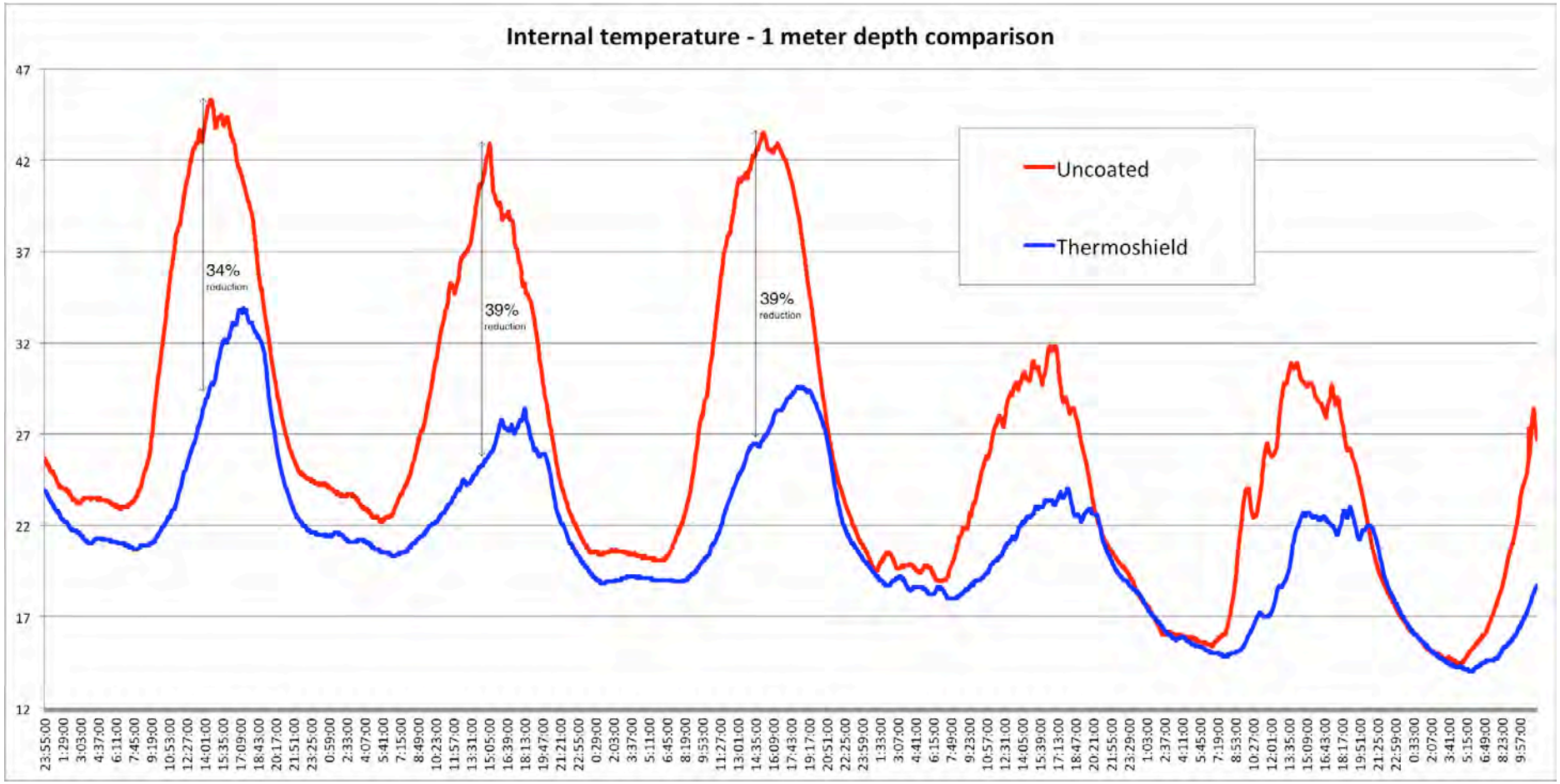
Outside:

Uncoated temperature – 85.8 degrees

Coated in Thermoshield – 33.9 degrees

60.4% reduction in [outside] surface temperature.

Below is the un-interrupted temperature data returned during the evaluation period:



You can see a significant reduction in internal temperature between the coated & uncoated roofs.
I have no doubt this is resulting in a reducing the A/C load for the finished goods warehouse and look forward to monitoring its effectiveness.