

PROGRESS WITH WARM MIX ASPHALT

WMA INTEREST GROUP



FIRST WMA TRIALS BRACKENHILL ROAD NOV 2008

Already extensively reported at RPF

2.2 km trial using 6 different mixes:

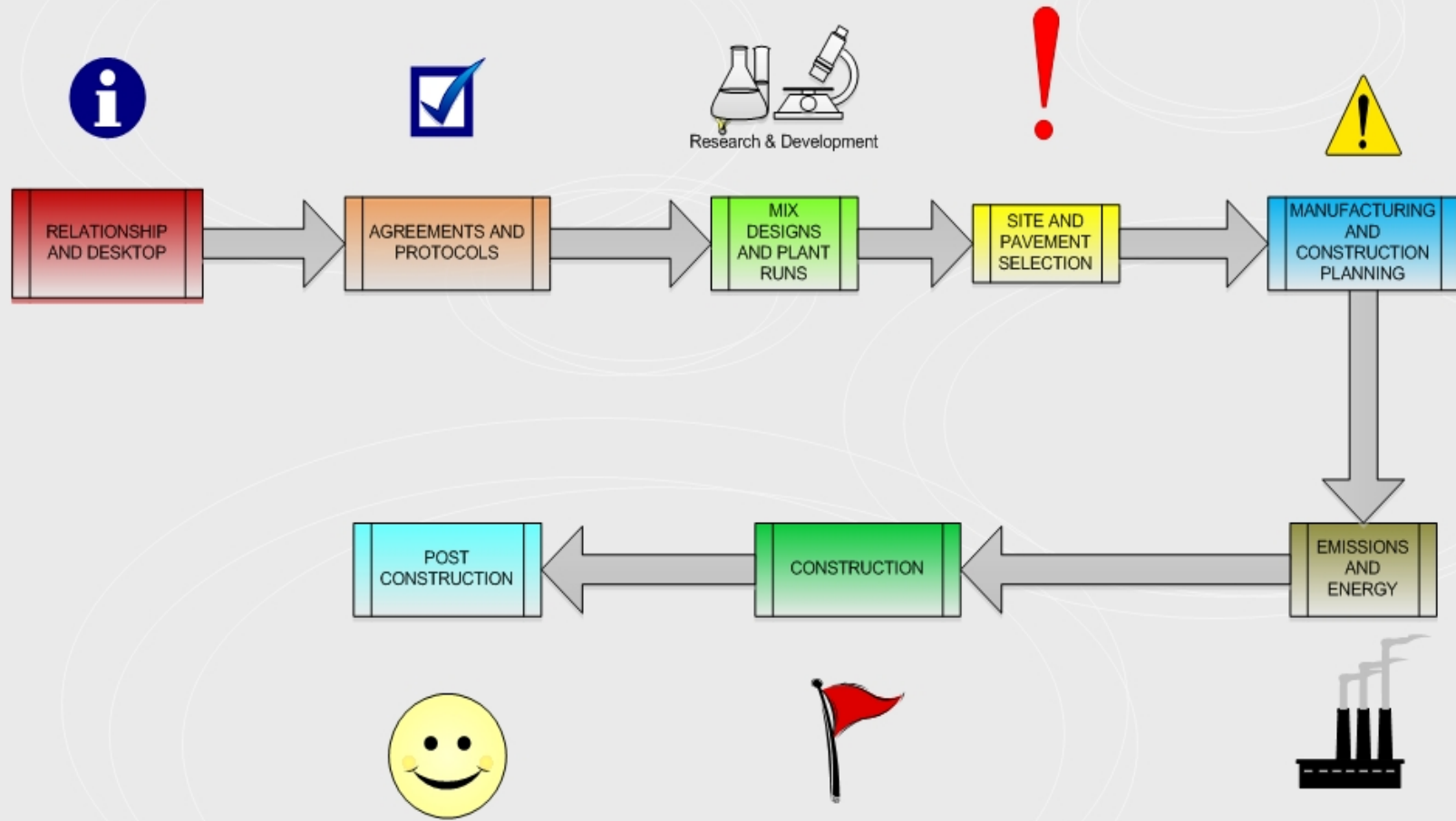
1. Control mix
2. Control mix with 10% RA
3. “Warm mix” with 1.5% SASOBIT
4. “Warm mix” with 10% RA and 1.5% SASOBIT
5. Recycled mix with 20% RA
6. Recycled mix with 30% RA and 2% EXP 1655 wax



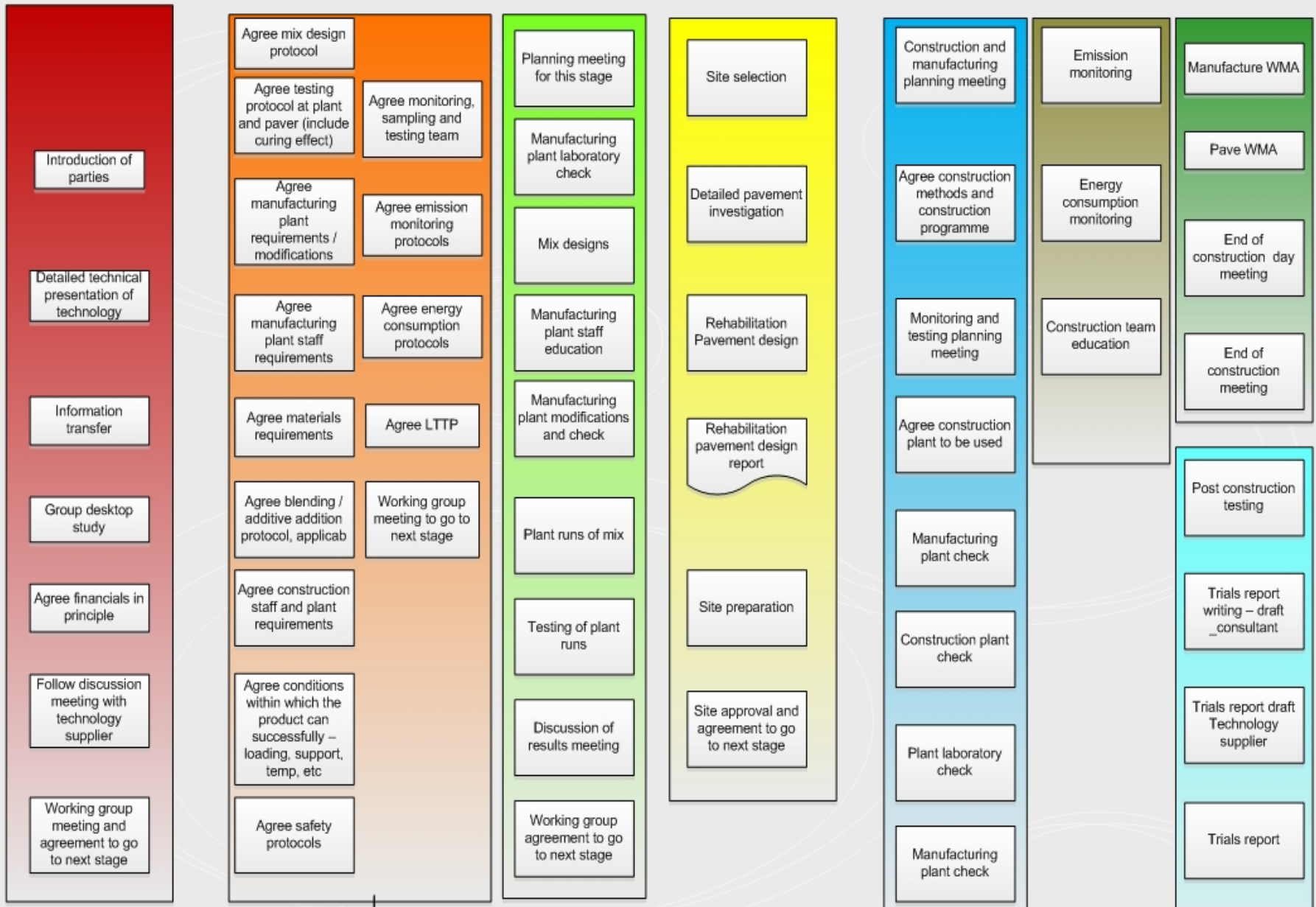
First LTPP survey July 2009



WMA performing well to date

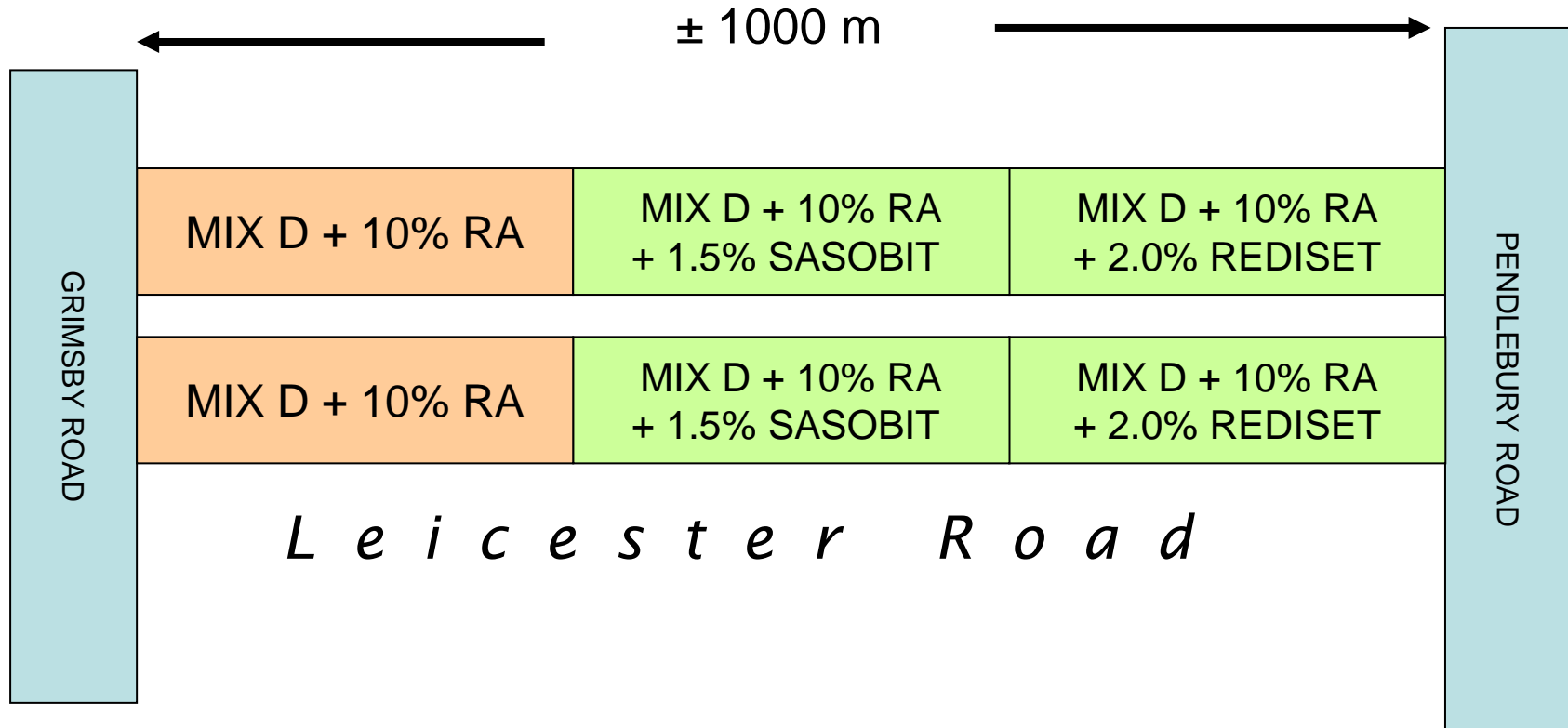


Warm mix asphalt trials
 South Africa
 Template Version April 2009



WMA Trials Template
April 2009

Second WMA Trials Leicester Road May/June 2009



Total quantity of asphalt ± 2 000 tons



MANUFACTURING
BY MUCH ASPHALT



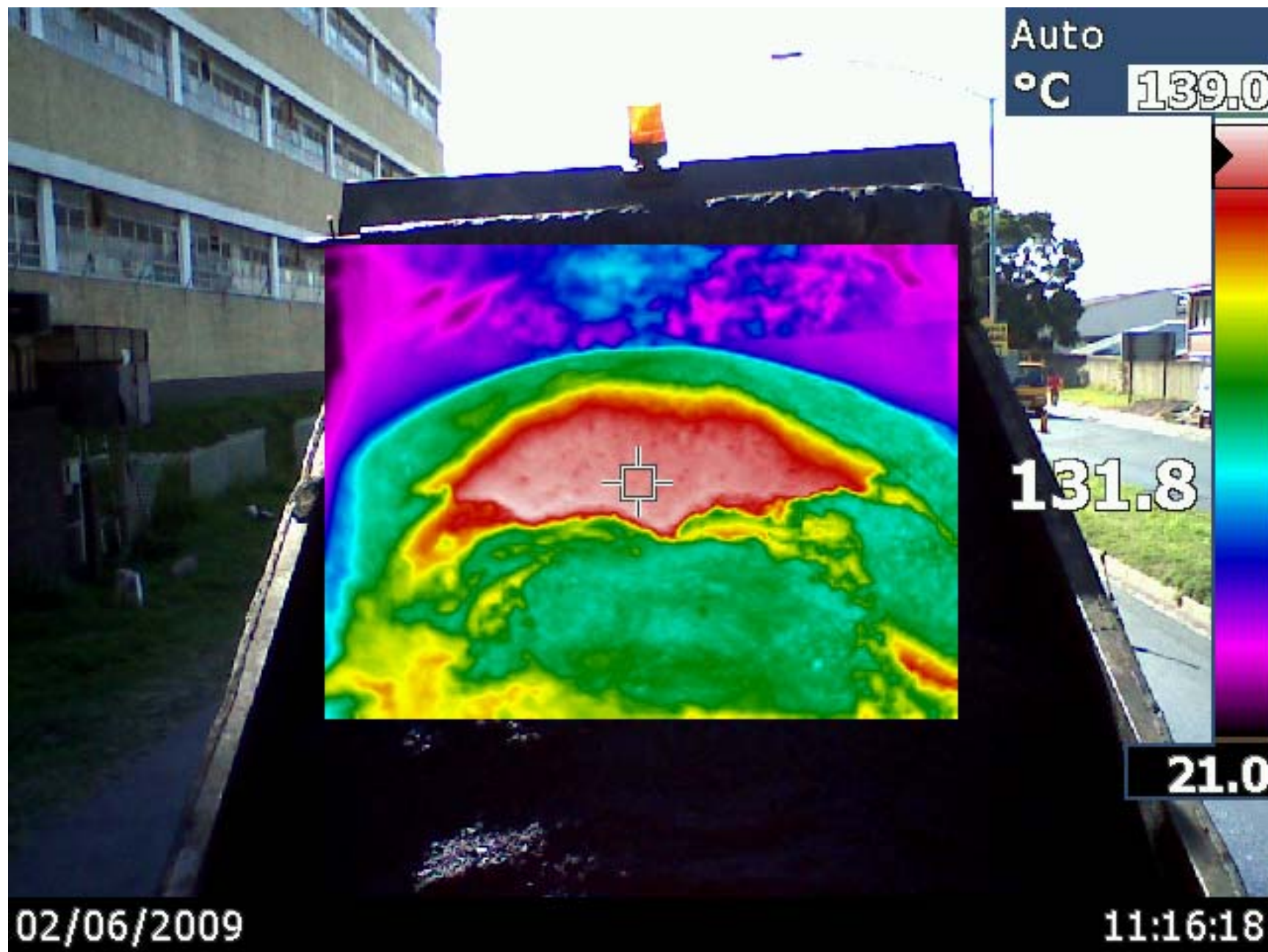
**PAVING BY
NATIONAL ASPHALT**

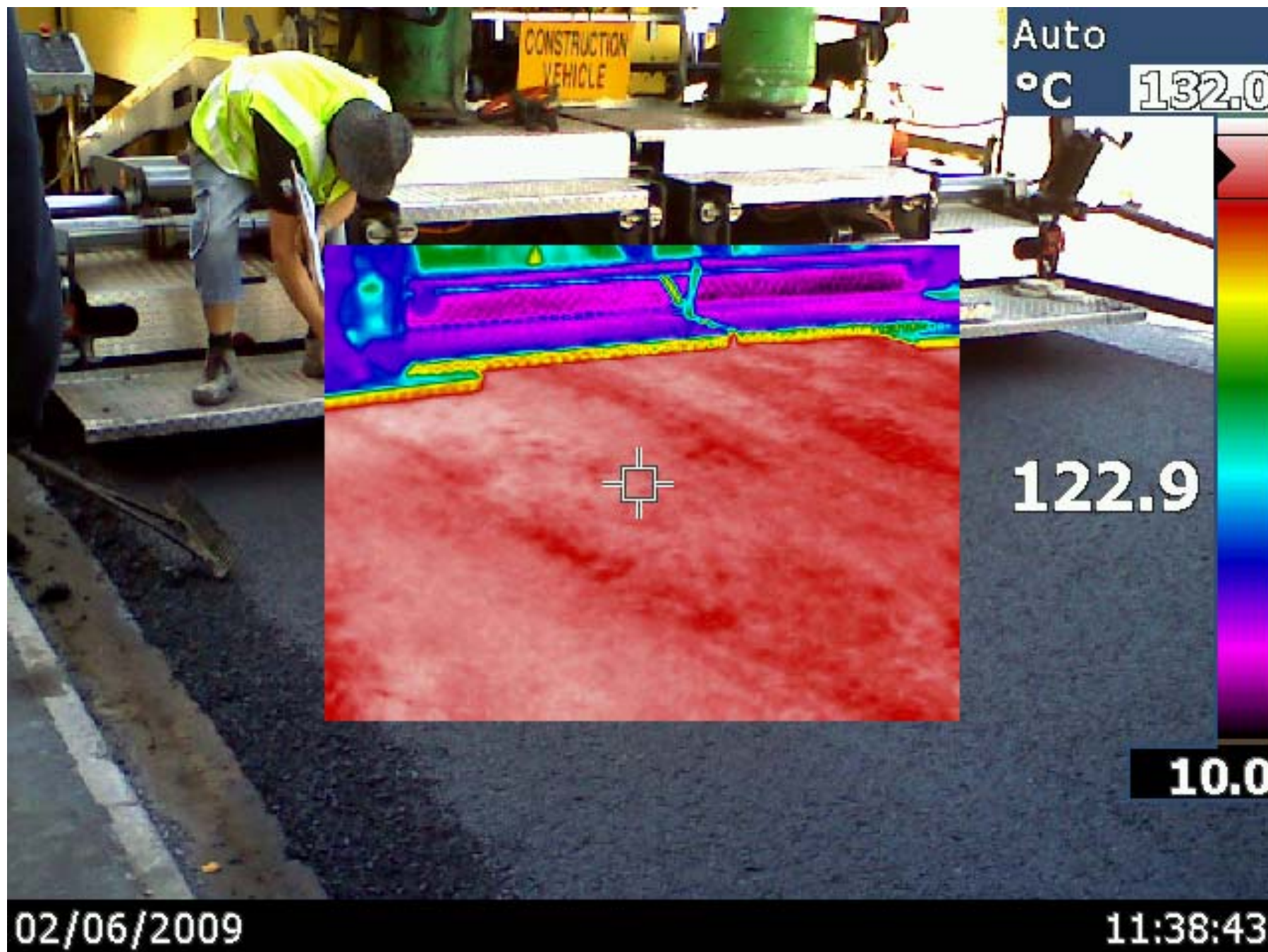




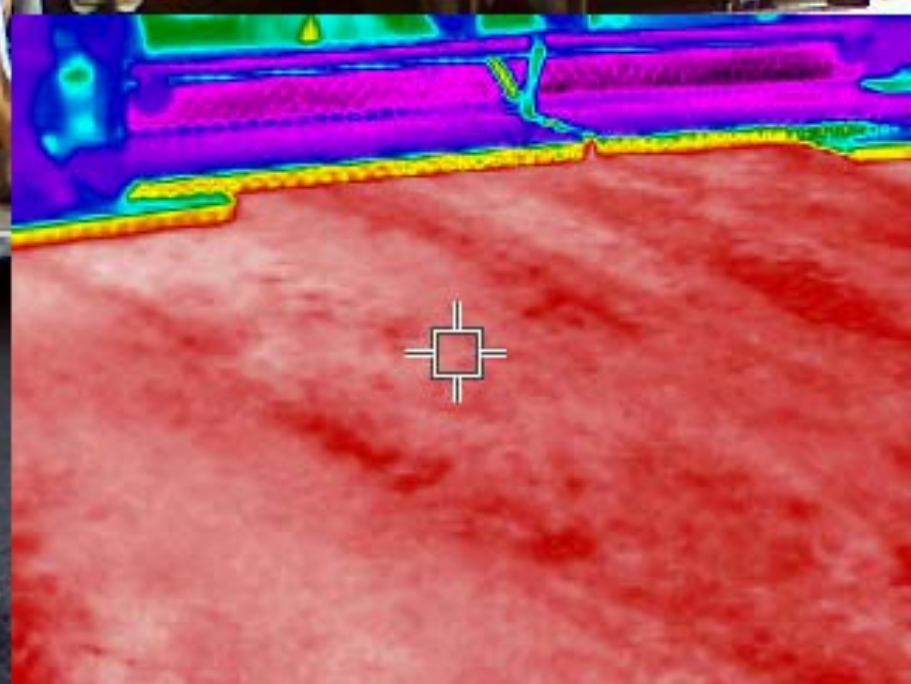








Auto
°C 132.0



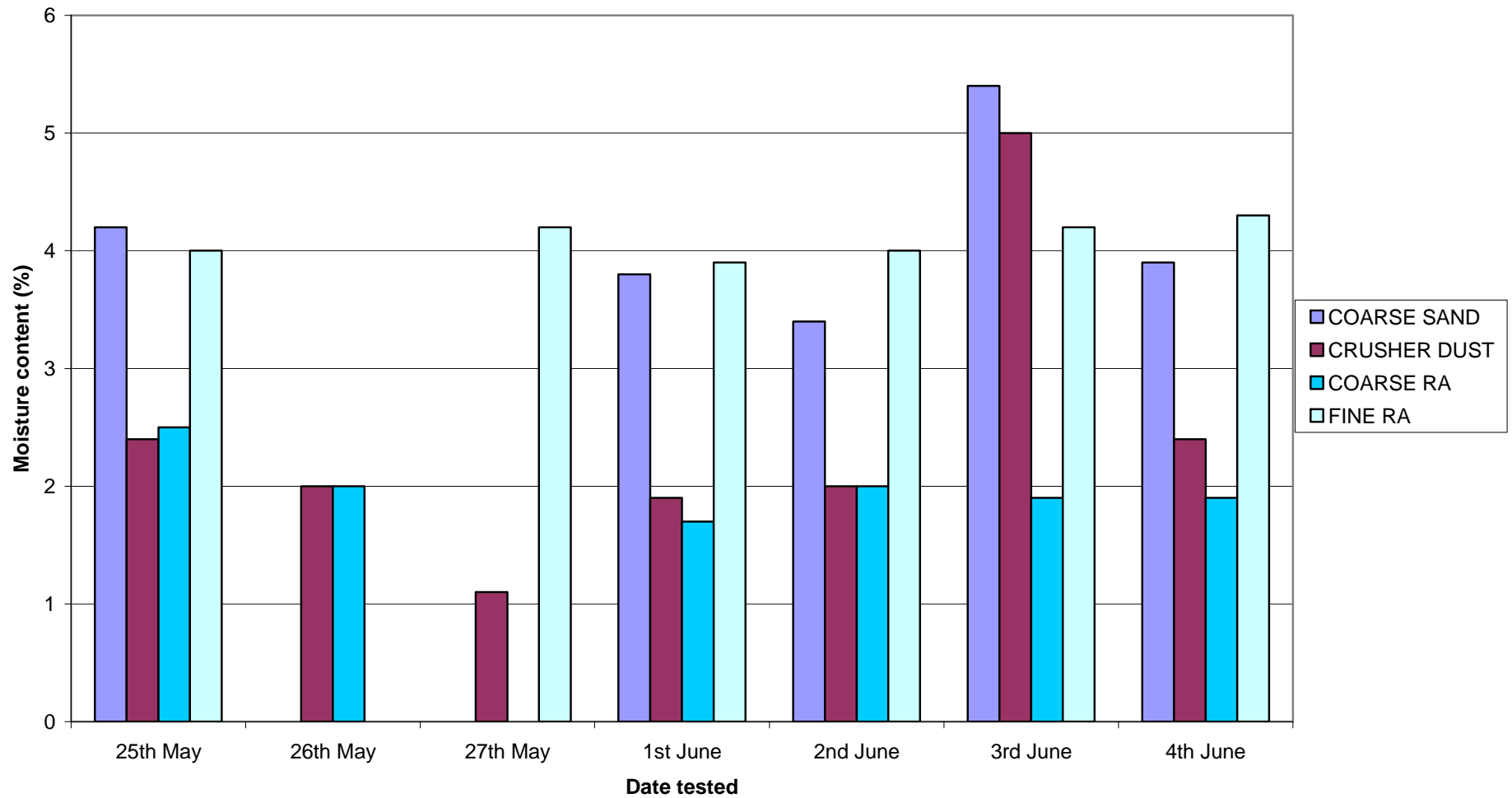
122.9

10.0

02/06/2009

11:38:43

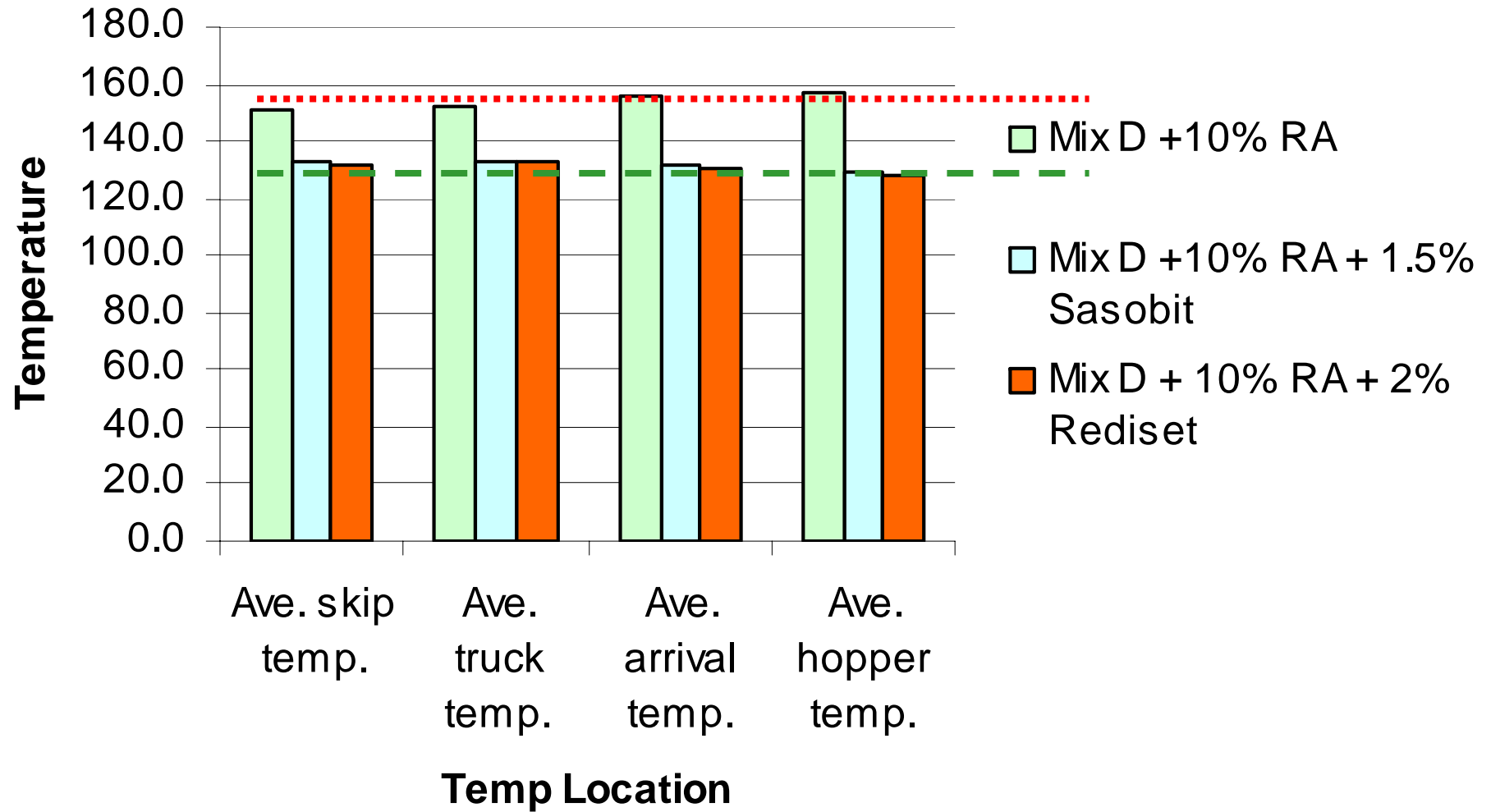
Moisture content of fine aggregate fractions and RA



Temperature range requirements for “warm” trial mixes

Mix temperature in delivery truck at mixing plant weighbridge	120°C to 140 °C
Mix temperature in delivery truck on arrival at the paver	120°C to 140 °C

Average Temperatures



REPORT ON WMA TRIALS ON LEICESTER

To be posted on Sabita website

1. Successful compaction of the 6 trial sections to required min. 92% MTRD - nothing unusual in compacting WMA compared to asphalt at conventional temperatures
2. Successful use of both SASOBIT and REDISET WMA technologies
3. Batch type asphalt mixing plant was fully capable of producing both conventional and “warm” mixes containing 10% RA - moisture content of all the mixes well below the required max. 0.5%
4. Less fumes, odour at plant and paving site
5. Increases “compaction window”
6. The quality of the WMA is at least the same as that of HMA

The principal aim of producing WMA containing RA at temperatures at least 20°C below those of conventional mixes was achieved in these trials

REPORT ON WMA TRIALS ON LEICESTER

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Some of the topics covered:

- WMA technologies
- Mix design
- Sourcing, storage & preparation of materials used in the mixes
- Manufacturing plant
- Paving & compaction

Substantial report:

*Could be used as the framework for guidelines on WMA
in South Africa*

The way forward.....

Carry out further trials to:

- Gather experience with other WMA technologies
- Push the limits re temperature and RA content
- Specify use of WMA on full-scale projects

A worthwhile cause....

We're striving to achieve significant:

- Cost savings – mix and burner fuel
- Reductions in emissions
- Improvements in compaction window

***IMPROVE THE SUSTAINABILITY OF
OUR ROAD PAVEMENTS***

