PROJECT BACKGROUND:
Wellers Hill State School had five classrooms in the upper story of a block that had been built in the early 1960s with a red metal roof and no insulation. Teachers and students found the class room temperatures difficult to cope with on hot days.
Roof Type: Factory coated, weathered, corrugated Zincalume® roofing in generally good condition. No rust.
Roof Area: 1000m².
Under Roof: No insulation. Flat panel, angled suspended ceiling.
Walls: Glass window and timber or metal panel.

PROJECT OBJECTIVE:
Reduce the roof temperature and heat penetrating into the class room to improve teacher and student comfort on warmer days.

RECOMMENDED SYSTEM:
Application date 28th September 2012 (Completion)
Surface Preparation High Pressure Wash (3000psi)
Primer Dulux® Roof Bond GI with InfraCOOL® technology
Topcoat Dulux Cool Roof Commercial (White) with InfraCOOL Technology

PROJECT TEMPERATURE MONITORING METHOD:
Classroom temperature readings were recorded by the teachers for two weeks prior to the end of Term 3, before the roof was painted. For the first two weeks of Term 4, after the roof was painted, the temperature was also recorded.
CASE STUDY – WELLERS HILL STATE SCHOOL

PROJECT RESULTS:

Before Painting
- The 9am temperature reading on warm days often had little difference between inside and outside and as the day progressed the internal temperature kept pace.
- By 2.50pm it was typically between 1 degree cooler and 3 degrees hotter inside the classroom, in comparison with the outside temperature.

After Painting
- The 9am temperature reading on warm days are 5 to 8 degrees cooler inside the classroom.
- The rooms are not heating up over the course of the day and the rooms are consistently cooler inside at 2.50pm than outside.

<table>
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<th>9.00am Inside</th>
<th>9.00am Outside</th>
<th>12.50pm Inside</th>
<th>12.50pm Outside</th>
<th>2.50pm Inside</th>
<th>2.50pm Outside</th>
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</table>

CUSTOMER ENDORSEMENT
Teachers, students and parents report that classrooms are cooler in the mornings, take longer to heat up, fans are not required as early in the day, longer quality learning time at a reasonable temperature, pleasant to return to classroom at 2pm after playtime.

PROJECT CONCLUSION
Changing the Total Solar Reflectance (TSR) of the Wellers Hill State School B Block roof upper roof surface from 40%, typical of a weathered, terracotta colour, Zincalume roof of this age, to 90% with Dulux Cool Roof Commercial (White) reduces heat gain in the roof surface and heat penetration under the roof, resulting in a cooler classroom and more comfortable learning environment.

Notes: Refer to Dulux Duspec specifications for full details on surface preparation and coating systems for the applicable substrate and substrate condition.

Full details on classroom temperature study provided by Wellers Hill State School B Block Project Coordinator in a letter dated 9th November 2012.

Refer to Dulux AcraTex Cool Roof Commercial brochure for further product information.