

“EXTRACT OF REPORT - EXECUTIVE SUMMARY”

Name of Client	TAMINMIN COLLEGE Challoner Crs Humpty Doo 0836 Northern Territory
Project	4 School Demountable Rooms referred as: 19.01 – Demountable School Room 19.02 – Demountable School Room 19.03 – Demountable School Room 19.04 – Demountable School Room
Applicator	Turtlehead Enterprises Pty Ltd
Executive Summary of Findings	<p>Overall the temperature reductions of rooms 19.01 and 19.04 after having their roof coated with the Energy Star coatings remained between 1°C – 4.8°C cooler than the external ambient temperatures without air-conditioners being used.</p> <p>In fact and without the use of air-conditioning, the temperature of the roof cavity in room 19.01 was up to 13.4°C cooler, after its roof had been coated with the Energy Star coatings, whilst the roof cavity temperature of room 19.02 remained consistently higher than external ambient temperature by up to 8°C. By comparing the roof cavity temperatures of the Energy Star treated roof of room 19.01 to that of the untreated room 19.02, we noted that the temperatures were as much as 8.67°C lower in room 19.01 rather than room 19.02.</p> <p>The reasoning behind using the roof cavity temperature data for comparison purposes above was that it minimized any impact the “hot box syndrome” may have created to the rooms, as all rooms were insulated using “bulk insulation”.</p> <p>We note that air-conditioning will still be required for these rooms when the internal ambient temperatures exceed 25°C, as the comfort temperature for occupancy (referred as the “dead zone”) outlined by the Macquarie University for a building is between 20°C to 25°C (refer Appendix 10). It is also notable that the air-conditioner condenser motors will not have to work as hard to reduce internal temperatures when the roofs of buildings have been coated with the Energy Star Infra-Red Heat Reflective roof coatings, as the temperatures remained below that of an uncoated roof. In fact a 1°C drop in temperature can provide a 10% power saving, and as such a considerable overall power saving for a property (refer Appendix 10), let alone the Co2 emissions reduction that is saved for our environment. We also note that the Energy Star coatings that were used on the site provide rust inhibiting properties for the metal roof substrate and have waterproofing properties to help eliminate water leaks in buildings thus protecting the asset value over the long term.</p>