

# Green Building Council of Australia



## **GREEN SCHOOLS**

**FOR OUR STUDENTS**

**FOR OUR TEACHERS**

**FOR OUR COMMUNITIES**

**FOR OUR ENVIRONMENT**

## FOREWORD

This Green Building Council of Australia report outlines the benefits of green schools, and shares the practical experience of ministers, education departments, principals and teachers in embracing the Green Star – Education rating tool.

Australia has 3.4 million full time school students in more than 9,500 schools across the country, with almost 280,000 teaching staff. A further 1.3 million students attend tertiary education facilities.

Many of these students and teachers spend each day in schools with badly designed classrooms, poor indoor air quality and limited access to daylight. Evidence and experience shows that this affects student health and learning, teacher morale and school operational costs – as well as the environment.

Green schools offer tremendous benefits for students, staff, and the environment. Nearly 1,000 school buildings in the United States have met, or are seeking, green building certification, with applications growing at the rate of more than one a day.

In Australia, some schools have already received Green Star ratings, and others are currently going through the process. However, if Australia is to embrace the concept of green schools, all governments must commit to achieving Green Star ratings for all new schools, as well as for new buildings and refurbishments at existing schools.



Our students, our teachers and our environment deserve no less.

Romilly Madew

Romilly Madew  
Chief Executive  
Green Building Council Australia

## CONTENTS

|  |       |
|--|-------|
| Foreword   | pg 2  |
| <b>WHY?</b>  |       |
| A healthy and productive place to learn                      | pg 4  |
| A better place to teach                                      | pg 5  |
| Lower operating costs  | pg 6  |
| Hands-on learning opportunities                              | pg 7  |
| Connection to the community                                  | pg 8  |
| A reputation for excellence                                  | pg 9  |
| An environmentally friendly facility                         | pg 10 |
| Case study: Wangaratta High School                           | pg 11 |
| <b>WHAT?</b>   |       |
| Who is the Green Building Council of Australia?              | pg 12 |
| What is Green Star?  | pg 12 |
| Why use Green Star?  | pg 13 |
| Green Star Communities                                       | pg 15 |
| Case study: Bond University                                  | pg 16 |
| <b>HOW?</b>  |       |
| What can government do?                                      | pg 17 |
| Case Study: The Australian Capital Territory                 | pg 17 |
| Greening your school – day by day                            | pg 18 |
| So, would you like to build a Green Star education facility? | pg 19 |

## A HEALTHY AND PRODUCTIVE PLACE TO LEARN

**“I think people are quite proud of the fact that our school is going to set a precedent for other buildings into the future.”** *Helen Gourley, Principal, Kingston High School, Tasmania*

Conventional education buildings are typically designed to meet only minimum standards in building codes. The result is facilities that are not necessarily designed to provide comfortable, productive or healthy work environments for students and teachers.

In contrast, one noteworthy review found that green schools and universities in the United States had delivered:

- a 41.5 per cent improvement in the health of students and teachers (such as reduced incidence of asthma, ‘flu, respiratory problems and headaches)
- up to 15 per cent improvement in student learning and productivity
- up to 25 per cent improvement on test scores due to good lighting and ventilation.<sup>1</sup>

There is a large body of research linking health and productivity with specific attributes of building design (for example, indoor air quality and control over the work environment, including lighting levels, air flow, humidity and temperature). The studies demonstrate that better

building design correlates with increased wellbeing and productivity.<sup>2</sup>

The Heschong Mahone Daylighting Study of more than 21,000 students showed a dramatic correlation between daylit school environments and student performance, including:

- 20 per cent faster progression in mathematics
- 26 per cent faster progression in reading
- increased performance of 5-10 per cent when students had window views.<sup>3</sup>

Both students and teachers enjoy learning and working in green schools because:

- daylight and views enhance performance
- high indoor air quality improves health and concentration
- excellent acoustics boost learning potential
- comfortable indoor temperatures increase occupant satisfaction.

Every student deserves to attend a school with healthy air to breathe and conditions that encourage learning. These are things that green schools provide.

<sup>1</sup> See Gregory Kats, Greening America’s Schools: Costs and Benefits, A Capital E Report, October 2006

<sup>2</sup> See Judith Heerwagen, Sustainable Design Can Be an Asset to the Bottom Line, Environmental Design and Construction, July 2002; Vivian Loftness, et al. Building Investment Decisions Support (BIDS), ABSIC Research 2001-2002 Year End report. Available at: <http://nodem.pc.cc.cmu.edu/bids>

<sup>3</sup> Heschong Mahone Group, Daylighting in Schools: An investigation into the relationship between daylighting and human performance, Heschong Mahone Group, Fair Oaks, California, 20 August 1999

## A BETTER PLACE TO TEACH

**“It’s about showing leadership in the community.”**

*Rob Dalton, Department of Education, Tasmania*

Green schools improve the health and wellbeing of our teachers, as well as our students.

Teachers regularly express concerns about school facilities and highlight the issues addressed by green design – lighting quality, temperature control, indoor air quality and natural ventilation.

Teachers spend up to 90 per cent of their day indoors, so they also benefit from buildings with natural daylight, fresh air and access to views. Research also indicates that teachers are happier when they have the ability to control their environment, through temperature and lighting settings.

Green schools regularly report reductions in teacher turnover. Greening America’s Schools: Costs and Benefits estimated that teacher retention in green schools translates into a financial savings of about \$4 per square foot over a 20 year period.<sup>4</sup>

Rates of absenteeism also decrease in green schools. The improved air, lighting and indoor environment in green school buildings have a positive effect on the health of teachers. This leads to fewer sick days and consequently, reduced costs and better outcomes for schools and teachers.



Wangaratta High School, Victoria

<sup>4</sup> See Gregory Kats, Greening America’s Schools: Costs and Benefits, A Capital E Report, October 2006

## LOWER OPERATING COSTS

**“The operational running costs are lower than a similar sized building because you are using less energy and water and accumulating less waste.”**

*State Department of Education*

In the United States, a comprehensive study found that while green schools can cost one to two per cent more than conventional schools to build, the return on investment was 20 times more than the cost of going green.<sup>5</sup>

The study also showed that green schools consume an average of 32 per cent less water and 33 per cent less energy than conventionally designed schools. Efficient lighting, heating and cooling, better insulation, greater use of daylight and natural ventilation, as well as water-saving features, all reduce energy and water consumption and, consequently, utility costs.

Lower energy and water costs, improved teacher retention, and lowered health costs save green schools about four times the additional cost of going green. For an average conventional school, building green would save enough money over a 20 year period to pay for an additional full-time teacher, or 200 new computers, or 5,000 new textbooks.

Financial savings to the broader community are significantly larger, and include reduced cost for public infrastructure, lower air and water pollution, and a better educated and compensated workforce.

Greening schools will have long-term and far-reaching benefits for the design and construction of schools, with a growing emphasis on sustainability and continuous improvement.

Green schools make sense, both from an economic and educational perspective.

<sup>5</sup> See Gregory Kats, *Greening America's Schools: Costs and Benefits*, A Capital E Report, October 2006

## HANDS-ON LEARNING OPPORTUNITIES

**“You might put in a passive ventilation design and solar panels on the roof, but then the students actually learn why you’ve done that, and how you’re reducing your impact on the environment and reducing your greenhouse gas emissions, and how that relates to climate change.”** *State Department of Education*

**“It has really enabled us to fine-tune our curriculum... we are helping this whole way of living become second nature to the next generation... you can already see the kids picking up on it.”** *Gwen Sands, Principal, Peregrine Springs State School, Queensland*

Green schools inspire and engage students with environmental issues. A green school is an interactive teaching tool, educating the next generation of sustainable leaders through hands-on learning.

Principals and teachers report that they have been able to incorporate learning on energy use, climate change, water resources and sustainability into the students’ everyday lives at green schools.

At Williamstown High School in Victoria, the school’s green design and principles create a unique learning setting and help students to develop a greater appreciation for their environment. Australia’s first Green Star – Education Design v1 school, Peregrine Springs State School on Queensland’s Sunshine Coast is attracting students from neighbouring schools, who visit to gain a hands-on lesson in sustainability.

The Bond University Mirvac School of Sustainable Development was one of six education facilities in Australia to pilot the Green Star – Education rating tool. A ‘living laboratory’ and self-guided building tour that has 13 different stations describing an environmental initiative or feature included in the design has been created to teach students, staff and the community about the environmental attributes of the facility, such as the building’s solar passive design and orientation, building

services, cyclist amenities, water treatment system and energy generation.

Other schools around Australia are recognising the learning opportunities that green schools present for students. There are limitless benefits and opportunities for students such as:

- learning about renewable energy from the solar panels and wind turbines incorporated into a school’s design
- emphasising water conservation from a school’s rainwater tanks and greywater recycling facilities
- taking responsibility for their school’s carbon footprint by monitoring water, gas and electricity consumption on screens around the school
- growing their own organic vegetables to eat for lunch
- understanding biodiversity and their local ecosystems by caring for their school grounds
- taking responsibility for reducing, reusing and recycling waste.

A green school provides a daily lesson in the importance of environmental sustainability to Australia’s future; the building itself can be the best learning resource of all.



Bond University Mirvac School of Sustainable Development, Queensland

## CONNECTION TO THE COMMUNITY

**“I think the whole community will benefit...it will encourage awareness and a certain type of behaviour... It’s something that the students and the school are conscious of, and it influences not only the way they behave and act as a school, but they carry that forward for the rest of their lives.”** *State Department of Education*

Green schools do not just focus purely on the facility within the school grounds but also consider how they are connected to the community.

It is important that the location for a new school development is considered in relation to public transport routes and good bicycle and pedestrian access. Schools can play an important part in the development of greener communities where people have mobility choices.

The Green Star – Education rating tool awards credits for a school’s proximity to transport links such as buses and trains. The environmental benefits of using public transport and having fewer cars on the road are well documented, but reducing the number of cars around schools can also decrease the risks to pedestrian safety.

Existing schools cannot control whether they are situated near to existing public transport routes, but there are still many ways in which green schools encourage people to leave the car at home by:

- Educating students and staff about the environmental and health benefits of using alternative ways to get to school
- Becoming bicycle friendly and providing bicycle storage and facilities
- Encouraging students to walk to school, or even starting a ‘walking school bus’
- Encouraging people to purchase smaller cars by reducing the number of car spaces available or by reconfiguring the school or university car park to allow more space for small vehicles
- Allocating car parks to fuel efficient cars (such as ‘smart cars’ or hybrids) or to those that car pool
- Assessing the school’s contribution to greenhouse gases through commuting and setting reduction targets.

## A REPUTATION FOR EXCELLENCE

**“There’s a measurable benefit in terms of student enrolments. We have done some work around how many kids are coming to the school because of the environmental focus and there are a significant amount of people who are attracted to the school because of that focus.”** *Green Star School Principal*

**“We’ve had busloads of people come though, from other schools and from overseas. It’s important to promote environmental and sustainable schools. We think we need to be making a contribution to the bigger picture.”** *Green Star School Principal*

**“A lot of teachers want to feel that they’re working for an organisation with a good moral purpose.”** *Green Star School Principal*

Schools which receive a Green Star rating attract teachers and students who appreciate the high quality learning environment. The Green Star rating has helped to generate community and media interest in their school.

The Bond University Mirvac School of Sustainable Development has found its green credentials helpful in attracting international students and developing research partnerships with other prestigious universities around the world. These benefits, alongside the environmental ones, have resulted in a sustainable financial return on their investment.

The Green Star-rated Peregian Springs State School has had the highest pre-enrolment of any school in Queensland.

The reputation Green Star schools have for sustainability has helped them to secure additional funding. One Green Star school principal has said:

“There have certainly been significant financial benefits, which wasn’t the intention at the time, but it’s brought significant additional funding into the school. It’s an unforeseen benefit, but a wonderful one for our school. For example, to raise a million dollars to build a wetland and a new oval would simply not have happened if we didn’t have a sustainable focus.”

Other schools also reported this benefit, citing grants for permaculture gardens, rainwater tanks and solar cells. While the grants are not specifically tied to Green Star, being able to demonstrate a commitment to sustainability has made Green Star schools well positioned to apply for additional funding.

## AN ENVIRONMENTALLY FRIENDLY FACILITY

**“The children are very keen on the idea. Young people are very switched on to sustainability.”** Heather Lindsay, *Keysborough Secondary College, Victoria*

**“Our motivation is to do with climate change, environmental sustainability and showing best practice for the future for the students we teach.”** Heather Sarau, *Principal, Wangaratta High School, Victoria*

Buildings are responsible for up to 30 per cent of global greenhouse gas emissions, and approximately 40 per cent of global energy use.<sup>6</sup>

The most recent report from the Intergovernmental Panel on Climate Change estimated that building-related greenhouse gas emissions totalled 8.6 billion metric tons in 2004, and could almost double by 2030 to reach 15.6 billion metric tons.<sup>7</sup> Up to 90 per cent of energy is consumed during the use stage of buildings, for heating, cooling, ventilation, lighting, appliances and so on; this figure can be significantly reduced.<sup>8</sup>

Proven and commercially available technologies could reduce energy consumption in old and new buildings by 30-50 per cent, without significantly increasing investment costs.<sup>9</sup>

Australia could reduce its greenhouse gas emissions by around 20 per cent through more efficient lighting, better insulation, more effective heating and cooling, and better management of building facilities.

On average, green schools use one third less energy than conventional schools, saving thousands of tonnes of greenhouse gases each year.

*The Greening America's Schools: Costs and Benefits* report estimates that a green school could lead to the following annual emission reductions per school:

- 1,200 pounds (544.3 kg) of nitrogen oxides (NO<sub>x</sub>) – a principal component of smog
- 1,300 pounds (589.7 kg) of sulphur dioxide (SO<sub>2</sub>) – a principle cause of acid rain
- 585,000 pounds (265,351.5 kg) of carbon dioxide (CO<sub>2</sub>) – the principle greenhouse gas
- 150 pounds (68 kg) of coarse particulate matter (PM<sub>10</sub>) – a principal cause of respirator illness and an important contributor to smog.<sup>10</sup>

<sup>6</sup> UNEP Sustainable Buildings and Climate Initiative, Buildings and Climate Change – Industry Call to Action, [‘Washington Declaration’], UNEP Sustainable Buildings and Climate Initiative, 2009. In Australia, 23 % of Australia’s total emissions are a result of energy demand in the building sector. See Centre for International Economics, Capitalising on the building sector’s potential to lessen the costs of a broad based GHG emissions cut, Canberra: Centre for International Economics, 2007, p.3

<sup>7</sup> See M Levine, D Urge-Vorsatz, K Block, L Geng, D Harvey, S Lang, G Levermore, A Mongameli Mehlwana, S Mirasgedis, A Novikova, J Rilling, H Yoshino ‘Residential and commercial buildings’, in B Metz, O Davidson, P Bosch, R Dave and L Meyers (eds), Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge: Cambridge University Press, 2007

<sup>8</sup> C Cheng, S Pouffary, N Svenningsen, and M Callaway, The Kyoto Protocol, The Clean Development Mechanism and the Building and Construction Sector – A Report for the UNEP SBCI, Paris: UNEP, 2001, p.8

<sup>9</sup> Ibid, p.1

<sup>10</sup> See Gregory Kats, Greening America’s Schools: Costs and Benefits, A Capital E Report, October 2006

## CASE STUDY: WANGARATTA HIGH SCHOOL

Wangaratta High School demonstrates how green building can minimise a facility's impact on the environment and maximise the health and learning benefits for its occupants.

One of the project's key objectives was to make the new school as energy efficient as possible. Among a range of design features is a ground heat exchange system that services most of the facility's heating and cooling needs. This geothermal technology uses the earth as a heat source and a heat sink, circulating water in a series of underground grid loops to cool or warm the building above. The temperature range is maintained at 20-26°C throughout the year, with little need for supplementary heating or cooling. Only 25 per cent of the heating energy is derived from fossil fuels, in contrast

to traditional gas heating systems where 100 per cent of heat is derived from burning gas.

Green schools become an interactive learning resource that inspire and engage students with environmental issues. The new facility has inspired staff at Wangaratta High School to develop new learning programs so that staff and students can participate in the use, monitoring and ongoing improvement of the facility's environmental systems.



Wangaratta High School, Victoria

## WHO IS THE GREEN BUILDING COUNCIL OF AUSTRALIA?

The Green Building Council of Australia (GBCA) is Australia's leading authority on green building. The GBCA was established in 2002 to develop a sustainable property industry in Australia and drive the adoption of green building practices.

The GBCA has more than 900 member companies who work together to support the Council and its activities. The GBCA promotes green building programs, technologies, design practices and processes, and operates Australia's only national voluntary comprehensive environmental rating system for buildings - Green Star.

## WHAT IS GREEN STAR?

Green Star was developed to establish a common language and set a standard of measurement for green buildings, to promote integrated, whole-building design, to recognise environmental leadership, to identify building life-cycle impacts and raise awareness of green building benefits. Green Star rates the attributes of a building rather than its performance. There are three different levels of 'star' ratings:

- 4 Star Green Star ('Best Practice')
- 5 Star Green Star ('Australian Excellence')
- 6 Star Green Star ('World Leadership').

The Green Star – Education v1 rating tool, released in 2008, assesses the environmental attributes of new and refurbished education facilities in Australia. It can be applied from the design phase of a project and up to two years from practical completion. The release of the tool represents a milestone in the assessment of environmental attributes of education facilities, and is guiding the industry towards more sustainable design practices.

## WHY USE GREEN STAR?

**“The ability to flag yourself and badge yourself as a Green Star certified school certainly carries more weight than making claims that you’re a sustainable school or some other sort of school. It provides a level of credibility that you’ve gone through a third party to achieve rating rather than claiming one off your own bat.”** *State Department of Education*

**“We have a responsibility to preserve and protect our environment and we would be totally irresponsible not to look towards having the best Green Star rating that we can.”** *Heather Lindsay, Principal, Keysborough Secondary College, Victoria*

The Green Star – Education rating tool is primarily targeted at state governments and owners of private education facilities. The tool enables these parties to minimise the environmental impacts of their developments and to capitalise on, and receive recognition for, their design initiatives.

Green Star certification for an education facility ensures that sustainability requirements are not compromised during construction. A formal commitment to Green Star demonstrates to school and university communities that sustainability remained a priority of the project.



Peregian Springs State School, Queensland

## WHY USE GREEN STAR?

The Green Star – Education v1 rating tool covers the following categories and credits:

### Management

- Green Star Accredited Professional
- Learning Resource
- Building Guide
- Environmental Management
- Waste Management
- Building Tuning
- Independent Commissioning Agent
- Commissioning Clauses

### Indoor environment quality

- Ventilation Rates
- Air Change Effectiveness
- Carbon Dioxide Monitoring and Control and VOC

### Monitoring

- Daylight
- Thermal Comfort
- Hazardous Materials
- Internal Noise Levels
- Volatile Organic Compounds
- Formaldehyde Minimisation
- Mould Prevention
- Daylight Glare Control
- High Frequency Ballasts
- Electric Lighting Levels
- External Views

### Energy

- Energy - Conditional Requirement
- Greenhouse Gas Emissions
- Energy Sub-metering
- Peak Energy Demand Reduction
- Lighting Zoning
- Unoccupied Areas
- Stairs
- Efficient External Lighting
- Shared Energy Systems

### Water

- Occupant Amenity Water
- Water Meters
- Landscape Irrigation

### Transport

- Provision of Car Parking
- Fuel Efficient Transport
- Cyclist Facilities
- Commuting Mass Transport
- Transport Design and Planning
- Heat Rejection Water
- Fire System Water
- Potable Water Use in Laboratories

### Materials

- Recycling Waste Storage
- Building Reuse
- Recycled-Content & Reused Products and Materials
- Concrete
- Steel
- PVC Minimisation
- Sustainable Timber
- Design for Disassembly
- Flooring
- Joinery
- Loose Furniture

### Land use and ecology

- Ecology – Conditional Requirement
- Topsoil
- Reuse of Land
- Reclaimed Contaminated Land
- Ecological Value of Site

### Emissions

- Refrigerant ODP
- Refrigerant GWP
- Refrigerant Leaks
- Insulant ODP
- Watercourse Pollution
- Discharge to Sewer
- Light Pollution
- Legionella

### Innovation

- Innovative Strategies & Technologies
- Exceeding Green Star Benchmarks
- Exceeding Green Star Scope

## GREEN STAR COMMUNITIES

If current trends continue, Australia's population is expected to rise by 60 per cent by 2050, reaching almost 36 million people. Most of us – nearly 85 per cent – will choose to live in cities, with two-thirds of our population residing in our major cities.

This trend in growth will challenge us and be influenced by ecological limits and natural resource constraints, particularly, diminishing supplies of oil worldwide, a changing climate, pressures on water supplies, reduction in arable land, the growing need for employment and access to affordable, liveable and enjoyable places.

In 2009, the GBCA commenced work on the development of a rating tool to assess sustainable communities against best practice sustainable benchmarks, and to help create a greater demand for more sustainable development projects at a community scale. The need for a national approach to the planning, design and delivery of sustainable communities has been driven by government and industry, and the GBCA has accepted the challenge to facilitate the process. Green schools will play an integral role in building green communities by leading the way in sustainable practices, and teaching green values to young people who will carry these with them into the future.

The first step in developing the Green Star Communities rating tool was to develop a national framework consisting of five best practice principles. These are:

- Enhance liveability
- Create opportunities for economic prosperity
- Foster environmental responsibility
- Embrace design excellence
- Demonstrate visionary leadership and strong governance.

The GBCA is continuing to build support and commitment for the project across all levels of government and industry. We recently announced a national sponsorship agreement with every state and territory Government Land Organisation, which we believe will secure the tool's position as a national benchmark for government and industry projects.

## CASE STUDY: BOND UNIVERSITY

Bond University's Mirvac School of Sustainable Development is a real life example of how to build green. The Queensland university achieved Australia's first six star Green Star rating during the pilot phase of the Green Star Education tool development in 2008.

From the early stages, Bond University embraced sustainable development with a triple bottom-line focus: a main platform of ecological sustainability combined with social and economic sustainability. The social and educational element of sustainability was critical given the nature of the building and became a key focus of the design process.

As a 'living laboratory', the building provides students, staff and visitors with the opportunity to develop a greater understanding of the environmental, social and economic principles of sustainable development.

The university's 'green credentials' are paying dividends – attracting international students and developing research partnerships with other prestigious universities around the world. These benefits, alongside the environmental ones, have resulted in a sustainable financial return on the university's involvement.



Bond University Mirvac School of Sustainable Development, Queensland

## WHAT CAN GOVERNMENT DO?

It is vital that all levels of government show leadership and commitment to meeting and exceeding best practice in sustainable development of the built environment to help tackle climate change. Governments can do this by:

- Achieving environmental ratings for every building they own, occupy or develop, at the time of refurbishment, retrofitting or development
- Developing policies that provide incentives to industry to adopt green building best practice for all refurbishment, retrofitting or development
- Implementing regulatory change in order to continually raise standards in the Building Code of Australia
- Working with industry to establish a clear long-term pathway towards a sustainable built environment for Australia.

## CASE STUDY: THE ACT

The ACT Government has committed to achieving a 5 star Green Star rating for three new schools. The ACT Minister for Education and Training Andrew Barr MLA said:

*The ACT Government is committed to tackling climate change both now and into the future, and we see education as a key tool to do this.*

*The ACT Government is determined to ensure our schools not only teach the theory of sustainability, but also that our schools are practical demonstrators to students and local communities of the steps they can take to reduce water and energy use.*

*Our new schools at Gungahlin and Tuggeranong are both being built to achieve a 5 Star Green Star rating from the Green Building Council, and in the case of Tuggeranong, 93 per cent of the school that formerly stood on the site has been recycled. These schools include features such as optimal solar orientation, water storage and low water use landscaping, natural airflow for heating and cooling, including a thermal labyrinth at Gungahlin College.*

*Placing features like these in our new and refurbished public schools really does ensure that every day, students get a practical understanding of how to tackle issues such as climate change. It will also help inspire many to take up careers in emerging areas of technology and policy that will further improve the sustainability of the Canberra community into the future.*

Phillip Tardif, Executive Director Corporate Services, ACT Department of Education and Training:

*The design of our three new schools incorporates such features as: a thermal labyrinth; a transpired solar collector wall; a water retention pond and underground water tanks; photovoltaic energy generation systems; and provision for separate metering of energy and water within the schools. This is a strong statement about our need to live sustainably and to demonstrate this to our students in their educational setting.*

*The Green Star rating process has inspired our design teams to take school design and learning environments in new sustainability directions. The Green Star process is to be commended for enabling our design teams to respond to sustainability issues in ways they never would otherwise have done.*

Warren Overton from Viridis E3, an environmental consulting firm, has been working with the Department:

*We have been very impressed with the ACT Department of Education and Training's commitment to sustainability through new major schools, refurbishments and also the numerous Building Education Revolution (BER) projects. In the last few years we have been working with the Department to develop Ecologically Sustainable Development policies, achieve Green Star ratings for new schools and integrate sustainability into their BER projects. The environmental improvements and experience gained by the Department are significant and will help them to meet the ambitious environmental targets set by the ACT Government.*

## GREENING YOUR SCHOOL - DAY BY DAY

There are many things that students and their families and teachers can do to help make schools greener.

For information and ideas, or to find out more about projects such as the Green Lane Diary, you can visit:

### **Green Lane Diary**

[www.greenlanediary.org](http://www.greenlanediary.org)

### **Green Cross Australia**

[www.greencrossaustralia.org](http://www.greencrossaustralia.org)

### **Australian Sustainable Schools Initiative**

[www.environment.gov.au/aussi](http://www.environment.gov.au/aussi)

### **Carbon Sink Schools**

[www.sustainability.ceres.org.au](http://www.sustainability.ceres.org.au)

### **Solar Schools**

[www.solarschools.net](http://www.solarschools.net)

### **SchoolsFirst**

[www.schoolsfirst.edu.au](http://www.schoolsfirst.edu.au)

### **CarboSchools**

[www.carboschools.org.au](http://www.carboschools.org.au)

### **TravelSmart**

[www.travelsmart.qld.gov.au](http://www.travelsmart.qld.gov.au)

The GBCA is a proud sponsor of the Green Lane Diary, a Green Cross Australia program.

The Green Lane Diary is a curriculum-linked education program designed by environmental educators to help 10-12 year old children become aware of the stresses our planet confronts and how sustainable living can make a difference.

There are plenty of tips on the Green Lane Diary website about a range of things that students can do to help the environment. For example:

- Start a vegetable garden and a worm farm or compost to use all of the food scraps from lunches
- Check all the taps at the school and make sure any leaks or drips are fixed as soon as possible
- Make signs to remind people to turn off lights and appliances that are not in use
- Try and walk or cycle to school, or use public transport, instead of the car
- Find out how much your family and/or your school throws away in a week, keep a tally of rubbish, green waste, recyclables and aim to minimise the amount of waste that goes to landfill.

Students are encouraged to keep a diary for 10 weeks of all the things they are doing at school and at home to be more environmentally friendly.



## SO, WOULD YOU LIKE TO BUILD A GREEN STAR EDUCATION FACILITY?

Are you interested in creating a Green Star school? Would you like to tell us about your experience of a Green Star school?

If you would like more information, or if you would like to provide feedback on this policy paper, please contact:

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