



Dapto High School

Environmental Management Plan

From: Aug 2008 To: Dec 2011

School Website:

Written by: Ms Patricia Morgan - Head Teacher Science /Ag



Principal's statement

Improving the ecological sustainability of Dapto High School is both a professional priority and a personal obligation. I believe schools must play a key role in the difficult and complex challenges ahead. Responding to climate change thoughtfully and skilfully can potentially provide leverage for a variety of good learning, community building activities.

This school is strategically poised to make a key contribution to the new city/community of West Dapto; 20,000 homesites to be developed over the next 20 years.

Enquiries

For more information about this School Environment Management Plan (SEMP) contact:
Patricia Morgan Email: patricia.l.morgan@education.nsw.gov.au

Dapto High School
Address: Cleveland Road, DAPTO, 2530
Phone: 02 - 427611416 Fax: 02 - 42612584
Postal Address: PO Box 866 Dapto 2530

About Dapto High School

School vision/mission statement

Dapto High Schools motto is "strive for higher things".

School vision and goals for the environment

Dapto High School believes it must not only teach responsible approaches to environmental sustainability, it must also actively model these approaches. All areas of our curriculum provision are endeavouring to contribute positively. Our aspects of operational protocols are expected to do likewise.

The school and students have gained a number of awards in the last two years. In 2007, DHS was recognised by State Red Cross Awards for our contributions to the environment. A student, Mitchell James gained the top state award for Student Contribution from Red Cross as well. In 2008, DHS was awarded a Healthy Cities Certificate for contributions towards the Environment.

A push to revitalise aging infrastructure is being nurtured through an enterprising approach to garnering 'green dollars'.

School profile and background

Dapto High School is a school of 960 students and over 100 staff and sits on 30 acres of alluvial floodplain. It is a co-educational comprehensive high school that has just celebrated its 50th anniversary. The school has a proud history of academic and sporting achievement. The school farm sits on 20 acres of the school land and agriculture is run from year 7 -12. Currently the school is involved in being a role model within the community for sustainability and has over the last 4 years been very successful in gaining environmental grants.

About the local environment and community

Dapto High School fronts Mullet Creek for approximately 1.5 kilometres which provides for a unique environment. Mullet Creek is part of the Lake Illawarra Catchment area within the City of Wollongong. Over time the creek area has places that has suffered through planting of introduced species as well as livestock having access the creek area. This has lead to erosion of the banks and degradation in the water quality. Currently, Dapto High School is bordered by suburban developement on one side (alongside the railway line) with farm land and Lake Illawarra Escarpment to the west of the school. There is little natural tree vegetation - except for the steeper, inaccessible slopes of the escarpment and lower foothills - as most was cleared for grazing.

The land was originally occupied by the Wodi-Wodi people. The Wodi-Wodi is a sub group of the Dharwal, including the Aboriginal people of the coast from Wollongong to Shoalhaven.

Tradition is a strong element within the Dapto community. Many of the families are second or third generation families who have attended Dapto High School. In the last 10 years there has been significant suburban growth in the west Dapto area which has resulted in increased numbers in the school in the last 3 years. The school facilities are used by a variety of organisations on weekends as well as after-school. The organisations that use the facilities include Dapto Little Athletics, Community Soccer, Dance, Kung Fu and Gymnastics. They all have a role to play in the way the school is a role model for sustainability, including management of grounds and resources. In the past they have supported applications for various grants that the school has gained.

Dapto High School is part of the Dapto Learning Community which includes Kanahooka High School, Dapto Public School, Lakelands Public School, Mt Brown Public School, Koonawarra Public School, Hayes Park Public School and Dapto TAFE.



School management and planning (including curriculum) priorities

An executive of 13 work collaboratively to improve the learning outcomes of the school. A process of renewal is underway, some 40% of current staff plan to retire in the next 5 years. This transition period is seen as both a challenge and an opportunity to reevaluate current practices and renewal.

Our SRC works closely with staff and P&C to address sustainability issues.

Digital learning is a high priority for staff , students and this community.

This plan fits into whole school planning through the following

- The school's strategic management plan
- Part of the school annual plan
- Reported on in the school annual report
- Integrated with relevant school policies
- Integrated with school administration and management procedures
- Integrated with curriculum programs
- Consultation with Student Representative body
- Consultation with Parents and Citizens or Friends organisations
- Links to regional education and local government planning
- Links to extra-curricular activities for students
- Community groups that use the school grounds

School environmental education team

Name: Environmental Committee: Ms Trish Morgan, Mr Dave Bateman, Ms Dianne Ridley Mr Paul Sanders, Mr Andrew FitzSimons, Mr Warren Neil, Mr John Wagg, Mr Michael Wilson, Ms Sarah Imber, Mr Holger Bandte, Ms Kelly Mathien.

No. of people: 12

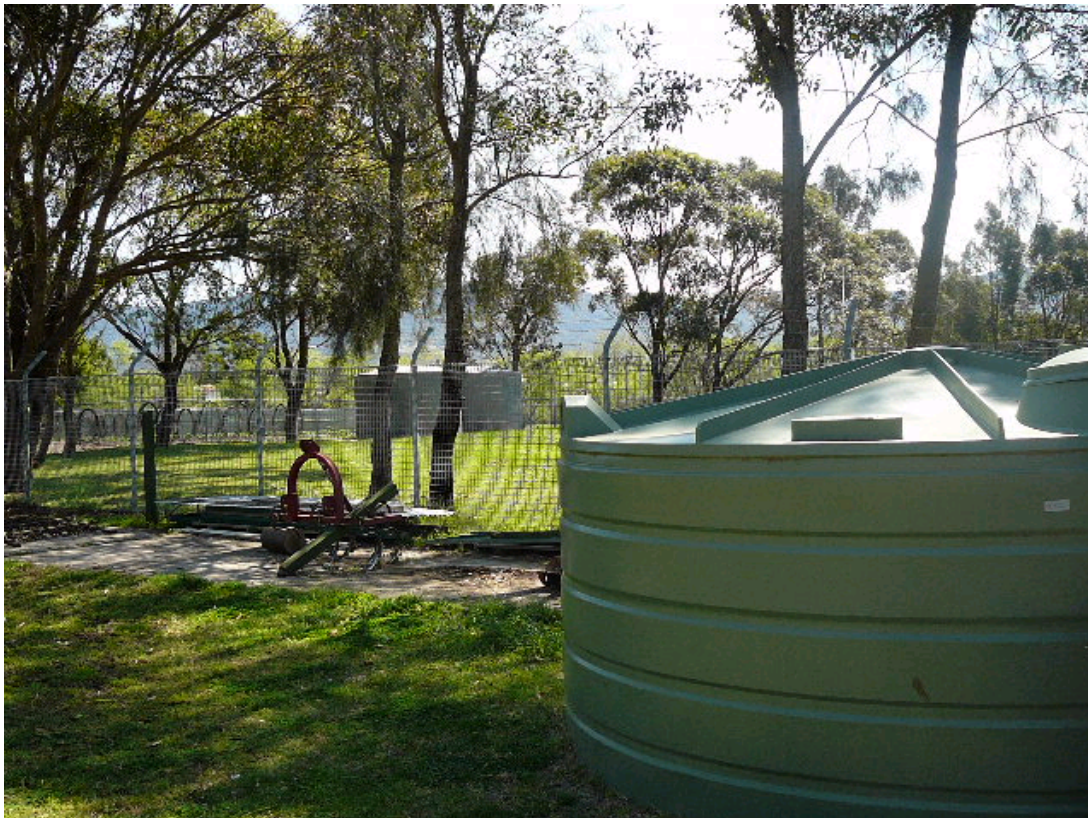
The team includes:

- Teachers
- Parents
- Grounds staff
- Elected Student Representative body
- Executive staff

This group is essentially project based. 2-3 members taking on responsibility for a particular project , funding opportunity or area of the school.

School environmental education achievements and new priorities

- Riparian zone replanting and fencing: in conjunction with Wollongong City Council.
- Climate Change Curriculum Project.
- Community Water Grant.
- Green Voucher solar hot water.
- Solar power generation.
- Cycle/skateboard/scooter secure storage.
- Walking Track.
- BushCare as a sport and as a Y8 Interest Elective.
- Worm Farm and paper/aluminium recycling.
- Farm production and canteen.
- Teachers travelling together.
- Lighting efficiency upgrade.



About this Plan

Across the focus areas the goals of this plan are

Curriculum

To integrate Environmental Education into all KLA areas, so that students and the community gain awareness, information and skills in sustainability and climate change including reducing their ecological footprint. It is important that the teaching programs are inclusive of literacy, numeracy and indigenous outcomes that increase students' engagement in school as well as their knowledge and understanding of environmental perspectives.

Resource management

To gain awareness of the concept of renewable versus non-renewable resources and how our use of those resources can be better managed.

Grounds management

To manage the school grounds so that the native biodiversity is increased and opportunities for student learning using the grounds are maximised.

Whole school planning

Develop, as part of the Dapto Climate Change Community, appropriate programs, resources and assessment that incorporate Environmental Education into Stage 4 and 5.

School community participation

Develop further relationships within the local community that can assist with resources and/or funding to further develop and an awareness of importance of sustainability. It is important that schools are a role model for sustainability within the community.

This plan addresses the following issues and topics

- The DET Environmental Policy
- Awareness of the Environmental Components for different KLA's
- Environmental Events/Days
- Recycling
- Sustainable Food
- Electricity Management
- Water
- Stormwater Runoff
- Green waste
- Introduced Plant Species
- Chemical Usage
- Management of Trees
- Gardens
- Health and decreasing our Ecological Footprint

The DET Environmental Policy

Staff are not aware of the policy

Outcome

Staff realise the importance and the need for Environmental Education.

Indicator

Environmental Education Policy presented at a full staff meeting

Time frame

2008-2009

Awareness of the Environmental Components for different KLA's

Participation in statewide Sustainable Schools initiative

Outcome

Students have better awareness, information and skills

Indicator

Stage 4 and 5 Programs and resources will have increased Environmental Education Outcomes

Time frame

2007 - 2009

Enviromental Events/Days

To encourage participation in days such as Clean Up Australia Day and Arbour Day as well as Pedometer Challenge

Outcome

Students to gain an awareness of the need to look after the environment - "we all can make a difference" - and to see the value of walking, health and the environment.

Indicator

10% of students involved

Time frame

2008-2011

Recycling

Recycling of paper and aluminium cans

Outcome

Students and staff recycle paper from classrooms and staffrooms as well as aluminium cans placed in the recycling bin by students and staff

Indicator

100% paper (that is suitable + not confidential) and aluminium cans (to be collected by local community group to assist their fundraising)

Time frame

2008-2011

Sustainable Food

In teaching of Agriculture students realise the importance of sustainable food production that has minimum impact on the environment.

Outcome

Students have an increased awareness of the need for sustainable food practices. Orchard is planted with fruit trees.

Indicator

All Year 7 and 8 students participate in Agriculture - Technology to complete a Food Production unit. Year 9/10 students can complete Agriculture - elective and Yr 11/12 can complete a VET course - Primary Industries

Time frame

2008-2011

Electricity Management

Solar panels placed on the schools roof (including participation in Solar in Schools) + Energy efficient lighting + Solar Hot Water systems + increased

Outcome

Less electricity from the main power supply is used

Indicator

Successful installation of solar panels, trial school for the installation of more energy efficient lighting, installation of solar hot water for the canteen, kitchens and Science preparation rooms

Time frame

2005-2011

Water

Installation of water tanks that are used by Agriculture + watering the fields and gardens + flushing toilets

Outcome

Less water consumption from town water

Indicator

Successful installation of water Tanks, pumps and fittings

Time frame

2006-2011

Stormwater Runoff

Audit + connection of storm water runoff into water tanks

Outcome

Connection of one of the main storm water drains into 2 X 35 000 litre tanks

Indicator

Less stormwater runoff into Mullet Creek

Time frame

2006 (audit) 2008 (connection)

Green waste

Composting, feeding of chickens and worm farms

Outcome

Students to collect waste and place in worms farms and green waste from the kitchens and canteen given to the chickens

Indicator

80% of all green waste recycled or reused

Time frame

2005-2011

Introduced Plant Species

Removal of introduced plant species along the banks of Mullet Creek

Outcome

Students to participate through Yr 8 Interest Elective, Sport group, Yr 7- 12 Agriculture to assist with removal of Introduced species, replanting with native species and fencing to protect the banks of the creek.

Indicator

Camphor Laurel and Willow Trees removed along the banks of Mullet Creek and replanting to occur - in partnership with WCC and grants gained through Envirotrust and other government grants (Eg: Dept of Primary Industries). Increased biodiversity withing the Mullet Creek ecosystem. Awarded an award from Healthy Cities for "Restoration work on Mullet Creek"

Time frame

2005-2011

Chemical Usage

Decrease the use of dangerous chemical on the school grounds and agricultural area and the implementation of the Chemical Safety Package

Outcome

Staff and community users of the grounds to investigate alternatives for the control of weeds and fertilising of pastures and fields Staff (teachers and SASS) to implement the Chemical Safety Package including labelling, storage and usage

Indicator

Decreased amounts of pesticides and chemical fertilisers are used on the school grounds. Correct labelling of all chemicals, storage and usage of all chemicals used within the school.

Time frame

2008-2011

Management of Trees

Removal of lower and older tree limbs.

Outcome

General Assistant, Agricultural Assistant and Agriculture students to remove low and older tree limbs.

Indicator

Older and low tree limbs removed

Time frame

2008-2011

Gardens

Management of the school grounds including the gardens to increase biodiversity as well as learning opportunities for students.

Outcome

(a) Bushcare students (Yr 8 Interest Elective and sport group) + Yr 9/10 Work Education classes to regularly mulch school gardens. (b) Yr 9 Science Students and staff to establish a Medicinal BushTucker Garden at the start of the walking Track (funded by EnviroSchools Grant). (c) Chaplain and HT Welfare + community members to establish and look after a memorial garden, wall and sculpture. (d) Establish a Bushcare sporting group and Yr 8 Interest Elective

Indicator

(a) Gardens - there is better management of weeds and less watering is required (b) Medicinal BushTucker Garden established and resources are developed to ensure teaching and learning of indigenous outcomes. (c) Memorial Garden, wall (with past members of the school community recognised) and sculpture established and opened (d) Bushcare groups established and have connection/links with outside environmental organisations

Time frame

2008-2011

Health and decreasing our Ecological Footprint

Students and staff using cycleways and walking tracks to increase their physical and emotional wellbeing as well as decreasing their ecological footprint.

Outcome

(a) Establish and maintain a 1.5 km walking track within the school grounds. (b) Development of a cycleway between DHS and the suburb of Horsley - Lobby Wollongong City Council

Indicator

(a) Track used regularly by students, staff and community for well being and exercise (b) Successful funding by WCC

Time frame

2006-2011

Actions to promote and celebrate progress

- Grants and competitions applied for
- Reported in the school annual report
- Regular updates in the school newsletter
- Stories for local media: newspapers, television or radio
- Relevant displays and events at school
- Relevant displays and events at locations outside the school
- Awards or badges for those involved

- Promoted at school assemblies

Action Plans

The DET Environmental Policy

Indicator: Environmental Education Policy presented at a full staff meeting

Strategy	Action	Indicator	Project management	
Whole School Planning				
Review environmental education related school policies	Present a workshop at a full staff meeting	Feedback from Staff meeting	Timeframe	2009
			Resources	Develop a powerpoint presentation on the DET Policy and Dapto High Schools Policy
			Responsibility	Trish Morgan

Awareness of the Environmental Components for different KLA's

Indicator: Stage 4 and 5 Programs and resources will have increased Environmental Education Outcomes

Strategy	Action	Indicator	Project management	
Curriculum Strategies				
Review teaching programs	Participate in Sustainable Schools ISER Climate Change Program	Yr 7 - Science - Energy Topic - rewritten so that more outcomes are related to renewable and non-renewable resources Yr7 - Science - Student Research Project - have environmental theme + develop an interactive website for guide students through the process of problem solving Yr 8 - Geography - Climate Change aspects put into the programs Yr 9 - Science - Act Local, Think Global - more emphasis on climate change Yr10 - Geography - Worldwide effect of Global Warming	Timeframe	2007-2009
			Resources	Write resources and plan days that increases students awareness, information and skills in sustainability and climate change
			Responsibility	Trish Morgan/Jane Swan/ Di Stewart

Enviromental Events/Days

Indicator: 10% of students involved

Strategy	Action	Indicator	Project management	
School Community Participation				
Participate in local government programs and events	Encourage participation in events such as Clean Up Australia Day and Arbour Day	Increase participation in events to raise awareness of the importance of the environment	Timeframe	2008 - 2011
			Resources	Gloves, tongs and bins
			Responsibility	Mr D Bateman + Mrs S Moran

Recycling

Indicator: 100% paper (that is suitable + not confidential) and aluminium cans (to be collected by local community group to assist their fundraising)

Strategy	Action	Indicator	Project management	
Resource Management				
Improve recycling generally	Recycle paper and aluminium cans - having students who are office duty to collect used paper from staffrooms and collecting aluminium cans that amy have been placed in bins	Increase in the amount of paper and aluminium cans that are recycled	Timeframe	2008-2011
			Resources	tongs and collection of used paper and aluminuim cans by local charity organisations
			Responsibility	Mr FitzSimons and Year 7/8 students

Sustainable Food

Indicator: All Year 7 and 8 students participate in Agriculture - Technology to complete a Food Production unit. Year 9/10 students can complete Agriculture - elective and Yr 11/12 can complete a VET course - Primary Industries

Strategy	Action	Indicator	Project management	
Curriculum Strategies				
Promote environmental citizenship	In the teaching of Agriculture, students are taught about the practices of sustainable agriculture	Students have an increased awareness of sustainable food practices - including the completion of assessments in the relevant Agricultural topics.	Timeframe	2008-2011
			Resources	Agriculture land - cattle, sheep, chickens and various vegetable and fruit plots
			Responsibility	Agriculture staff - Mr I Heffernan and Mrs J Swan

Electricity Management

Indicator: Successful installation of solar panels, trial school for the installation of more energy efficient lighting, installation of solar hot water for the canteen, kitchens and Science preparation rooms

Strategy	Action	Indicator	Project management	
Resource Management				
Use alternate energy	Solar panels fitted (through Solar in Schools Program) + additional solar panels and solar hot water systems (from Green Voucher Grant) + Retro fit of more energy efficient lighting	Decrease in the mount of Electricity taken from the Grid	Timeframe	2005-2011
			Resources	Grants from State and Federal governments
			Responsibility	Mr H Bandte

Water

Indicator: Successful installation of water Tanks, pumps and fittings

Strategy	Action	Indicator	Project management	
Resource Management				
Reuse grey water and stormwater	Installation of water tanks that are used by Agriculture + watering sporting fields + flushing boys toilets	Decrease in the amount of town water used	Timeframe	2006 - 2011
			Resources	Water Tanks + pumps + relevant plumbing systems - funding provided through Sydney water and Community Water Grant
			Responsibility	Mr I Heffernan + Mr A FitzSimons + Ms P Morgan

Green waste

Indicator: 80% of all green waste recycled or reused

Strategy	Action	Indicator	Project management	
Resource Management				
Increase reuse of materials	Composting of organic wastes + feeding of food scraps to chickens and worm farms	Students to collect organic materials from waste containers	Timeframe	2007 -2011
			Resources	Chickens + compost bins + worm farms
			Responsibility	Mr D Bateman + Ag staff

Introduced Plant Species

Indicator: Camphor Laurel and Willow Trees removed along the banks of Mullet Creek and replanting to occur - in partnership with WCC and grants gained through Envirotrust and other government grants (Eg: Dept of Primary Industries). Increased biodiversity within the Mullet Creek ecosystem. Awarded an award from Healthy Cities for "Restoration work on Mullet Creek"

Strategy	Action	Indicator	Project management	
Grounds Management				
Increase local biodiversity	Removal of Introduced species along Mullet Creek - Camphor Laurels + Willow tress. Replanting native species along the banks of Mullet Creek. Audit of biodiversity in the creek.	Decrease in Introduced tree species + fencing of parts of the creek (to protect from livestock) + replanting of bank with native species + increase in biodiversity within the Mullet Creek ecosystem	Timeframe	2005-2011
			Resources	Nets and tubs for audit + grants (Envirotrust + Dept Prim Ind) to allow for heavy equipment to remove trees from the creek
			Responsibility	In partnership with Wollongong City Council + Mr P. Sanders + Mr M Wilson + Mr P Johnson + students from Yr 8 Interest Elective , Bushcare Sport Group, Yr 9/10 Work Ed Groups, Yr 11/12 Primary Ind (to complete fencing) and Yr 7 Science students (audit)

Chemical Usage

Indicator: Decreased amounts of pesticides and chemical fertilisers are used on the school grounds. Correct labelling of all chemicals, storage and usage of all chemicals used within the school.

Strategy	Action	Indicator	Project management	
Resource Management				
Reduce chemical use	Decrease the amounts of dangerous chemicals used on the school grounds including the agricultural areas. Implementation of the Chemical Safety Package	Decrease in the amounts of chemicals used as well as compliance with the Chemical safety Package	Timeframe	2008-2011
			Resources	Knowledge of chemicals and Chemical Safety Package so that correct labelling, storage and use of chemical occurs.
			Responsibility	Agricultural Staff + General Assistant + teaching staff + Laboratory Assistant

Management of Trees

Indicator: Older and low tree limbs removed

Strategy	Action	Indicator	Project management	
Grounds Management				
Increase grounds safety	Removal of lower and older tree limbs	Tree Limbs lower than 1.5m removed if needed as well as regular inspections to identify older limbs to be removed	Timeframe	2008-2011
			Resources	appropriate cutting instruments and equipment
			Responsibility	General Assistant + Agricultural staff + Agricultural students

Gardens

Indicator: (a) Gardens - there is better management of weeds and less watering is required (b) Medicinal Bush Tucker Garden established and resources are developed to ensure teaching and learning of indigenous outcomes. (c) Memorial Garden, wall (with past members of the school community recognised) and sculpture established and opened (d) Bushcare groups established and have connection/links with outside environmental organisations

Strategy	Action	Indicator	Project management	
Curriculum Strategies				
Implement new teaching programs	Develop a Yr 8 Bushcare Interest Elective class + Bushcare Sport Group	Groups established + improvement in school gardens	Timeframe	2008 -2011
			Resources	Tools + appropriate plants + soil + mulch
			Responsibility	Mr P Sanders + Mr M Wilson
Grounds Management				
Develop a themed garden (eg a harmony garden, bush food)	Establish a Memorial garden, wall and sculpture	Garden, wall and sculpture established	Timeframe	2008 - 2009
			Resources	Mulch, plants, tools, sculpture, bricks and plaques
			Responsibility	Yr 9/10 Boys (build wall) + Yr 8 Bushcare class + Mr G Craft + Mr P Sanders + Ms F Kyle

Health and decreasing our Ecological Footprint

Indicator: (a) Track used regularly by students, staff and community for well being and exercise (b) Successful funding by WCC

Strategy	Action	Indicator	Project management	
Grounds Management				
Develop a wildlife / bushland corridor through the school	Develop a 1.5 km walking track withing the school grounds and at the start plant a Medicinal BushTucker Garden (funded by Ecoschools Grant)	Walking Track and Medicinal BushTucker Garden established and used regularly by students and staff	Timeframe	2006-2008
			Resources	Teaching resouces and appropriate knowledge of Medicinal Bushtucker plants
			Responsibility	Mrs T Meredith + Science/Agricultural staff + Yr 9 students

Community and environment network

These organisations will join in our environmental meetings and activities:

Name of organisation	Type of organisation	Contact details	Type of assistance
Julie Haywood	NSW local government	Wollongong City Council 4227 7111	Grants and assistance with audits
Stuart DeLande	Other	Illawarra Environmental Education Centre - Principal	Educational Support
Meryl McKerrow	NSW non-government organisation	Futureworld Eco-Technology-Education Officer - 4226 9147	Writing resources including excursions and advice on sustainability
Dr Tony Miestkovitz	NSW local government	42277574	Tony is a source of advice and inspration and practical assistance.

Evaluation Plan

Curriculum

Goal: To integrate Environmental Education into all KLA areas, so that students and the community gain awareness, information and skills in sustainability and climate change including reducing their ecological footprint. It is important that the teaching programs are inclusive of literacy, numeracy and indigenous outcomes that increase students' engagement in school as well as their knowledge and understanding of environmental perspectives.

Issue	Strategy	What was Achieved?
Awareness of the Environmental Components for different KLA's	Review teaching programs	
Sustainable Food	Promote environmental citizenship	
Gardens	Implement new teaching programs	

Resource Management

Goal: To gain awareness of the concept of renewable versus non-renewable resources and how our use of those resources can be better managed.

Issue	Strategy	What was Achieved?
Recycling	Improve recycling generally	
Electricity Management	Use alternate energy	
Water	Reuse grey water and stormwater	
Green waste	Increase reuse of materials	
Chemical Usage	Reduce chemical use	

Grounds management

Goal: To manage the school grounds so that the native biodiversity is increased and opportunities for student learning using the grounds are maximised.

Issue	Strategy	What was Achieved?
Introduced Plant Species	Increase local biodiversity	
Management of Trees	Increase grounds safety	
Gardens	Develop a themed garden (eg a harmony garden, bush food)	
Health and decreasing our Ecological Footprint	Develop a wildlife / bushland corridor through the school	

Whole school planning

Goal: Develop, as part of the Dapto Climate Change Community, appropriate programs, resources and assessment that incorporate Environmental Education into Stage 4 and 5.

Issue	Strategy	What was Achieved?
The DET Environmental Policy	Review environmental education related school policies	

School community participation

Goal: Develop further relationships within the local community that can assist with resources and/or funding to further develop and an awareness of importance of sustainability. It is important that schools are a role model for sustainability within the community.

Issue	Strategy	What was Achieved?
Enviromental Events/Days	Participate in local government programs and events	



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