



Environmental Management System

Annual Report 2007-08

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Principal's Statement

I am delighted to introduce the College's first Environmental Management System (EMS) Report.

The EMS Report encompasses the entire organisation which includes centres at Rhos, Rhyl College, Denbigh College, Abergele College.

The College was awarded the Management Award for sustainable development in the public sector category of the Wales Business and Sustainability Awards (previously known as the Wales Environment Awards) in 2007.

The College has implemented a programme of environmental and sustainability initiatives over a period of years and I am pleased with the real progress that is being made in so many areas of the college's operation.

In 2008, the College was further achieved the Green Dragon Environmental Standard at level 4 for its activity at Rhos Campus, and is committed to achieve level 5 across all sites early in 2009.

As Principal of a one of the largest educational providers in Wales, I am entirely committed to improving the College's environmental performance, tackling climate change as far as we can, and most importantly reducing the College's ecological impact.

Huw Evans, OBE

Principal.

Executive Summary

This report presents the environmental performance of the Coleg Llandrillo Network. The report details the monitoring data gathered to enable the organisation to measure its environmental impact and present actions for continual improvement.

Key Findings

In 2007-08, Coleg Llandrillo Network:

- Used kWh energy **615,753**
- Staff travelled: 673,323 miles
- Generated waste **3,986 m³**
- Consumed m³ of water **20,062**
- Produced 1,980.8 tonnes CO₂ emissions

Introduction

Coleg Llandrillo is a college of Further and Higher Education delivering a wide range of courses to students from Conwy, Flintshire, Denbighshire and Gwynedd.

The College network has four main sites at Rhos, Rhyl, Denbigh and Abergele and has leased premises at St Asaph, Madoc Street Llandudno and the Glasdir Rural Development Centre in Llanrwst. The leased premises do not form part of the EMS.

The College employs approximately 850 full and part-time staff across the network and has about 2,500 full time students and 25 000 part-time students.

The College aims to have as low an effect as possible on the local environment and encourages staff to support this mission. The College also aims to equip students to enter the workplace with an appreciation of environmental issues.

The College's Mission Statement

“To provide outstanding education and training opportunities to improve the skills base for employers, individuals and communities to support social and economic advancement”

Sustainability and Environmental Policy

Coleg Llandrillo Cymru is a College of Further Education, which has sites at Rhos-on-Sea, Rhyl, Abergele, Denbigh, St Asaph and Llandudno and provision at a large number of community based venues. The College provides a wide range of education and training, both full and part-time and at Further and Higher Education levels, to the local communities and employs approximately 850 full and part-time members of staff.

Coleg Llandrillo seeks to develop, amongst all its staff and students, an understanding of environmental and sustainability issues and an appreciation of the institution as an environmental agent.

Objectives of the Policy:

To make sustainability and environmental best practice part of every aspect of College life.

To ensure compliance with all relevant legislation.

To ensure the development and adoption of an environmental management system which prevents pollution and ensures continual improvement in the College's environmental performance.

To promote awareness of energy and water use amongst all members of the College and to improve the efficiency in use of these resources.

To reduce the consumption of materials where possible and to extend the life of materials where practicable.

To recycle or re-use materials where possible and to dispose of waste in the least environmentally damaging way.

To ensure that the College has a minimal negative effect on the local environment and makes a positive contribution to the local community and its environment.

To ensure that all students and College staff are aware of environmental issues and to provide a range of courses and training in relevant topics.

To ensure that all staff and students are aware of the environmental impacts of transport and to encourage the use of alternative forms of transport.

To monitor progress on a regular basis to identify areas for improvement.

Huw Evans

Principal

The Environmental Management System

The College's Environmental Management System is designed to ensure:

- Compliance with any relevant legislation
- Awareness of the College's environmental impacts
- The reduction of the impacts and continual improvement of performance.

The Principal has overall responsibility for the EMS, including the Environmental Policy and providing adequate resources for implementing and maintaining the system on a strategic basis.

A review of the EMS is carried out annually. The review addresses the following issues:

- A review of environmental performance
- A review of non-conformance and audit reports
- Confirmation of preventative actions
- A review of achievement against current objectives and targets
- Setting of new objectives and targets
- A review of the Environmental and Sustainability Policy, the Environmental Manual, Procedures and Work Instructions to check that they are still relevant to the overall policies and objectives of the College.
- A review of environmental training needs

- A review of significant aspects and impacts
- A review of the effectiveness of environmental projects undertaken by the College.

The necessary documents and procedures to ensure that the College continues to meet the requirements of the Green Dragon Environmental standard are available on the College intranet.

A copy of this report and further information on Coleg Llandrillo is available on the College web site www.llandrillo.ac.uk

Aspects and Impacts

The key activities relating to the College's operations have been identified within the environmental review. The activities which produce the most significant aspects and impacts include: use of electricity and gas, transport, use of paper, waste production and management.

The aspects and impacts significance are rated using a prioritisation matrix. A "traffic light" system has been developed to prioritise the impacts. A red indicates that the impact is significant, amber that the impact could become significant and green indicates that the impact is not deemed significant. These are recorded in the Aspects and Impacts Register.

The aspects and impacts that are identified as the most significant are selected for inclusion in the annual objectives and targets following an annual review.

Review of Targets for 2007-08 Against Actual Activity Levels

- v To reduce electricity use by 5% based on 2006-07 figures.

Rhos showed a 0.6% increase

Rhyl showed a 5.3% decrease

VBR showed a 19% increase – the new Evans block (opened Sep 2007) at Rhyl is connected to the VBR supply

Denbigh showed a 6.9% decrease

Overall there was a 0.2% decrease in electricity use

- v To reduce gas use by 5% based on 2006-07 data*

Rhos showed an 11.8% decrease

Denbigh showed a 14.5% increase

Rhyl is not included in this calculation as gas was not connected to the site until September 2007

Overall there was a 9% decrease in gas use

- v To reduce water use by 2% based on 2006-07 data

Rhos showed a reduction of 5.9%

Rhyl showed an increase of 93.7% - the Rhyl site opened the Evans block in September 2007. This building is mainly for building trades. There has also been a new hairdressing salon opened on the site.

Denbigh showed an increase of 25%

Overall there was a 3.7% increase in water use.

- v To reduce mileage due to fleet cars, vans and minibuses by 5% based on 2006-07 data

Mileage was reduced by 1.7%

- v To increase the amount of waste recycled to 30% of the total waste produced.

21.3% of total waste produced was recycled, therefore the target was missed.

- v To reduce the amount of paper purchased by 5% based on 2006-07 data
- There was a 3.6% reduction in the amount of paper purchased.**

Environmental Performance

Energy

2007-08 Performance

Energy Performance for the College Network

Energy	kWh	Carbon Dioxide (tonnes)
Electricity	3122195	1342.5
Gas	2989138	567.9
LPG	45820	9.8
Total	6157153	1920.2

Overall energy consumption was reduced by 4.9%

Energy Performance for the Rhos Site

Energy	Use (kWh)		Carbon dioxide (tonnes)	
	2006-07	2007-08	2006-07	2007-08
Electricity	2 244 706	2 259 778	965.2	971.7
Gas	3 195 022	2 886 011	607.1	548.3
LPG	59 829	45 821	12.8	9.8
Total	5 499 557	5 191 610	1 585.1	1 529.8

At the Rhos site total energy use was reduced by 6% and total CO₂ emissions reduced by 3.5%

Electricity

The increase in electricity at the Rhos site could be attributed to the installation of 4 new air conditioning units in the new classrooms in Glyn Block, an air conditioning unit in the telephone server room (A08) and an air conditioning unit in the server room D1A.

The roof on part of the existing building at the Rhyl site was resurfaced and extra insulation included. New and more efficient air conditioning units were introduced and replaced the existing ones in the main part of the building. Rhyl site has been connected to the BMS at Rhos and therefore gave better control of the heating system.

The new Evans Building (Construction) at Rhyl was a major new development with a significant increase in the student population and was connected to the VBR electricity supply.

Gas

Further improvements to the BMS have contributed to the reduction in gas use on the Rhos site.

Transport

2007-08 Performance

Staff travelled 673 323 miles on College business. In 2007-08 mileage of staff using private vehicles for travel, trains and travelling by air was included in the data for the first time.

Student Transport

The College together with Conwy, Denbighshire and Flintshire LEAs provides free transport for students under 18 who live more than three miles from the site. A total of 1929 students were issued with passes, of these, 344 students who are over 18 were provided with free transport (funded by the College) and 484 students had Arriva passes, which were provided at the Councils' and College's expense.

35 students were provided with train passes to travel to Rhyl or Abergele campuses.

Student transport data was included in the table for the first time

Mode of Transport	2006-07	2007-08 (miles)
College fleet cars	91676	103,526
Post and catering vans	26704	26,394
Minibuses (inc. large vans)	81281	83,812
Private vehicles	N/A	373,502
Train	N/A	31,035
Air	N/A	55,054
Student transport (College buses)	N/A	18,763
Total	199661	692,086

Savings of carbon Dioxide Emissions

Video conferencing saved 28 818miles of travelling, equivalent to 5.48 tonnes carbon dioxide emissions.

Students using College buses saved 940 tonnes of carbon dioxide emissions

Waste

2007-08 Performance

The total amount of waste produced was 3986 m³.

Recycled materials included

Paper	117 m ³
Cardboard	208 m ³
Plastic bottles	377 m ³
Metals	80 m ³
Wood	67 m ³

The total amount of waste going to landfill was 3137 m³ this is 25% less than the amount landfilled in 2006-07.

There was a decrease on the percentage of waste recycled. However, the present waste contractor only takes plastic bottles for recycling, whereas in 06-07 the waste contractor took all types of plastic waste.

Greenhouse Gas Emissions

2007-08 Performance

Carbon dioxide emissions were calculated from the buildings energy use and transport.

The conversion factor used to calculate CO₂ emissions for transport takes into account the nitrous oxide emission.

Aspect	Tonnes CO₂ 2006-07	Tonnes CO₂ 2007-08
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Electricity	1340.2	1342.5
Gas	624.2	567.9
Oil	12.8	9.8
College fleet	45.0	60.59
Total	2022	1980.8*
Private cars	N/A	123.26
Train	N/A	2.99
Air	N/A	50.50

* the total refers to the sum of electricity, gas, oil and College fleet.
 Data in blue are not included in the total as these were not monitored in 2006-07.

There was a 2% (41 tonne) reduction in greenhouse gas emissions.

Water

2007-08 Performance

A total of 20 062 m³ were used at the Rhos, Rhyl and Denbigh sites. This is an increase of 3.7%.

The increase was due to the opening of the new Construction and Hairdressing Departments and a new catering outlet at Rhyl.

Site	2006-07	2007-08
Rhos	17 006	15996
Rhyl	1655	3206
Denbigh	690	1717
Total	19 351	20 062

Paper

In 2007-08 the College purchased 16,200 reams of paper. This is 600 reams fewer than 2006-07 (a reduction of 3.6%).

Training and Awareness

2007-08 Performance

All new staff receive Environmental management System awareness training as part of the induction process.

The SHE Manager, Environmental Co-ordinator and other trained staff provide general environmental awareness training to both staff and students.

Key staff also received formal environmental training from external bodies:

- Spill Training provided by Darcy

Staff seminars have included environmental issues such as Sustainability and waste minimisation.

Pollution Prevention

2007-08 Performance

The College has developed a Spillage Plan and key staff have received training in dealing with spillages.

All areas maintain chemical inventories and store chemicals in bunded secure cabinets. Spill kits and spill absorbent materials are held at appropriate places.

Any incidents which cause pollution or result in resource use or energy loss will be recorded in the EMS incident log.

Supply Chain

2007-08

The College has appointed a Procurement Manger, whose duties include addressing sustainability issues.

A Sustainable Procurement Policy has been written.

The contract for the Rhyl build was awarded to a company which registered the site under the Considerate Constructors Scheme.

All sites registered with the Scheme are monitored by an experienced industry professional to assess their performance against the eight point Code of Considerate Practice which includes the categories Considerate, Environment, Cleanliness, Good Neighbour, Respectful, Safe, Responsible and Accountable.

Under the environment section, the contractor must be aware of the environmental impact of the site and minimise, as far as possible, the effects of noise, light and air pollution. Efforts should be made to select and use local resources wherever possible. Attention should be paid to waste management; reduce, reuse and recycle materials where possible.

Legislation

2007-08 Performance

The College has prepared a Register of Legal Requirements, which identifies environmental legislation that is relevant to its operations.

The Environmental Co-ordinator updates the register when necessary, using a number of sources including updates from Arena Network and Croner and the Environment Agency's NetRegs.

The College will continue to meet its Duty of Care when disposing of waste, by using licensed carriers and retaining transfer notes for the required time span.

Biodiversity

2007-08 Performance

On the Rhos site, the College has maintained the wet land area. The Independent Learning students have taken charge of the pond area and are maintaining the area.

Renewables

2007-08 Performance

Full time students in the Construction Department at Rhos were given the opportunity to include the construction of renewable energy sources in their courses. The available technology includes wind turbine, solar voltaic cells, and solar water heating. A course for Biodiesel production, using waste cooking oil from the College refectory, was offered at Rhyl.

Several school parties visited the Rhyl site to look at the Renewable Technology Unit.

Community

2007-08 Performance

The College encourages students to take part in Community activities. In 2007-08, these activities have included:

- IB students working on the nature reserve at Bryn Euryn
- Skill build students at Rhyl clearing debris from the Brickfield pond and creating butterfly glades at Rhyl Community Woodland and planting wild flowers on the Marsh Road Community Woodland in Rhyl.

Environmental Focus Group

2007-08 Performance

Regular meetings are held of the cross network Environmental Focus Group, which is chaired by the Assistant Principal Corporate Services. This group reviews environmental issues and sets the objectives and targets for 2008-09.

The Environmental Focus Group reports to the SHE Committee.

Communications

2007-08 Performance

Communication is an important part of the EMS. An Environmental Newsletter is produced each term.

It is considered essential to include students in the decision making and there is student representation on the SHE Committee and the Environmental Focus Group.

Future Goals

The College will continue to meet the requirements of Level 4 Green Dragon Standard and hopes to achieve Level 5 in the near future

The College will continue to reduce its environmental impacts and will continue to improve its environmental performance

The College will continue to encourage its students to appreciate their environment and to take part in environmental projects.

Objectives and Targets 2008-09

Summary

Objective: To minimise the College's impact on climate change

Target: To reduce carbon dioxide emission due to electricity use by 2.5% based on 2007-08 data

Objective: To minimise the College's impact on climate change

Target: To reduce carbon dioxide emission due to gas use by 5% based on 2007-08 data.

Objective: To minimise the College's impact on Climate change

Target: To reduce carbon dioxide emissions due to business travel by 2% based on 2007-08 data

Objective: To minimise the amount of water used.

Target: To reduce the amount of water used by 3% based on 2007-08 data

Objective: To reduce the use of resources

Target: To reduce the quantity of paper used by 2.5% based on the 2007-08 data

Objective: To reduce the quantity of waste going to landfill

Target: To increase the quantity of waste recycled to 25% of the total amount of waste produced

