

Environmental Management System (EMS) Annual Report 2020/21 (including Objectives and Targets for 2021/22)



Environmental Management System (EMS)

Annual Report 2020/21

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CEO's Statement

I am delighted to introduce the College's Annual Environmental Management System (EMS) Report for 2020/21 for Grŵp Llandrillo Menai.

The Grŵp 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 maintained across the college's operation.

The Grŵp is committed to maintaining Level 5 Green Dragon Environmental Standard (2016). This year, similar to last year, due to the corona-virus pandemic, the Green Dragon Environmental Standard audit took place online and focused on our Environmental Management System. I am pleased to say that we retained our Level 5.

As CEO of the largest Further Education provider in Wales, I am committed to improving the Grŵp's environmental performance, tackling climate change as far as we can, and most importantly reducing the Grŵp's ecological impact.

Signed



Dafydd Evans

CEO Grŵp Llandrillo Menai

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Executive Summary

This report presents the 2020-21 environmental performance of Grŵp Llandrillo Menai.

During 2020-21, due to the ongoing Corona-virus pandemic, student numbers were reduced on campuses, with most face to face teaching replaced with blended learning. The majority of staff either worked from home or a mixture of on campus and home working. This has had a large impact on the environmental performance of the Grŵp and therefore the statistics in this report, although accurate will not be a true reflection of normal operation.

When setting the targets for 2020-21 in September 2020, the targets were set against the 2018-19 performance as it was assumed that College life would start returning to 'normal', however, further lock down measures meant that most students continued to be taught online

Key Findings

In 2020/21 the Grŵp:

- Used a total of 12,115,969 kWh energy, an 1.6% decrease compared with 2018-2019. The total cost of energy was £1,114,421 a decrease of £100,023 compared with 2018/19. This included;
 - 11.8% increase in gas usage across the Grwp.
 - 18.6% decrease in electricity use across the Grwp.
 - 22.8% decrease in propane used at Glynllifon.
- Mileage for staff using fleet cars decreased by 58% whilst fleet minibus use decreased by 47%. Mileage decreased by 79% for staff using their own private vehicles for College business to 267,111 miles. The cost of mileage for staff using their own vehicles for College business for 2020-21 was £138,634, a reduction in cost of £381,514 compared with 2018-19.
- Generated 641 tonnes of waste of which 535 tonnes were recycled. The amount of waste generated across the Grŵp decreased by 18% compared with 2018-19. 83% of waste was recycled across the Grwp in 2020-21 compared with 81% in 2018-19.
- Consumed 48,374m³ of water, a decrease of 9,169m³ compared with 2018-19, and a cost saving of £30,787.
- Used 66.5% less paper for printers and photocopiers compared with 2018-19.
- Produced a total of 465 tonnes of CO₂ equivalent emissions from livestock at Glynllifon.
- Produced a carbon gain of 37 tonnes of CO₂ equivalent emissions from tree planting at Glynllifon and energy from photovoltaic cells at Llangefni, Rhos, Glynllifon and Rhyl sites.
- Produced 3,477 tonnes of CO₂ equivalent emissions a decrease of 19.1% compared with 2018-19.
- Our carbon emissions equate to 165.6 kgCO₂e per student

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Introduction

The Grŵp is Wales' largest Further Education Institution and one of the largest FE college groups in the UK. The Grŵp employs 1,645 staff and delivers courses to around 21,000 students across four counties, Denbighshire (Rhyl), Conwy (Rhos and Abergele), Ynys Môn (Llangefni and Holyhead) and Gwynedd (Bangor, Dolgellau, Pwllheli, Glynllifon and Caernarfon).

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

The Grŵp's Mission, Vision and Values

The Grŵp will

“Manage our services, resources and facilities in a sustainable manner”

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SUSTAINABILITY AND ENVIRONMENTAL POLICY

Grŵp Llandrillo Menai was formed in April 2012 following the merger between Coleg Llandrillo, Coleg Menai and Coleg Meirion Dwyfor. The Grŵp has sites in Conwy, Denbighshire, Gwynedd and Ynys Môn with provision at a large number of community based venues. The Grwp provides a wide range of education and training, both full and part-time, at Further and Higher Education levels and has approximately 1,645 staff and attracts about 21,000 students.

Grŵp Llandrillo Menai seeks to develop, amongst all its staff and students, an understanding of environmental and sustainability issues, both local and global, and an appreciation of the institution as an environmental agent.

Objectives of the Policy:

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

To ensure compliance with all relevant legislation, compliance obligations and to adopt policies which will contribute to a sustainable future.

To ensure the development and adoption of an environmental management system which prevents pollution and supports 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 most environmentally friendly 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.

Signed



Dafydd Evans

(C.E.O.)

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The Environmental Management System (EMS)

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

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

The CEO 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 Grŵp
- A review of environmental training needs
- A review of significant aspects and impacts
- A review of the effectiveness of environmental projects undertaken by the Grŵp

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

A copy of this report and further information on Coleg Llandrillo, Coleg Menai and Coleg Meirion Dwyfor is available on the Grŵp web site www.gllm.ac.uk

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Aspects and Impacts

The key activities relating to the Grŵp'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 water.

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.

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Review of Targets for 2020-21

- ❖ To reduce carbon dioxide emissions due to the use of electricity, based on the 2018/19 data:

The target set for the reduction of carbon emissions due to the use of electricity was a reduction of 2% at all sites.

There was a reduction of electricity usage at the Llandrillo sites of 24.3%. At Meirion Dwyfor sites, the electricity usage decreased by 9.2% and also at the Menai sites, the usage decreased by 16.3%.

Overall, across the Grŵp, there was an electricity usage reduction of 18.6%.

The target was therefore met.

- ❖ To reduce carbon emissions due to the use of gas based on 2018-19 data:

The target set for reduction of carbon emissions due to the use of gas was set at 6% for all sites.

Gas usage in 2020-21 increased by 12.7% at Llandrillo sites, 7.4% at Menai sites and 22.8% at Meirion Dwyfor Sites. Overall, the gas usage increased by 11.8% across the Grŵp.

The target was therefore not met.

- ❖ To reduce carbon emissions due to the use of LPG:

The target set was to reduce the use of LPG at Glynllifon by 2% of the 2018-19 usage.

There was a 22.8% decrease in the use of propane with 2018/19.

The target was therefore met.

- ❖ To reduce carbon emissions due to travel on Grŵp business:

The target was set to reduce miles travelled on Grŵp business by 2% of 2018-19 mileage.

Overall, the combined mileage for all vehicles decreased by 34.8%.

The target was therefore met.

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- ❖ To reduce carbon emissions due to travel to work:

The target was to continue to promote the cycle to work scheme.

The cycle to work scheme is continually being promoted. Up until August 2020, 219 staff have joined the scheme, of which 24 joined the scheme in 2019-20.

The target was therefore met.

- ❖ To reduce the impact on resource depletion due to water use:

The target set was to reduce water use by 2% of the 2018-19 data.

Across the Grŵp, there was a 15.9% decrease in water usage compared with 2018/19.

The target was therefore met.

- ❖ To reduce the impact on resource depletion due to paper use:

The target set was to reduce the quantity of paper used by 2% of the 2018-19 data.

There was a 66.5% decrease in paper usage throughout the Grŵp compared with 2018/19.

The target was therefore met.

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- ❖ To reduce the impact on the use of resources due to the disposal of waste to landfill:

The target set was to maintain the quantity of waste recycled to 99% of the total amount of waste produced at the Coleg Llandrillo sites, to recycle 50% at the Coleg Meirion Dwyfor sites and recycle 96% at the Coleg Menai sites.

100% of waste was recycled at the Coleg Llandrillo sites

50% of waste was recycled at Coleg Meirion Dwyfor *

93% of waste was recycled at Coleg Menai*

*Further details regarding differences in recycling can be found on page 18

The target was therefore not met.

- ❖ To reduce the Grŵp's impact on resource use

The target set was to reduce the amount of waste produced on all sites by 5% of the 2018-19 data

There amount of waste produced in 2020-21 reduced by 18.4% compared with 2019-19.

The target was therefore met

- ❖ To reduce the Grŵp's impact on climate change:

The target set was to continue planting of hedgerow and mixed woodland trees by August 2020 and onwards.

Hedgerow and tree planting is on-going at Glynllifon; tree planting has taken place in 2020/21 with over 2,000 mixed trees planted over 2 hectares.

The target was therefore met.

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- ❖ To increase the level of Environmental Awareness amongst staff:

The target set was to carry out one to one and group Environmental Awareness talks within departments during 2020/21.

Environmental awareness is essential training for all staff delivered by iHasco software, 92% have completed the training and the staff Environmental awareness handbook is issued annually to all staff.

The target was therefore met.

- ❖ To engage with and contribute to the local community:

The target set for the Grŵp's staff and learners to carry out at least 35 activities in which learners utilise their skills in their local community in 2020/21.

Due to lockdown, activities taking place outside of the College were limited

The target was therefore not met.

- ❖ To reduce the Grŵp's impact on climate change:

The target set was to reduce Greenhouse Gas emissions from the buildings' energy use, transport and livestock by 4% based on the 2018/19 data.

The Carbon emissions for 2020-21 decreased by 19.1% compared with 2018/19.

The target was therefore met.

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Environmental Performance

Energy

2020-21 Performance

Gas

	kWh		CO ₂ (kg)	
	2018-19	2020-21	2018-19	2020-21
Coleg Llandrillo	2,733,911 £100,742 (72 kWh/m ²)	3,080,256 £104,364 (81 kWh/m ²)	505,700 (13.2kg CO ₂ /m ²)	718,131 (18.8kg CO ₂ /m ²)
Coleg Meirion Dwyfor	1,023,453 £52,025 (66 kWh/m ²)	1,256,467 £57,715 (80 kWh)	189,311 (12.1kg CO ₂ /m ²)	292,933 (18.7kg CO ₂ /m ²)
Coleg Menai	3,145,255 £146,302 (82 kWh/m ²)	3,376,997 £139,266 (88 kWh/m ²)	581,787 (15.1 kg CO ₂ /m ²)	787,313 (20.5 kg CO ₂ /m ²)
Total	6,902,619 £299,069 (75 kWh/m²)	7,713,720 £301,345 (84 kWh/m²)	1,276,798 (13.8 kg CO₂/m²)	1,798,377 (19.5 kg CO₂/m²)

2020-21 saw an increase in gas usage of 11.8% across the Grŵp. Gas increased by 12.7% at Llandrillo sites, 7.4% at Menai sites 22.8% at Meirion Dwyfor sites.

The increase in gas usage resulted in a cost increase of £2,276.

To control the spread of Covid 19, windows are opened in occupied rooms to allow the flow of fresh air.

The temperature of 2020/21 was cooler than that of 2018/19 which would account for some of the increase in gas usage.

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Electricity

	kWh		CO ₂ (kg)	
	2018-19	2020-21	2018-19	2020-21
Coleg Llandrillo	2,413,697 £400,132 (65 kWh/m ²)	1,826,295 £326,623 (49 kWh/m ²)	994,556 (26.8 kg CO ₂ /m ²)	425,782 (11.5 kg CO ₂ /m ²)
Coleg Meirion Dwyfor	991,603 £172,315 (48 kWh/m ²)	900,627 £173,294 (44 kWh/m ²)	408,590 (19.8 kg CO ₂ /m ²)	209,972 (10.2 kg CO ₂ /m ²)
Coleg Menai	1,915,730 £319,356 (50 kWh/m ²)	1,602,877 £291,204 (40 kWh/m ²)	789,377 (20.5 kg CO ₂ /m ²)	373,695 (9.4 kg CO ₂ /m ²)
Total	5,321,030 £891,803 (55 kWh/m²)	4,329,799 £791,121 (44 kWh/m²)	2,192,523 22.8 kg CO₂/m²	1,009,449 10.4 Kg CO₂/m²

There was a decrease of electricity usage at the Llandrillo sites of 24.3%, at Meirion Dwyfor sites a reduction of 9.2% and Menai sites a reduction of 16.3%.

Overall, across the Grŵp, there was an electricity usage reduction of 18.6% and a cost saving of £100,682.

As many staff continued to work from home in 20/21 and students being taught online and on site, this would account for a large percentage of the savings.

During the Summer of 2020, photovoltaic panels were installed on the Sports Centre roof at the Rhos campus.

Propane

Propane is used for heating and cooking at Glynllifon and for the Engineering Department

	litres				CO ₂ (kg)	
	2018-19		2020-21		2018-19	2020-21
Glynllifon	93,790	£23,572	72,450	£21,955	141,156	112,687

There was a 22.8% decrease in the use of propane, and a reduction in cost of £1,617.

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Transport

2020-21 Performance

Student Transport

The Grŵp together with Conwy, Denbighshire and Flintshire LEAs provides free transport for students under 18 who live more than three miles from the College site that they attend.

College Vehicles and Private Mileage

Mode of Transport	2018-19 (miles)	2020-21 (miles)	2018-19 (kgCO2e)	2020-21 (kgCO2e)
College fleet cars (Inc. small vans)	142,207	60,249	33,586	16,332
Minibuses (Inc. large vans)	152,973	80,965	55,324	26,608
Private vehicles (all Grwp)	1,257,035	267,911	224,093	72,625
Total	1,552,215	409,125	313,003	115,565

The figures show that the mileage for college fleet cars and small vans decreased by 14.9%, mileage for fleet minibuses and small vans decreased by 14.7% whilst mileage for private vehicles decreased by 39.5%.

Overall, there was a reduction in mileage of 540,001 miles, a 34.8% decrease compared with 2018/19.

The cost of mileage for staff using their own vehicles for College business for 2020-21 was £138,634 a decrease of £381,514 compared with 2018/19.

The Coronavirus pandemic had a big impact on vehicle usage. As College campuses start to get back to a new 'normal', most meetings are continuing to be held via video conferencing and only essential trips are being undertaken.

In light of the reduction in use of College fleet cars, the majority of these were returned.

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Secure storage for bicycles is provided at all sites and a 10% discount for the purchase of bicycles has been negotiated with some retailers. To encourage staff to cycle to work the Grŵp has continued the cycle to work scheme. A total of 219 staff have signed up to this scheme since it began with 24 signing up in 2020/21.

In 2019, the Staff Benefits Scheme was introduced which allowed staff to lease cars at reduced rates with especially good rates for electric vehicles. This allowed staff to obtain new, more efficient vehicles.

In 2020, electric charge points were installed at the Rhos and Llangefni campus to provide staff with electric vehicles a charging facility and to also encourage the choice of electric vehicles as an option for those purchasing a new vehicle.

The College owns and electric van for caretaking / catering use.

The Grŵp has negotiated a reduction in the cost of the weekly Arriva bus ticket for both staff and students.

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Waste

2020-21 Performance

Coleg Meirion Dwyfor and Coleg Menai employ mixed recycling; the waste at Coleg Llandrillo is separated into specific streams. There are differences between Local Authorities in how they dispose of general waste. All general waste generated at Gwynedd and Ynys Môn sites is sent for refuse derived fuel whilst general waste generated at Conwy and Denbighshire sites is sorted further and then the sent for refuse derived fuel hence recycle figures for Conwy and Denbighshire sites will be higher than Gwynedd and Môn.

No waste from any Grŵp Llandrillo Menai sites is sent to landfill. As Refuse Derived Fuel is low on the waste hierarchy, the figures have been kept separate from the recycling figures.

Coleg Llandrillo Sites

	Total waste		Refuse Derived Fuel (RDF) (kg)		Waste Recycled (kg)		Percentage of Waste Recycled		kgCO2e	
	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21
Rhos	206,674	170,719	1,215	378	205,459	170,341	99%	100%	4,340	3,585
Rhyl	75,916	64,570	411	149	75,505	64,421	99%	100%	1,594	1,356
Abergele	8,472	4,880	61	15	8,411	4,865	99%	100%	177	102
Total	291,062	240,169	1687	542	289,375	239,627	99%	100%	6,112	5,044

Overall, at the Llandrillo sites, the amount of waste produced has decreased by 17.5%, the percentage of waste recycled has stayed at 99%.

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Coleg Menai Sites

	Total Waste		Refuse derived Fuel (RDF) (kg)		Waste Recycled (kg)		Percentage of Waste Recycled		(kgCO2e)	
	18/19	20/21	18/19	20/21	18/19	20/21	18/19	20/21	18/19	20/21
Llangefni (inc. Holyhead)	212,645	158,886	22,160	12,042	190,485	146,844	90%	92%	4,466	3,337
Friars	11,500	11,170	127	35	11,373	11,135	99%	100%	242	235
Parc Menai	16,270	11,799	6,595	933	9,675	10,866	59%	92%	342	248
Bangor	44,906	35,400	249	111	44,657	35,289	99%	100%	943	743
Caernarfon	2,940	2,600	1,500	1,320	1,440	1,280	50%	49%	62	55
Total	288,261	219,855	30,631	14,441	257,630	205,414	89%	93%	6,053	4,617
Total	288,261	219,855	30,631	14,441	257,630	205,414	89%	93%	6,053	4,617

At the Coleg Menai Sites, the amount of waste produced has decreased by 23.7%, the amount of waste recycled has risen from 89% to 93%.

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Coleg Meirion Dwyfor Site

	Total waste		Refuse Derived Fuel (RDF) (kg)		Waste Recycled (kg)		Percentage of Waste Recycled		kgCO2e	
	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21	2018/19	2020/21
Pwllheli (inc. Hafan)	46,710	38,035	27,870	21,755	18,840	16,440	40%	43%	981	799
Glynlifon	68,161	65,198	40,850	38,690	27,311	26,508	40%	41%	1,431	1,369
Dolgellau (inc. Marian Mawr)	91,857	78,060	45,076	30,974	46,781	47,086	51%	60%	1,929	1,639
Total	206,728	181,293	113,796	91,419	92,932	90,034	45%	50%	4,341	3,807

At the Coleg Meirion Dwyfor sites, the amount of waste produced has reduced by 12.3%, the amount of waste recycled has increased from 45%. To 50%.

Across the Grŵp the amount of waste produced reduced by 18.4% whilst the amount of waste recycled increased from 81% to 83.4%

In 2020, the Students' Union submitted a bid to the Welsh Government for our Environmental Project, Sustainable Future Project and were recently granted over £22k for their project. The aim of the project is to provide student led education that will drive changes in behaviour so that the whole college community (including staff) can all contribute positively towards the environment. Our Students' Union are working on two videos: 'The environmental consequences of single use plastic' and 'switch off campaign'.

The Students' Union have completed the first video, Single-use Plastic, the videos will be shown in inductions, on our organisation's website, on student portal; eDrac, across our social media platforms and on our YouTube channel for our wider communities.

Infographics will be produced on recycled material and displayed by water fountains at all campuses, the infographics will be used to encourage students to move away from single use plastic and use the Students' Union branded water bottles that were distributed to our students in our Freshers' Fairs and Learner Conferences. The infographics will include information on impacts of single use plastic including information on pollution, health issues, marine and bird life, food chain and carbon footprint.

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Glynllifon Farm Livestock

Livestock	Approx annual head count	2018-19 (KgCO ₂ e)	Approx annual head count	2020-21 (KgCO ₂ e)
	2018-19		2020-21	
Dairy Herd	235	278,913	260	308,585
Beef Herd	47	30,080	50	32,000
Pigs	50	4,339	500	43,386
Sheep	563	60,474	600	64,448
Lambs	700	14,467	750	15,501
Horses	2	638	2	638
Total		388,911		464,558

Emissions from livestock at Glynllifon totalled 464,558 KgCO₂e.

Glynllifon Tree Planting

Type of tree	Area (hectares)	2018-19 (KgCO ₂ e)	Area (hectares)	2020-21 (KgCO ₂ e)
	2018-19	Gain	2020-21	Gain
Hardwood/softwood				
Hardwood	0.5	98	0.5	98
softwood	2.5	925	1.5	555
Total	3	1,023	2	653

At Glynllifon, in excess of 2,000 trees were planted over 2 hectares. Trees were mainly softwoods and some hardwoods with species including hardwoods; Sessile Oak, Cherry, Birch, Hazel, holly and softwoods; Sitka Spruce, Norway Spruce, Scots Pine and Alder. The carbon gain from tree planting equates to 653 KgCO₂e.

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Building Energy Efficiency Measures

Photovoltaic Cells 2020/21

Meter Location	2018-19 KWh Generated	2018-19 (kgCO ₂ e)	2020-21 KWh Generated	2020-21 (kgCO ₂ e) Carbon gain
MBEC, Rhos	1,653	681	1,781	415
Glynllifon 1	9,965	4,106	12,423	2,896
Glynllifon 2	2,360	972	2,948	687
Evans Block, Rhyl	8,934	3,681	10,209	2,380
Canolfan Cefni, Llangefni	12,155	5,008	6,042	1,408
UCCL, Rhos	20,025	8,251	23,515	5,482
Engineering, Llangefni	18,959	7,812	24,737	5,767
Sports Centre Rhos			74,908	17,464
Total	74,051	30,511	156,563	36,499

Photovoltaic cells are installed on all new buildings. In 2020/21 there was a carbon gain of 36,499 KgCO₂e.

When calculating carbon gain, The Carbon Trust Conversion Factors document is used. The conversion factor for electricity changes annually in line with how electricity is generated. Electricity generation is moving more from fossil fuels to greener methods.

Two 50KW photovoltaic cell panels were installed on MBEC and Colwyn roofs on the Rhos site and two 50K Photovoltaic cell panels were installed on Rhyl college roofs in the Summer of 2021. The energy generation from these will be included in the statistics for 2021-22.

Electric Vehicle car charging points have been installed on the Rhos and Llangefni campuses.

Lighting is upgraded to LED as standard as lighting is replaced/upgraded. Where roofs are replaced, additional insulation is installed. Movement sensors are installed on new buildings and major refurbishments. As boilers are replaced they are replaced with more efficient boilers.

A woodchip boiler supplies the heating at the PA@G Building, Glynllifon. The woodchip is produced by the College's forestry department.

The Energy Centre, Llangefni has under floor heating using ground source heat and sun pipes, which supply light to rooms on the first floor.

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Greenhouse Gas Emissions

2020-21 Performance

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

Aspect	Kg CO ₂ 2018-19	Kg CO ₂ 2020-21
Electricity	2,192,523	1,009,449
Gas	1,276,798	1,798,377
LPG	141,156	112,687
Transport	313,003	115,565
Waste	16,506	13,468
Glynllifon Farm Livestock	388,911	464,558
Glynllifon Tree Planting (Carbon gain)	--1,023	-653
Photovoltaic Panels (carbon gain)	-30,511	-36,499
Total	4,297,363	3,476,952

The Carbon emissions for 2020/21 decreased by 19.1% compared with 2018/19.

Our carbon emissions equate to 165.6 kgCO₂e per student

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Water

2020-21 Performance

Coleg Llandrillo Sites

Site	2018-19		2020-21	
	Use (m ³)	cost	Use (m ³)	cost
Rhos	12,645	£40,456	8,667	£27,678
Rhyl	3,124	£10,588	2,067	£7,097
Denbigh	468	£1,569	88	£307
Total	16,237	£52,613	10,822	£35,082

There was an overall decrease of 33.3% in water usage at the Coleg Llandrillo sites, there was also a cost saving of £17,531 compared with 2018/19. Denbigh College was unoccupied in 2020/21 and was sold in the Summer of 2021.

Coleg Meirion Dwyfor Sites

Site	2018-19		2020-21	
	Use (m ³)	cost	Use (m ³)	cost
Dolgellau (inc. Marian Mawr)	1,982	£8,102	908	£4,514
Pwllheli (inc. Hafan)	1,177	£4,558	695	£2,942
Glynllifon	25,336	£35,248	24,917	£34,490
Total	28,495	£47,908	26,520	£41,946

There was a decrease of 6.9% in water usage at the Coleg Meirion Dwyfor sites, with a cost saving of £5,962 compared with 2018/19.

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Coleg Menai Sites

Site	2018-19		2020-21	
	Use (m ³)	cost	Use (m ³)	cost
Bangor	4,768	£16,857	3,585	£12,476
Llangefni	5,769	£19,402	6,400	£20,720
Parc Menai	1,028	£4,647	340	£2,142
Bangor Friars	1,088	£3,727	664	£2,357
Holyhead	158	£586	43	£230
Total	12,811	£45,219	11,032	£37,925

There was a decrease of 13.9% in water usage at Coleg Menai sites with a cost saving of £7,294.

Across the Grŵp, there was an 15.9% decrease in water usage, and a saving of £30,787 compared with 2018/19.

The MBEC and UCCL buildings at Rhos, PA@G at Glynllifon and the Energy Centre at Llangefni use rainwater harvesting.

Water fountains have been replaced throughout the Grŵp that enable water bottles to be filled up to help prevent plastic waste.

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Paper

2020-21 Performance

	Paper used (reams)	
	2018-19	2020-21
Llandrillo Sites	7,641	2,840
Meirion Dwyfor Sites	3,206	1,810
Menai Sites	5,875	950
Total	16,722	5,600

Overall, the Grŵp has continued to reduce its paper use. There was a 66.5% decrease in paper usage throughout the Grŵp compared with 2018/19.

Admin staff are encouraged to buy 100% recycled paper, the paper is off white in colour and is cheaper than the normal printer/copier paper. 100% recycled paper accounts for 5.2% of the paper purchased in 2020-21.

A student printer allowance continues to be in place and staff are advised of their own printing total each time they print a document. The printing default on all printers is set to double sided.

There are additional multifunctional devices throughout the Grŵp which are not limited.

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Training and Awareness

2020-21 Performance

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

All caretaking staff have completed Spillage Training.

A suite of online health, safety and environmental courses by iHasco has been rolled out to all staff to complete which includes an environmental awareness course.

Pollution Prevention

2020-21 Performance

A generic spillage response plan has been developed for sites where the risk of pollution from a spillage incident is assessed to be low. The Grŵp has developed Pollution Plans for Rhos, Rhyl, Glynllifon, Llangefni and Bangor 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.

Supply Chain

2020-21 Performance

The Procurement Manager is responsible for addressing sustainability issues when awarding supply contracts.

Building contractors for large contracts must be registered as Considerate Contractors. 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.

All contractors are required to attend a contractor's induction session, where they are made aware of the Grŵp's environmental concerns.

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Legislation

2020-21 Performance

The Grŵp has prepared a Register of Compliance Obligations, which identifies environmental legislation that is relevant to its operations.

The Environmental Advisor updates the register when necessary, using a number of sources including updates from Croner, Tarian and IEMA. The Grŵp 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.

Audits

2020-2021 Performance

The following audits were carried out in 2020-21

April 2021

Science, (Dolgellau); Category: Satisfactory

Hairdressing and Beauty Therapy (Dolgellau); Category: Satisfactory

Catering (Dolgellau); Category: Satisfactory

Arts and Ceramics (Dolgellau); Category: Satisfactory

Welding Workshop (Llangefni); Category: Satisfactory

Engineering (Marian Mawr, Dolgellau); Category: Satisfactory

Construction (Marian Mawr, Dolgellau); Category: Satisfactory

Marine Engineering (Hafan, Pwllheli); Category: Observation – larger spill tray needed for storage of oils – completed

Arts (Parc Menai, Bangor); Category: Observation – key required for chemical store cupboard, MSDS/COSHH sheets not on site - completed

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May 2021

Science, (Pwllheli); Category: Satisfactory

Science, (Bangor); Category: Satisfactory

Catering (Bangor, Friars); Category: Satisfactory

Hairdressing and Beauty Therapy (Bangor, Friars); Category: Satisfactory

Farm (Glynllifon); Category: Observation – a general tidy up of some areas required.

Engineering Workshop (Llangefni); Category: satisfactory.

Construction (Llangefni); Category: satisfactory

Engineering Workshop (Glynllifon); Category: satisfactory.

Automotive (Llangefni); Category: satisfactory

Biodiversity

2020-21 Performance

Each site in the Grŵp has a unique environment. The Rhos campus has developed a wild life break along one of its borders and there is a designated conservation area adjacent to the UCCL building; the Rhyl campus is next to a SSSI. Part of the Glynllifon campus is designated a SSSI and a Special Area of Conservation. Bat boxes have been put up in the woods on site. Llangefni (Pencraig) is bordered by farmland.

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

Hedgerows and trees have been planted at Glynllifon.

A College biodiversity Group has been set up comprising of interested staff with an aim to help improve the biodiversity of the College Campuses.

The Grŵp aims to increase the biodiversity of its sites where possible.

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Renewables

2020-21 Performance

The Renewable Technology Unit is based at Rhos and at Llangefni. The available technology includes:

Photovoltaic cells, solar water heating and wind turbines.

The MBEC building utilises solar power for electricity production and water heating.

The UCCL building at Rhos campus and Canolfan Cefni at the Llangefni campus both use solar panels for energy production.

The PA@G building at Glynllifon utilises solar power for electricity production and a woodchip boiler is used for heating the building.

The Technology building at Llangefni uses ground source heating, and solar panels for energy.

A 100KW Photovoltaic cell panel has been installed on the new roof at the Sports Centre at Rhos campus during the Summer of 2020

Two x 50KW photovoltaic cell panels were installed on MBEC and Colwyn roofs on Rhos site in the Summer of 2021.

Two x 50KW Photovoltaic cell panels were installed on Rhyl college roofs in the Summer of 2021.

Electric Vehicle car charging points have been installed on the Rhos and Llangefni campuses.

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Community

2020-21 Performance

The Grŵp encourages students to take part in community activities. Due to the on-going coronavirus pandemic, most community activities usually undertaken by the students were cancelled due to the lockdown and social distancing.

In 2020-21, the activities which were carried out included:

1. Llandrillo Sport and Public Services students have undertaken litter picking on local beaches, the Great Orme and Snowdonia National Park
2. Llandrillo Sport and Public Services Students have carried out path building and repairs in Snowdonia National Park
3. Llandrillo ILS students have carried out litter picking on the Llandrillo Campus and surrounding areas.
4. Llandrillo ILS students have planted 1trees donated to them by the Woodland Trust
5. Llandrillo Health and Care students held a Christmas toy appeal for North Wales Superkids in Rhyl
6. A member of staff participated in March the Month by walking every day in March 2021 and raising money for Prostate Cancer
7. Members of the Environmental Focus Group carried out litter picks at the Rhos campus by the stream.

Environmental Focus Group

2020-21 Performance

Regular meetings are held of the cross network Environmental Focus Group, which is chaired by the Executive Director Corporate Services. This group reviews environmental issues and elicits support for behavioural changes at all sites.

The Environmental Focus Group reports to the SHE Committees.

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Communications

2020-21 Performance

Communication is an important part of the EMS. 'Y Llais' is a monthly newsletter emailed to all staff. Regular environmental items feature in the newsletter. An Environmental Handbook, which outline environmental issues at the Grŵp, reports on the previous year's results and suggests how staff can help improve the Grŵp's performance.

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.

A communications register is kept by the SHE department which records any environmental queries or suggestions from staff, students or the general public and what action has been taken.

New staff are given environmental awareness training at induction by the Safety, Health and Environmental Team.

Future Goals

The Grŵp will continue to meet the requirements of Level 5 Green Dragon Standard.

The Grŵp will continue to reduce its environmental impacts and will continue to improve its environmental performance.

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

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Objectives and Targets 2021-22

Due to the Coronavirus pandemic, the savings achieved in 2020-21 in electricity use, transport, water use, paper usage and greenhouse gas emissions are in excess of what would normally be reasonably achievable and therefore not reflective of a 'normal' year.

The targets for 2021-22 therefore have been set again using the 2018-19 data but will take into account the targets that should have been achieved in 2019-20 and 2020-21 and the additional targets that would normally have been set in 2021-22. The exception to this will be the target set for gas usage. Due to measures taken to help control the spread of Covid-19, windows are opened to allow a flow of fresh air whilst simultaneously adequate heating is required to keep rooms at a comfortable temperature. The target for 2021-22 for gas usage has therefore been set to maintain or reduce the gas usage in 2021-22 to that of 2020-21.

Objective: To reduce carbon emissions due to the use of electricity

Target: To reduce the use of electricity by 3% based on 2018-19 data

Objective: To reduce carbon dioxide emissions due to the use of gas.

Target: To maintain or reduce the gas usage at all sites based on 2020-21 data

Objective: To reduce carbon emissions due to the use of LPG

Target: To reduce to the use of LPG at Glynllifon by 3% based on 2018-19 data

Objective: To reduce carbon emissions due to travel on Grŵp business

Target: To reduce miles travelled on Grŵp business by 3% of 2018-19 mileage.

Objective: To reduce carbon emissions due to travel to work

Target: To continue to promote the cycle to work scheme.

Objective: To reduce the Grŵp's impact on resource use

Target: To reduce the amount of water used by 3% based on 2018-19 data

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Objective: To reduce the Grŵp's impact on the use of resources
Target: To reduce the quantity of paper used by 3% based on the 2018-19 data

Objective: To reduce the Grŵp's impact on resource use.
Target: To maintain the quantity of waste recycled to 99% of the total amount of waste produced at the Coleg Llandrillo sites, to 55% at the Coleg Meirion Dwyfor sites and 96% at Coleg Menai sites.

Objective: To reduce the Grŵp's impact on resource use.
Target: To reduce the amount of waste produced on all sites by 10% of the 2018-19 data

Objective: To reduce the Grŵp's impact on climate change
Target: To continue planting of hedgerow and mixed woodland trees by Aug 2022 and onwards.

Objective: To increase the level of Environmental Awareness amongst staff
Target: Online Environmental Awareness training to continue to be rolled out to staff. Staff Environmental Awareness Handbook to be updated and issued to staff annually.

Objective: To engage with and contribute to the local community.
Target: Grŵp's staff and learners to carry out at least 35 activities in which learners utilise their skills in their local community in 2021-22.

Objective: To reduce the Grŵp's impact on climate change
Target: To reduce Greenhouse Gas Emissions from the buildings' energy use, transport and livestock by 6% based on the 2018/19 data.

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Environmental Statement/Report Validation

The information contained within this Environmental Report has been sampled and validated by the Green Dragon auditor and found to be a fair and accurate assessment of the organisations activities and environmental performance over the past year within the organisations defined scope.

Lead Auditor: Robert Williams

Auditing Organisation: Groundwork Wales

Date of audit:

Valid until:

Validation of the Environmental Report does not confirm certification of the organisations Environmental Management System to the Green Dragon Standard. Confirmation of certification can be made by obtaining a copy of the organisations valid Green Dragon certificate or visiting the Green Dragon website at www.greendragonems.com.

Dilysiad y Datganiad/yr Adroddiad Amgylcheddol

Mae'r gwybodaeth sydd wedi ei gynnwys yn y Datganiad/ yr Adroddiad yma wedi ei brofi a'i ddilysu gan archwiliwr y Ddraig Werdd ac mae'r gwybodaeth yn asesiad teg a chywir o weithgareddau a prefformiad amgylcheddol y sefydliad tros y flwyddyn diwethaf sydd oddifewn i sgôp diffiniedig y sefydliad.

Archwiliwr Arweiniol: Robert Williams

Sefydliad Archwilio: Groundwork Cymru

Dyddiad yr Archwiliad:

Dilys Tan:

Nid yw dilysu'r Datganiad/Adroddiad yn cadarnhau ardystiad y Sustem Rheoli Amgylcheddol yn erbyn Safon y Ddraig Werdd. Fe all gael cadarnhad o ardystiad drwy gael copi dilys o dystysgrif Draig Werdd y sefydliad neu drwy ymweld â safle we'r Ddraig Werdd yn www.greendragonems.com