University of Glamorgan

SUSTAINABILITY

ASPECTS REGISTER

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AUTHORISATION AND AMENDMENT CONTROL SHEET

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23/08/01	3	0	18, 19	Additional data, repagination	MWJ
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27/06/05	7	0	All	New section 14 and general updating	MC
02/05/06	7	1	2 5-9 19	 Statistics updated Update teaching data	MC
02/03/09	8	0	All	General Updating	MC
19/10/10	9	0	All	Updated Sections 1, 2, 3, 5, 6, 9, 12, 13, 14, 16, 17 & 18. Changed wording for ranking of aspects on all sections	DW
21/06/11	10	0	All	Updated all sections to capture the change from Environmental Management to Sustainability Management. Added new chapters: Fairtrade; Sustainable Development; Community; Cleaning; Storage, Handling and Use of Hazardous Substances.	DW
13/07/11	10	1	1	Corrected logo	

Contents

Introduction

This Register defines the Environmental and Sustainability Aspects which apply to the University of Glamorgan.

The Significance of each aspect has been estimated to determine its relative importance, and whether it is beneficial or detrimental or detrimental to the environment.

The definitions used in determining the importance of the Environmental and Sustainability Aspects are as follows:

Normal	This includes all normal operations occurring on site.
Abnormal	This includes reasonably foreseeable situations that do not involve the emergency services.
Emergency	This includes any incident that does or could involve the emergency services.

Each aspect defined in the Aspects Register has been rated against each definition. Note that all the definitions may not always apply, e.g. some aspects may never create abnormal or emergency conditions; other aspects may only come into play if there is an emergency.

Relative Importance of Environmental Aspects

An environmental aspect can be either beneficial or detrimental in its impact on the environment.

In the tables below, beneficial aspects have been given a positive Significance factor leading to a positive impact, and detrimental aspects have been given a negative Significance factor leading to a negative impact.

The relative impact is calculated using the following equation:

Impact = Frequency of occurrence x Significance using the following scale:

Frequency of Occurrence	
Description	**Factor**
Unlikely (less than once a year)	1
Common (monthly/several times a year)	2
Frequent (daily/weekly)	3

Significance		
Description	**Beneficial Factors**	**Detrimental Factors**
Minimal environmental or sustainability impact	+1	-1
Low environmental or sustainability impact	+2	-2
Moderate environmental or sustainability impact	+3	-3
High environmental or sustainability impact	+6	-6
Severe environmental or sustainability impact	+10	-10

'Significance' takes into account the following:

- The scale of the operation
- The impact of the operation
- If prosecution because of failing to observe the law will have an adverse effect on the University's finances or reputation, a higher detrimental Significance rating may be justified than that which would be related to the environmental or sustainability impact on its own.

The Aspects Register and the significance of aspects is reviewed at least annually, usually as part of the annual environmental audit, and also if there is any significant change to activities, equipment or operational practices. Note is also taken of any incidents or complaints.

Traffic Light System

The following traffic light colour coding is used for the Impact Ranking of Environmental and Sustainability Aspects, within the Impact Ranking table (on the next page).

The aspects highlighted in red are those that are deemed to have a negative impact by the company.

The aspects highlighted in yellow have a detrimental impact on the environment but have not been deemed significant.

The aspects highlighted in green are those which have a positive impact.

Summary

IMPACT RANKING OF ENVIRONMENTAL & SUSTAINABILITY ASPECTS

Aspect		Impact – Normal			Impact – Abnormal			Impact – Emergency		
		Freq	Signifi-cance	Impact	Freq	Signifi-cance	Impact	Freq	Signifi-cance	Impact
Electricity Usage		3	-3	-9	-	-	-	-	-	-
Gas usage		3	-3	-9	-	-	-	-	-	-
Water		3	-1	-3	1	-1	-1	-	-	-
Effluents	Domestic Sewage	3	-1	-3	-	-	-	1	-3	-3
	Spillages	-	-	-	1	-6	-6	1	-10	-10
	Use of Fertilisers	1	-2	-2	1	-2	-2	1	-3	-3
	Use of Pesticides	1	-2	-2	1	-3	-3	1	-3	-3
Hazardous Substances		3	-1	-3	1	-6	-6	1	-10	-10
Wastes		3	-2	-6	-	-	-	-	-	-
Recycling		3	+3	+9	-	-	-	-	-	-
Fire		-	-	-	-	-	-	1	-10	-10
Cleaning		3	-1	-3	1	-1	-1	1	-3	-3
Housekeeping		3	-1	-3	-	-	-	-	-	-
Traffic		3	-2	-6	2	-3	-6	-	-	-
Own Vehicles		3	-1	-3	-	-	-	-	-	-
Paper usage		3	-3	-9	-	-	-	-	-	-
Teaching		3	+3	+9	-	-	-	-	-	-
Sustainability and Environmental Awareness		3	+3	+9	-	-	-	-	-	
Research		3	+3	+9	-	-	-	-	-	-
Wildlife Conservation		3	+3	+9	1	-1	-1	1	-3	-3
Community		3	+1	+3	-	-	-	-	-	-
Fairtrade		3	+2	+6	-	-	-	-	-	-
Sustainable Development		3	+3	+9	-	-	-	-	-	-
Suppliers & Subcontractors		3	+1	+3	2	-2	-4	1	-6	-6
Noise		3	-1	-3	2	-3	-6	-	-	-
Ozone Depleting Emissions to Air		-	-	-	1	-3	-3	1	-6	-6
Flood		-	-	-	1	-3	-3	1	-6	-6

1 Electricity

1. Aspect

Electricity generation consumes natural resources (oil, gas, coal) and creates atmospheric emissions CO_2 , SO_2 etc. CO_2 emissions can lead to inexplicable detrimental impacts via increased greenhouse effects while SO_2 emissions can lead to acid rain that has detrimental effects on wildlife, soil, water resources, buildings and machines.

Generating one kWh of electricity produces approximately 0.54kg of CO_2.

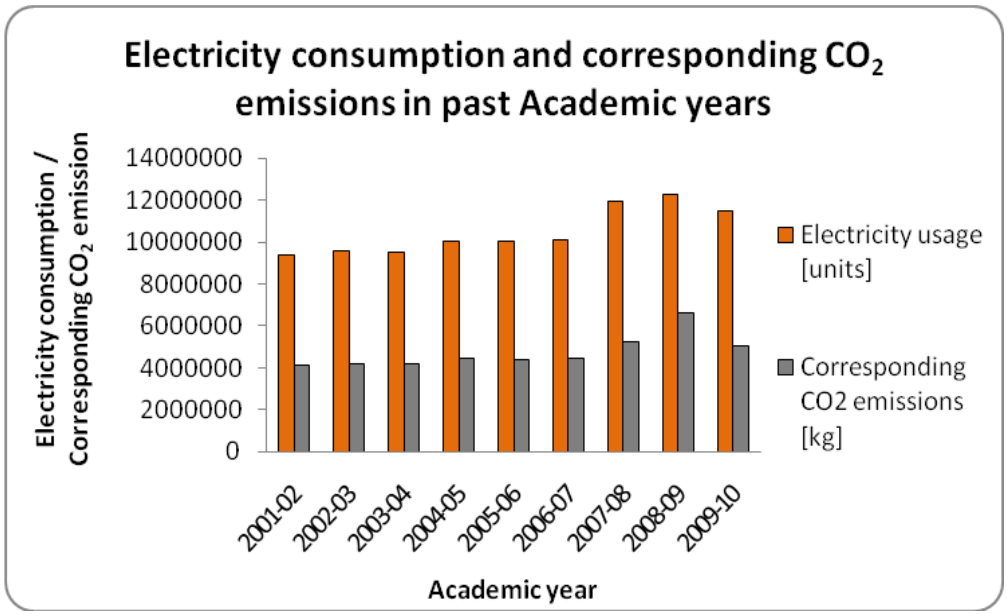
Note the government has imposed a climate change levy of 0.47p per kWh.

2. Source of aspect

Electricity is used in all the University's buildings and campuses. Significant users are lighting, computers, air-conditioners and refrigerators used in laboratories and for catering.

3. Impact

Comparative usage data for the whole University is available from the academic year 2001 – 2002, as follows:



Source: HEMS data.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-3	-9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

The chart presented above accounts for the actual consumption information but does not provide details for changes in opening hours, expansion of facilities newly built or changes in the number of staff and students, all of which inevitably increases electricity consumption.

Since October 2000 a programme has been run by the Sustainability Manager to:

- Identify electricity usage by building
- Create and implement programmes to reduce consumption.

The university learning centres provide 24 hour access, to meet the increased need for use of technology and computers.

6. Procedures

Handbook Chapter 12 “Energy”

7. Cross reference to Register of Legislation

9 Energy

2 Gas

1. Aspect

Gas and oil are natural resources and are therefore limited in the long term. Burning them generates atmospheric emissions, principally CO_2, which accumulates in the atmosphere as a greenhouse gas and can lead to global warming.

A kWh of gas is equivalent to 0.20 kg of CO_2. (Note that a kWh of electricity is equivalent to 0.54 kg of CO_2 and is more expensive, which makes gas the preferred option when a choice is feasible.)

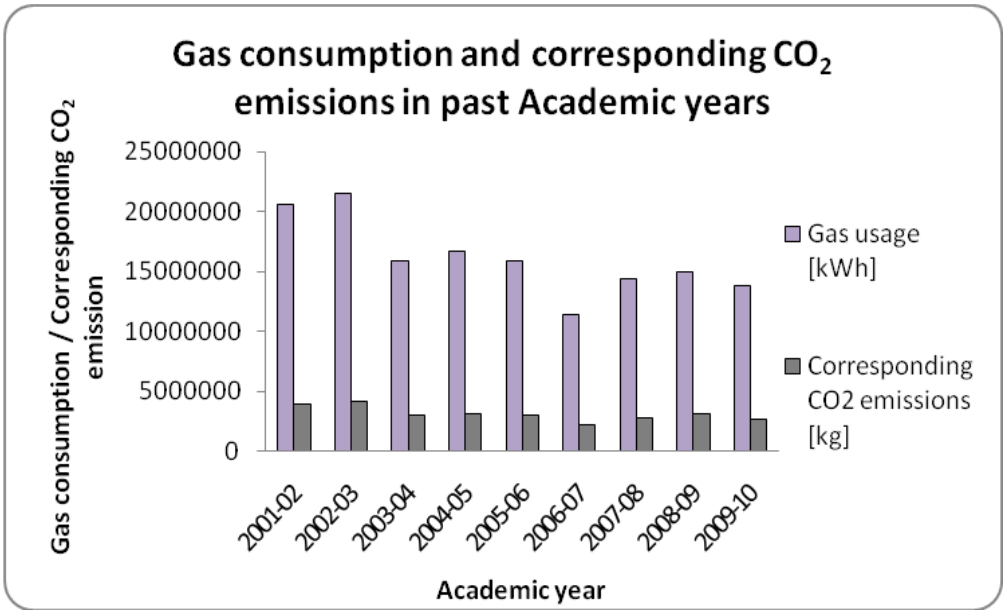
Note the government's imposition of a climate change levy, at 0.164p per kWh for gas.

2. Source of aspect

Gas is used in the boilers for space and water heating.

3. Impact

Comparative usage data for the whole University is as follows:



Source: HEMS data.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-3	-9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

The chart presented above accounts for the actual consumption information but does not provide details for changes in opening hours, expansion of facilities newly built or changes in the number of staff and students, all of which inevitably increases gas consumption, used for heating.

The reduction from 2002-3 to 2003-4 was brought about by greater utilisation of the BMS (Building Management System) facility. Since 2006 -2007, there has been a programme of replacing small inefficient boilers with condensing boilers. A & B block boilers have also been replaced.

Remember that a 1°C reduction in room temperature can save 8-10% of the associated heating bill.

In 2008/2009 gas use was higher due to 24 hour opening of learning centres, increased use of heating.

6. Procedures

Handbook Chapter 12 “Energy”.

7. Cross Reference to Register of Legislation

9 Energy

3 Water usage

1. Aspect

Water is a natural resource that is essential for the sustenance of all species. Due to ever increasing demands and periodic dry spells water shortages can occur.

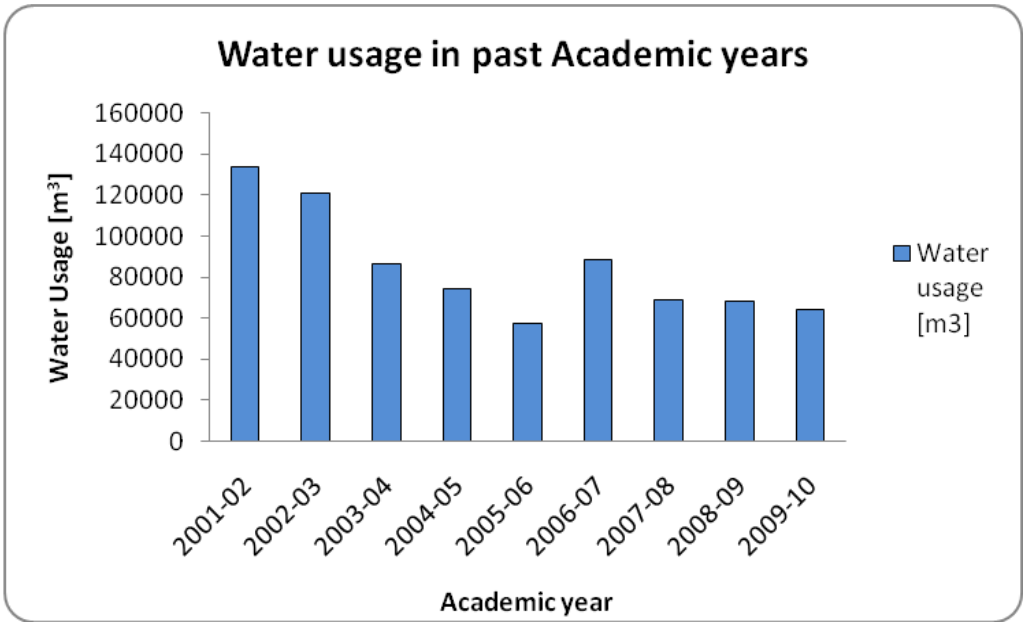
2. Source of aspect

Water is mainly used for domestic purposes. Some water is used in teaching practicals.

Laundrettes are operated on site.

3. Impact

Comparative usage data for the whole University, excluding Llantwit Road and Forest Grove where fixed charges are levied, is available from the year August 2001 – July 2002, as follows:



Source: HEMS data.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	1	-1	-1
Emergency	-	-	-

5. Comment

The reduction from 2002-3 to 2004-5 was brought about by further installation of water conservation measures and regular inspection and maintenance to prevent waste. This is an ongoing project as buildings are refurbished.

The increase in 2006 – 2007 was largely triggered by a change in the control measures for legionellosis which require greater volumes of hot water to be boiled through the water distribution paperwork.

6. Procedures

Handbook Chapter 13 “Water”.

7. Cross reference to Register of Legislation

None

4 Effluents

1. Aspect

Disposal of effluents to sewer and site drains and site run-off.

2. Source of aspect

- Domestic effluents to sewer.
- Surface water is channelled to the site drains, and thence to the river Taff.
- There are no other regular effluents.
- Uncontained spillages of diesel, oils and solvents could reach the site drains.
- Use of fertilisers and pesticides.
- Laundrettes are operated on site.

3. Impact

Any spillage of oils or solvents entering the site drains will ultimately pollute the river Taff.

Any fertiliser and pesticide run-off would reach the river Taff.

4. Impact Ranking

Domestic sewage

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	-	-	-
Emergency	1	-3	-3

Spillages

	Frequency	Significance	Impact
Normal	-	-	-
Abnormal	1	-6	-6
Emergency	1	-10	-10

Use of fertilisers

	Frequency	Significance	Impact
Normal	1	-2	-2
Abnormal	1	-2	-2
Emergency	1	-3	-3

Use of pesticides

	Frequency	Significance	Impact
Normal	1	-2	-2
Abnormal	1	-3	-3
Emergency	1	-3	-3

5. Comment

None

6. Procedures

Handbook Chapter 3 “Waste Handling and Storage”

Chapter 7 “Drains and the Nant-y-Fforest”

Chapter 11 “Suppliers and Contractors”

7. Cross Reference to Register of Legislation

3 Effluents from site

5 Storage, Use and Handling of Hazardous Substances

1. Aspect

Storage and use of dangerous or polluting substances must be secure to avoid spillages which could lead to Environmental damage.

2. Source of aspect

Storage and handling for use of gases, fuels, chemicals (including solvents, pesticides, herbicides) or hazardous wastes.

3. Impact

Spillages of hazardous substances can contaminate land, water courses or the atmosphere.

Spillages to drain could ultimately contaminate River Taff.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	1	-6	-6
Emergency	1	-10	-10

5. Comment

Hazardous substances are stored in secure stores and relevant staff members are trained in safe handling, use and disposal of these.

6. Procedures

Handbook Chapter 3 “Waste Handling and Storage”

Chapter 8 “Handling Pollution Incidents”

Chapter 17 “Environmental Awareness and Training”

7. Cross reference to Register of Legislation

Storage on site

6 Wastes

1. Aspect

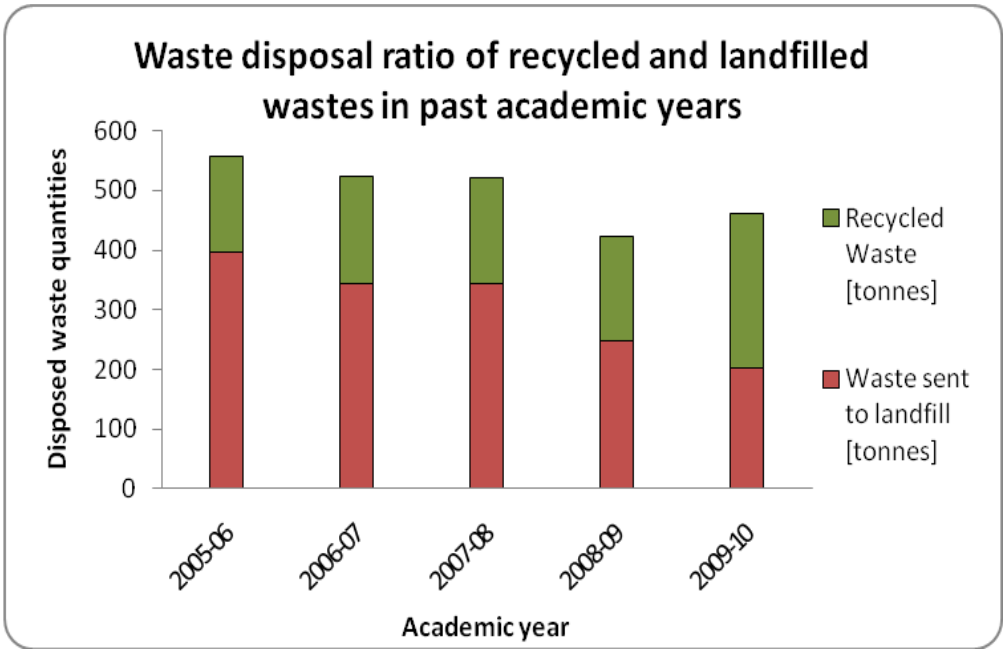
Creating waste is a waste of resources. The disposal of waste is often to landfill and is a potential land pollutant. Organic wastes in landfill generate methane which filters up into the atmosphere as a greenhouse gas.

2. Source of aspect

Wastes and rubbish generated across all campuses and halls of residence which are not segregated for recycling. Other wastes are:

- Waste chemicals, oils etc.
- Sanitary wastes, sharps etc. (Note: This includes approximately 600 nappies per week from the Crèche.)

3. Impact



4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-2	-6
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

Opportunities for further recycling are currently being reviewed.

6. Procedures

Handbook Chapter 2 “Disposing of General Waste”

Chapter 6 “Disposing of Hazardous Waste”

Chapter 11 “Suppliers and Subcontractors”

7. Cross reference to Register of Legislation

1 Disposal of controlled wastes

2 Disposal of hazardous wastes

7 Recycling

1. Aspect

If it is not possible to avoid creating wastes, every effort should be made to promote recycling as a means of reducing the consumption of virgin resources.

2. Source of aspect

Waste arisings, especially paper, cardboard, metallic scrap, cans, toner cartridges, IT equipment.

3. Impact

Currently recycling facilities have been set up for: paper, cardboard, toner cartridges, mobile phones, IT equipment, glass, cans, furniture, clothing, books, metal, wood, fluorescent tubes. The impact has been to reduce the cost of waste disposal to landfill by approximately £23,000 per annum.

Recycling in the academic year of 2009 – 2010 was:

ITEM	WASTE TONNES
Compactor	160.460
Skip waste	41.840
Glass	21.390
Cardboard	17.360
Paper	136.730
Cans	2.892
Toner	4.144
Wood pallets	0.000
WEEE	9.023
Furniture	6.600
Metal	5.000
Plastic	1.030
White goods	0.000
Clinical	1.183
Cooking oils	2.740
Florescent tubes	0.413
Hazardous	18.360
Waste fixer	6.000
Composting	6.000
Mulch	20.000
Spectacles	0.003
TOTAL WASTE	**461.170**
TOTAL RECYCLED	**258.870**

During the academic year of 2009-2010, 56% of the total waste arising was recycled, compared to 41% in 2008-2009 and 34% in 2007-2008.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

The need for expansion in recycling facilities is currently being reviewed.

6. Procedures

Handbook Chapter 4 “Recycling”

7. Cross reference to Register of Legislation

None

8 Fire

1. Aspect

Fire can release noxious smoke and particulates which will spread to the neighbourhood.

Firemen's water can become contaminated with substances released by the fire and combustion products and can enter site drains which might be overwhelmed, leading to pollution of water courses.

2. Source of aspect

Fire in any part of the campuses, but particularly the older buildings e.g. A Block Annexe.

3. Impact

Apart from the danger to life and destruction of buildings and goods, a fire could pollute the atmosphere and neighbourhood, and water could pick up pollutants and enter the surface drains leading to river pollution.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	-	-	-
Abnormal	-	-	-
Emergency	1	-10	-10

5. Comment

None

6. Procedures

Handbook Chapter 8 "Handling Pollution Incidents"

Chapter 17 "Environmental Awareness and Training"

7. Cross reference to Register of Legislation

3 Effluents from site

9 Cleaning

1. Aspect

Cleaning substances contain chemicals that could be harmful to human health or to the aquatic environment in the event of an accidental release.

Phosphates can cause entrophication, thereby upsetting the balance of nutrients in streams and rivers.

Many products contain enzymes, bleaches, brighteners and perfumes. Such chemicals may aggravate allergies.

2. Source of impact

The purchasing, use and storage of cleaning products across the campus.

3. Impact

The University uses large quantities of cleaning products each year.

Staff could use incorrect quantities of chemicals if not properly trained.

Spillages of cleaning materials may occur if they are not stored correctly.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	1	-1	-1
Emergency	1	-3	-3

5. Comment

The control over dilution and mixing of chemicals will impact on the University's Sustainability performance. Cleaners are therefore trained in the correct techniques.

6. Procedures

Handbook Chapter 17 "Environmental Awareness and Training

7. Cross reference to Register of Legislation

None

10 Housekeeping and site appearance

1. Aspect

The visual aspect of the campuses and buildings, both externally and internally, has an impact on the environmental attitudes and sustainability awareness of all members of staff, and influences the opinions about the organisation of visitors, especially staff, students and regulators.

2. Source of aspect

Capital works undertaken to improve the appearance of the campuses.

Actions of all staff and students regarding keeping the campuses tidy.

3. Impact

The visual impact of the site not only influences staff and visitors in a general way, but is an indication of the University's attitude towards the environment and sustainability.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

There has been a steady programme of improvements to the appearance of the site over recent years, which has included cladding buildings and road and landscaping improvements.

The programme is ongoing on a year by year basis.

6. Procedures

Good housekeeping and care of the campuses etc is a basic duty for all staff and students.

7. Cross reference to Register of Legislation

None

11 Traffic and Transport

1. Aspect

Traffic to and from the site can cause nuisance and pollution in the neighbourhood.

2. Source of aspect

Students' and staff cars to and from the University, and the associated need for parking space.

Lorries and vans delivering goods etc.

Visitors, especially on open days.

3. Impact

Each campus experiences a high number of traffic in and out of site that occasionally has a major impact on local traffic conditions. The local police department is aware of the situation and has been working with the university to overcome the issue.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-2	-6
Abnormal	2	-3	-6
Emergency	-	-	-

5. Comment

The overall targets set in the Travel plan for 2003 – 2008 were not met and the Travel Plan for 2010 – 2015 has set challenging but realistic targets. Trends for each campus have been identified with new targets and action plans.

Details are contained within the Travel Plan (e.g. shuttle buses, cycle routes and car sharing).

Shuttle buses are utilised for a more sustainable way of commuting to and between campuses.

6. Procedures

Handbook Chapter 14 "Traffic and Transport"

2010 – 2015 Travel Plan

7. Cross reference to Register of Legislation

None

12 University-owned vehicles

1. Aspect

Vehicles consume petrol or diesel and generate CO_2, SO_2, NO_x, particulates etc., use natural resources and cause atmospheric pollution, in particular adding to the greenhouse effect.

Disposal of end-of-life vehicles and tyres are major environmental issues.

2. Source of aspect

The University has a fleet of 12 cars, 21 vans, 2 minibuses and 3 tractors. Additional vehicles are hired on a regular basis.

3. Impact

For a typical car of 1.6 litres engine capacity, typical emissions would be 0.30 kg CO_2 per mile (petrol) or 0.26 kg CO_2 per mile (diesel). Diesel transport vehicles will produce emissions of 2.63 kg CO_2 Per litre of diesel fuel consumption.

(Note: the cost to the University of vehicle excise duty for new vehicles is related to the vehicle's emissions index, from April 2001.)

Used tyres and end-of-life vehicles should be disposed of responsibly. Car tyres cannot be sent to landfill – they must be recycled - and there are targets in place for recycling of end-of-life vehicle components.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

Emission levels and tyre usage depends on tyre quality and how well a car is driven.

6. Procedures

None

7. Cross reference to Register of Legislation

None

13 Paper usage

1. Aspect

Paper manufacture consumes trees, water and bleaching chemicals.

2. Source of aspect

Purchases of paper for teaching purposes, computers, office use etc.

3. Impact

Approximate paper usage of paper sheets:

Year	Total sheets	standard tree equivalent[l]
2006-2007	12,526,500	501.1
2007-2008	11,655,000	466.2
2008-2009	11,288,500	451.5
2009-2010	10,445,500	417.8
2010-2011		

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-3	-9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

The University now takes into account the sustainability sourcing of paper when deciding on its purchasing policy, e.g. does the paper come from managed forest, recyclate etc.

The reduction is due to the introduction of double sided printing and the increasing use of the Blackboard facility and the use of CD ROMs to transmit teaching materials.

[l] Paper/tree equivalence deduced from data in : Marks and Spencer plc *The Environment* 1997

The use of recycled paper for brochures is currently being investigated by prototype printings at Reprographics.

6. Procedures

None

7. Cross reference to Register of Legislation

None

14 Teaching

1. Aspect

Teaching of environmental and sustainability studies.

2. Source of aspect

The University promotes the teaching of environmental and sustainability studies at both undergraduate and postgraduate level, thus equipping students with environmental and sustainability knowledge.

3. Impact

The following courses for 2011 contain a sustainability or environmental component:

Faculty	Course Description
AT	Beng (Hons) Building Services Engineering
	BEng (Hons) Civil Engineering
	BSc (Hons) Project Management [Construction]
	Foundation Degree Construction Technology and Management
	HNC Construction Technology and Management
	HNC Engineering (Civil)
	HND Engineering (Civil)
	MSc Civil and Structural Engineering
	MSc Civil Engineering and Environmental Management
	MSc Environmental Management
	MSc Occupational Safety, Health and Environmental Management
	MSc Safety, Health and Environmental Management
	MSc Sustainable Business Risk Management
	MSc Total Quality
HESAS	BA (Hons) Human Geography
	BSc (Hons) Geography
	BSc (Hons) Geology
	BSc (Hons) Geology and Physical Geography
	BSc (Hons) Geology with Physical Geography
	BSc (Hons) Physical Geography
	BSc (Hons) Physical Geography with Geology
	MSc Environmental Conservation Management
	MSc Renewable Energy and Resource Management

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

The university is working together with students to identify weak areas within its management system by providing the opportunity of auditing the university as part of certain course assessments. The findings are reviewed and addressed by the Sustainability Manager and the Estates Department.

6. Procedures

Management System Manual Appendix 1

Handbook Chapter 17 “Environmental Awareness and Training”

7. Cross reference to Register of Legislation

None

15 Sustainability and Environmental Awareness

1. Aspect

Knowledge of sustainability and environmental issues and practices amongst staff and students and other institutions and organisations.

The level of sustainability and environmental awareness amongst the University's staff and students is an aspect which needs to be continually developed.

2. Source of aspect

Participation of University Staff and students in raising the sustainability and environmental awareness of others.

3. Impact

As awareness increases, good sustainability and environmental performance should also increase.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

None

7. Procedures

None

8. Cross reference to Register of Legislation

None

16 Research

1. Aspect

Academic research into sustainable and environmental topics.

2. Source of aspect

The University promotes research into sustainability and environmental topics, in both the Faculty of Advanced Technology and the Faculty of Health, Sport and Science.

3. Impact

The following research activities are recorded in the Postgraduate Prospectus for 2011:

Engineering Research Centre

- Recycled construction materials
- Combustion and heat transfer

Sustainable Environment Research Centre

- Waste treatment
- Sustainable production of energy (e.g. from sewage)

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

None

6. Procedures

None

7. Cross reference to Register of Legislation

None

17 Wildlife

1. Aspect

The campuses, surrounding woodland and playing fields present an opportunity to encourage wildlife.

2. Source of aspect

See Section 1.

3. Impact

Policies are adopted to conserve, and improve, natural habitats.

4. Impact Ranking

Conservation

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	1	-1	-1
Emergency	1	-3	-3

5. Comment

The tunnel on the main campus is a bat habitat. Bats are further encouraged by placing bat boxes on buildings and trees.

Birds, ladybirds, lacewings and bees are similarly encouraged by placing boxes etc in suitable locations.

June 2005 – an inventory of birds, residents and visitors, has been compiled.

Land suitable for planting as wild flower meadows is being identified.

The use of pesticides and herbicides has been reduced around the margins of the playing fields so that trees, shrubs and grasses can develop more naturally. Woodpeckers were seen in year 2000. Other wildlife is also increasing.

A biodiversity survey was carried out by the Countryside Council of Wales in 2005 and in 2009.

A Woodland Walk conservation area has been opened on 23rd July 2010, this is a fully sustainable site with a large variety of wildlife which can be used by all staff and students.

6. Procedures

Handbook Chapter 15 “Wildlife and Grounds”

7. Cross reference to Register of Legislation

12 Wildlife

18 Community

1. Aspect

Involvement in community activities which relate to the environment.

2. Source of aspect

Management's desire to assist the community around the site, where many employees are resident.

3. Impact

The university is working together with local producers and service providers wherever it is possible.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+1	+3
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

Locally sourced products are considered.

6. Procedures

None

7. Cross reference to Register of Legislation

None

19 Fairtrade

Organisations, particularly in the public sector, regard Fairtrade as an Sustainability benefit. In the university sector, the People and Planet league tables include Fairtrade as one of the criteria.

More info on www.fairtrade.org.uk. Particularly follow the links Get Involved>Campaigns>Universities>5 goals.

1. Aspect

Sourcing of food products.

2. Source of Aspect

Encouraging responsible farming in developing economies

3. Impact

Proper farming will help preserve the integrity of the land, and assist the farmers.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+2	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comment

Fairtrade products are sold throughout the university shops and provided for catering purposes.

6. Procedures

None

7. Cross reference to Register of Legislation

None

20 Sustainable Development

1. Aspect

BS8900 defines sustainable development as "an enduring balanced approach to economic activity, environmental responsibility and social progress".

2. Source of Aspect

The University's commitment to sustainable development contributes to the promotion of continuing and lasting success.

3. Impact

By embracing the concept sustainable development, the University is making decisions that promote continuing and lasting success.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+3	+9
Abnormal	-	-	-
Emergency	-	-	-

5. Comments

The University is in the process of adopting a new approach to take forward the sustainability agenda. The agenda has significance for:

- Learning and teaching, academic research and scholarship.
- Management of the University's estate, procurement policies, travel and transport arrangements, learning facilities and student support.
- Engagement with local and regional organisations (both public and private sector).
- Engagement with faith and issue groups across the region, and the range of national, international and virtual communities with which it interacts.
- Commitment to transformation and developing opportunities for renewal, adaptive capacity and innovation.

6. Procedures

None

7. Cross reference to Register of Legislation

None

21 Suppliers and Subcontractors

1. Aspect

The suppliers and subcontractors used by the University will themselves cause environmental impacts. Some may be better or more responsible than others.

2. Source of aspect

Activities of suppliers and subcontractors.

3. Impact

The enquiry document to be sent to all potential civil engineering and maintenance sub-contractors will enquire about their environmental performance plans and environmental status achievements.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	+1	+3
Abnormal	2	-2	-4
Emergency	1	-6	-6

5. Comment

The University's standard conditions of contract for large and small civil engineering contracts contain environmental requirements which must be observed by the contractor.

6. Procedures

Handbook Chapter 11 "Suppliers and Contractors"

7. Cross reference to Register of Legislation

None

22 Noise

1. Aspect

Noise disturbs residents neighbouring the University's campuses.

2. Source of aspect

Glass being placed in recycling bins, especially at the Students Union.

Students rowdy behaviour in the streets and residences in the town.

The upper Glyntaff campus is very close to residential housing.

3. Impact

Most external complaints are regarding noise to Community Liaison e.g. noise from students living in private rental accommodation. The helpdesk records complaints, action and outcomes.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	3	-1	-3
Abnormal	2	-3	-6
Emergency	-	-	-

5. Comment

Whilst the University does its best to influence student behaviour in lodgings and the town generally, it has no authority off-campus. Persistent or serious incidents are the responsibility of the police.

The Student Union building recently constructed is rated as 'excellent' in terms of preventing noise pollution.

6. Procedures

Handbook Chapter 16 "Handling Enquiries and Complaints"

7. Cross reference to Register of Legislation

4. Statutory nuisance

23 Ozone Depleting Emissions to Air

1. Aspect

Emissions of volatile chemicals can pollute the atmosphere.

Certain chemicals, rising to the stratosphere e.g. fluorocarbons, may attack the ozone layer.

2. Source of aspect

LEV's attached to fume cupboards or other equipment venting to atmosphere.

Hydrofluorocarbons contained within air conditioning/ refrigeration units may contribute to ozone depletion, if allowed to escape.

3. Impact

The use of LEV's attached to fume cupboards or other equipment is limited.

Refrigerants are present on the sites. Should these escape whilst air conditioning/ refrigeration equipment is being maintained, serious damage to the environment will occur.

4. Impact Ranking

	Frequency	Significance	Impact
Normal	-	-	-
Abnormal	1	-3	-3
Emergency	1	-6	-6

5. Comment

Request of LEVs and equipment containing refrigerates are maintained in Estates & Facilities.

Air conditioning / refrigerators are maintained by a suitably qualified sub contractor.

6. Procedures

9. "Emissions to Air"

7. Cross reference to Register of Legislation

8. "Emissions to atmosphere"

24 Flood

1. Aspect

Severe flooding can be an environmental emergency. There is always a risk that the flood waters will pick up and carry substances which are pollutants

2. Source of aspect

The Treforest and Glyntaf campuses are situated on the steep sides of the Taff valley. The Treforest campus is particularly at risk from floods caused by blockages upstream of the campus, which are outside the control of the University.

3. Impact

Flooding can cause significant damage to local wildlife, buildings and operations.

4. Significance

	Frequency	Significance	Impact
Normal	-	-	-
Abnormal	-	-	-
Emergency	1	-6	-6

5. Comment

Two floods in 2008 flooded the visitor's car park, causing severe damage to vehicles and the security lodge, and to buildings on the William Price campus.

A flood emergency plan has been added to the Contingency Plan.

6. Procedures

8. Emergencies

7. Cross reference to Register of Legislation

None

25 Other Aspects

The following environmental aspects have been identified but are considered to be sufficiently minor not to warrant documentation:

- Contaminated land (see Register of Legislation)