

Aspects and Impacts – Determining Significance

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Version History

Version	Date	Purpose	Author	Review Due Date
1.0	01/2012	Original draft	Rose Rooney	01/2024
2.0	29/05/2012	Inclusion of ESD requirements as part of ISO14001 scope extension to cover curriculum	Rose Rooney	29/05/2014
3.0	01/12/2015	Changes to the Environmental aspects register to align with 14001:2015, changes to scoring, categories, significance.	Rose Rooney	01/12/2017
4.0	09/12/2020	Correction of page numbering	Rose Rooney	09-12-2022
5.0	04/10/2021	Change of title from EMS Manager to Sustainability Manager for Waste and EMS	Rose Rooney	04-10-2023
6.0	30/05/2025		Kasia Haywood	30/05/2027

1. Introduction

- 1.1 ISO 14001 requires the organisation to determine the environmental aspects of its activities, products and services that it can control and those that it can influence with their associated environmental aspects, considering a life cycle perspective and within the defined scope of the Environmental Management System (EMS).
- 1.2 A semi-quantitative system is used to rank environmental aspects into levels of significance using a ranking matrix.
- 1.3 The procedure involves gaining an understanding of the University's processes, materials and services taking into account normal, abnormal and potential emergency conditions.
- 1.4 The 'Environmental Aspects' register will be reviewed at least annually or as required to consider emerging historical and future implications, audits, complaints and changes to regulations and legislation. This review will be carried out by the Sustainability Manager (Scope 3) in collaboration with specialists in each area of the institution.

2. Environmental Aspect

- 2.1 The definition for environmental aspect is as stated in the ISO 14000 series of standards as an 'element of an organisation's activities or products or services that interacts or can interact with the environment'.
- 2.2 When determining environmental aspects of activities, products and services, the following are taken into account:
 - Areas of control and influence
 - Current activities
 - Change in activity, such as planned or new developments, new or modified activities, products and services
 - Abnormal, normal and foreseeable emergency situations
 - Life cycle perspective

3. Environmental Impact

3.1 An impact is defined in ISO 14001 as ‘any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation’s environmental aspects’.

3.2 These are associated environmental impacts arising from any change to the environment, whether adverse or beneficial, wholly or partly resulting from the University’s organisational operations in the form of activities/services/products. Environmental impacts to be considered are included in Table 1.

Table 1 – University of Bristol environmental impacts

Environmental aspect (cause)	Description of environmental impact (effect) using a life cycle perspective.
Use of raw materials and natural resources	Depletion of natural and finite resources
Disposal in/on land	Degradation of land/soil associated with disposal of general waste, hazardous waste, contamination issues
Use of water	Depletion of natural and finite resources; drought, water scarcity
Discharges to water	Contamination of waterways and sewers associated with discharges of dangerous substances, slurry, BOD/COD, total suspended solids
Emissions to air	Reduction of air quality associated with emissions of pollutants including: greenhouse gases, acidifying gases, ozone depleters, VOCs (from energy generation, heating, air condition and transport
Energy consumption	Depletion of natural and finite resources
Statutory nuisance	Disruption to quality of life/working condition: noise, vibration, odours, littering, dust, smoke, traffic, light/glaring, visual impact, physical hazard,

4. Significance Assessment

4.1 The Sustainability Manager and relevant stakeholders assess the significance of each aspect. The identified environmental aspects/impacts are categorised and scored according to Table 2 and equation below.

Consequence (A+ B + C + D) X Likelihood (Z) = Significance evaluation score

Table 2 – Significance Evaluation

Consequence			
A	Environmental legislation and corporate Policy	Is there any legislation affecting the aspect?	Score
		The aspect is covered by legislation & Policy	3
		The aspect is covered by legislation	2
		The aspect is covered by Policy	1
		The aspect is not covered by legislation or Policy	0
B	Stakeholder concern / interest	What stakeholder concern or interest does the stakeholder raise	Score
		The aspect raises considerable global, national and local interest or would have serious detrimental effect on the reputation of the University	3
		The aspect raises some interest and may have some detrimental effect on the reputation of the University	1
		The aspect raises no interest and would have no effect on the company's reputation	0
		The aspect raises some interest and may have some positive effect on the reputation of the company	-1
		The aspect raises global, national and local interest or would have a significant positive effect on the reputation of the company	-3
C	Environmental Impact	What is the environmental impact of this aspect?	Score
		The aspect has a major detrimental environmental impact on the environment or a scarce, non-renewable resource. Long term/irreversible impact.	3
		The aspect has a moderate detrimental environmental impact on the environment or a scarce, non-renewable resource. Impact not reversible within a year.	2
		The aspect has a minor detrimental environment impact or impact on scarce, non-renewable resource. Impact reversible within a month to a year.	1
		The aspect has no known environmental impact	0
		The aspect has a minor positive environment impact	-1

		or impact on scarce, non-renewable resource.	
		The aspect has a moderate positive environmental impact on the environment or a scarce, non-renewable resource	-2
		The aspect has a major positive environmental impact on the environment or a scarce, non-renewable resource	-3
D	Scale of aspect	What is the scale of the aspect?	Score
		The negative aspect occurs in high or large quantities	3
		The negative aspect occurs in medium quantities	2
		The negative aspect occurs in low or small quantities	1
		The positive aspect occurs in low or small quantities	-1
		The positive aspect occurs in medium quantities	-2
		The positive aspect occurs in high or large quantities	-3
Likelihood			
Z	Frequency	How frequently does the aspect occur?	Score
		The aspect occurs on a daily basis	5
		The aspect occurs on a weekly basis	4
		The aspect occurs on a monthly basis	3
		The aspect occurs on an annual basis	2
		The aspect is unlikely to occur	1

Table 3 - Significance level categories

Aspect Significance	Score
High Negative Significance	50 >
Medium Negative Significance	25 to 50
Low Negative Significance	1 to 25
Positive Significance	< -1