



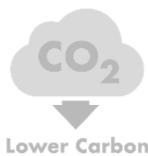
# Environmental Management System

## 8.1.6 Emissions to Air

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Lower Carbon

## 8.1.6 Emissions to Air

### 1 Purpose

The University is committed to ensuring that all activities undertaken on its premises follow the highest possible standards of safety, health and environment.

This document explains how air-conditioning/refrigeration equipment, boilers and fume cupboards are managed at the University in order to:

- address the risks and opportunities associated with the aspect ‘Emissions to air’;
- minimise emissions to air;
- minimise pollution risks by ensuring equipment is maintained;
- ensure compliance with relevant environmental legislation.



Minimal Waste



Biodiverse Campuses

### 2 Scope

This procedure covers the use of fluorinated gas and ozone depleting substances including in air-conditioning/refrigeration equipment, and the use of boilers and fume cupboards, across the institution.



Sustainable Travel

### 3 Definitions

**Risks and Opportunities:** potential adverse effects (threats) and potential beneficial effects (opportunities).

**Process:** set of interrelated or interactive activities, which transform inputs into outputs.



Positive Procurement

### 4 Responsibilities

Head of Technical Services (Estates and Facilities Management <sup>1</sup> )	Responsible for managing the air-conditioning maintenance contract and ensuring compliance with relevant Fluorinated Gas (F-gas) legislation.
Technical Services Team (Estates and Facilities Management)	Responsible for maintaining the equipment and providing information and working with Data and Asset Management Team to update the equipment asset registers. Ensuring contractor control. Conduct general maintenance and repairs to equipment.

<sup>1</sup> Estates and Facilities Management (E&FM)



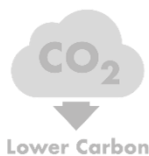
Wellbeing and Health



Culture and Community



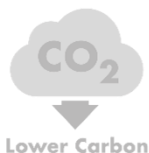
Knowledge and Skills



Data and Asset Management Team (Estates and Facilities Management)	Update the equipment asset register and upload the maintenance records on to Quemis as provided by Technical Services and Projects Team.
Projects Team (Estates and Facilities Management)	Responsible for providing information and working with Data and Asset Management Team to update the equipment asset registers if a project alters the asset register by removal or adding to a system.
Appointed Air-Conditioning Contractor	Conduct air-conditioning/refrigeration maintenance including leak testing and top-ups and reporting findings with maintenance records.
Fire & Premises Manager (Corporate Responsibility)	Responsible for the annual maintenance of fume cupboards. Responsible for providing advice on compliance with relevant Health and Safety legislation.
College Technical Services Team Manager / Project Manager	Responsible for maintenance and compliance with relevant legislation for any equipment is locally owned and managed, rather than by E&FM  Make the Environment Officer aware of equipment and processes utilising ozone depleting substances (ODS) and fluorinated greenhouse gases (F-gas).
College Principal Investigator / Project Managers	Avoid the use of ODS and F-gas in research, where practicable.  Where ODS are used, ensure use is 'essential' in accordance with the ODS regulation. Inform Environment Officer of potential/new uses and ensure relevant approvals are obtained before purchase and use.  Where F-gas is used, ensure use is essential (i.e. no alternatives available), inform Environment Officer of use and ensure it is well managed to avoid releases, in accordance with the F-gas regulation.
Sustainability Team	Responsible for providing guidance on compliance with environmental legislation including ODS and F-gas legislation.  Responsible for coordinating ODS registrations with the European Commission.  Before new equipment or processes come online, Environment Officer to work with Colleges to ensure permits or other compliance is in place.

## 5 Related Documents

- **Aspects and Impacts Register: Relevant environmental aspects and associated environmental impacts are detailed within the College/PSU register.**



- **Air-conditioning maintenance records are stored on [N:\Space\HE 026 0\Building Maintenance\Air conditioning](#)**
- **8.1.8 Energy and Water Management: procedure describes the requirements for TM44 air conditioning inspections.**



## 6 Process

### 6.1 Air-conditioning and refrigeration equipment:

The University uses equipment containing F-gases including air conditioning units and refrigeration units. Appointed air-conditioning contractors are employed to maintain the air-conditioning and refrigeration equipment across all the University buildings.



An asset register that details all equipment containing F-gases and the quantity of each type of gas is stored on the Quemis ([N:\Bespoke Reports](#)). The Technical Services and Projects Team are responsible for providing information and working with Data and Asset Management Team to update the equipment asset registers when required.

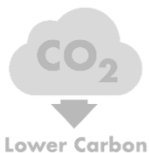
All equipment is serviced and leak tests are conducted by the air-conditioning contractor at frequencies as required by the F-Gas Regulations:

- at least every 12 months for equipment containing between 5 and 50 tonnes of CO<sub>2</sub> equivalent, or where a leakage detection system is installed, at least every 24 months;
- at least every 6 months for equipment containing between 50 and 500 tonnes of CO<sub>2</sub> equivalent, or where a leakage detection system is installed, at least every 12 months;
- at least every 3 months for equipment containing over 500 tonnes of CO<sub>2</sub> equivalent, or where a leakage detection system is installed, at least every 6 months.

Maintenance records including evidence of leak tests are stored within the service records/space building specific ([N:\Space\HE 026 0\Building Maintenance\Air conditioning](#)). The maintenance and the projects team is responsible for providing the records to Data and Asset Management Team to update the information on Quemis.

The appointed air-conditioning contractor is certified to handle fluorinated greenhouse gases and a copy of their REFCOM F-gas certificate is stored centrally on the filing structure per building within the N Drive ([N:\Maintenance Contracts](#)). Only





engineers from the appointed air-conditioning contractor, with relevant qualifications are authorised to carry out work on equipment containing F-gases:

- City and Guilds F-Gas and ODS Regulations Certificate
- Construction Industry Training Board Refrigeration Certificate.



Contracts, maintenance and individual contractor training records are stored on the central filing structure N-Drive ([N:\Maintenance Contracts](#)).



## 6.2 Boilers:

The University does not have boilers over 20MW, or over 3MW that burn waste or waste oil, therefore is not required to have an Environmental Permit. However, all boilers are maintained to prevent emissions of dark smoke and ensure compliance with the Clean Air Act 1993. The University has appointed a maintenance contractor to conduct maintenance and emissions testing every 12 months. Contracts, maintenance and training records are stored on the central filing structure N-Drive ([N:\Maintenance Contracts](#)).

In case of emissions of dark smoke from the boilers, the Maintenance Team must shut off the boiler, notify the boiler maintenance contractor and raise an adverse event notification.



## 6.3 Fume cupboards:

The University will identify all buildings with fume cupboard emission points with asset numbers on Quemis along with graphical identification on floor map and photos. All fume cupboards must be tested by a competent engineer every 14 months to ensure that they are performing as intended and to demonstrate that adequate control of exposure is achieved. The test reports are stored by the Fire & Premises Manager and must be kept for a minimum of 5 years.



All laboratory technicians are trained on the use of fume cupboards and shall report any defects via the Estates help desk. Training records are stored by Human Resources on the ABW system.

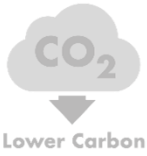


## 7 Effects and Actions on Non Conformance

Failure to comply with this procedure may result in:

- Non-conformance with the requirements of EcoCampus and the ISO 14001:2015 standard.





Departure from this procedure is addressed in the procedure **10.1 Nonconformity and Corrective Action**

## 8 Version Control

Date	Version	Update
04/05/2017	3	Produced by Ambreen Jahangir
12/10/2018	4	- Responsibilities updated to include College-based roles Additional info on the use of F-gas and ODS used in research inserted

