

## Environmental Procedure

### **PROCEDURE:** 3.6.1 Operational control

Department: Sustainability Unit

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen's Park Campus), and Warrington Campus

Author: Alice Elliott, Head of Sustainability

Approved by: Peter Hay, Director of Estates and Facilities

Date of Approval:

### **PURPOSE:**

To identify, plan, control and monitor the operations associated with the institution's identified significant environmental aspects in line with the University's Sustainability Policy, and Corporate Objectives and Targets.

### **SCOPE:**

All operations at all of the University of Chester's sites, including Waste Management, Emissions to Air, Emissions to Water, Hazardous Substance and Oil Storage, Energy Management, Construction and Refurbishment, Grounds Management, Transport, and Space Management.

### **METHOD:**

- The Head of Sustainability and Operational Managers are responsible for establishing, implementing and maintaining documented operational procedures, for controlling the operations associated with the institution's significant environmental aspects and for preventing deviations from the Sustainability Policy, and Corporate Objectives and Targets.
- Operational Managers are responsible for stipulating the operating criteria in the procedures.
- Operational Managers are responsible for communicating relevant procedures and requirements to all those involved, including suppliers and contractors.
- These procedures are controlled documents and maintained as described in procedure 3.5.1 Control of Documents and Records Procedure.
- The Control of Procedures, Records & Documentation Spreadsheet indicates which Environmental Procedures people are responsible for, and where records referred to in the Environmental Procedures are located, and who controls them, as well as any other EMS-related records and documentation that are not referred to in the Environmental Procedures.
- The Control of Procedures, Records & Documentation Spreadsheet is stored in the folder: 3. Operating/3.5 Control of Documents and Records, in the EMS Document Control System.

### **EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to control and monitor operations associated with the institution's identified significant environmental aspects effectively;
- non-conformance with requirements of the Scheme and/or the clauses of the ISO 14001 standard.

Departures from this procedure are addressed using procedure 4.2.1

Nonconformity Corrective Action & Preventative Action Procedure

## **CHANGES TO THE PROCEDURE**

## REASON FOR THE CHANGE

01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.

19/01/15 Michelle Giordmaina – updated Director of Facilities job title.

18/03/15, Alex Lerczak – Updated the site information, added Date of Approval, added to the scope and added and removed “the” from effects and actions on non-conformance. Changed EMS Managers to Operational Managers.

21/05/15, Alex Lerczak – Updated the Scope to include all current Operational Procedures, and amended method, adding new file paths to other documents.

03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.  
18.02.16 Alice Elliott – approved by Peter Hay

## Environmental Procedure

### PROCEDURE: 3.6.2 Waste Management

Department: All

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen’s Park Campus), and Warrington Campus

Author: Alice Elliott, Head of Sustainability, and Jacquie Gaffney, Head of Operations Approved by: Peter Hay, Director of Estates and Facilities

Date of Approval: 18.02.16

### PURPOSE:

- To explain how waste and recycling is managed at the University of Chester.
- To ensure that waste management objectives and targets are achieved.
- To ensure that waste documentation is stored and maintained.
- To ensure compliance with relevant environmental legislation including the Duty of Care under Section 34 of the EPA (1990), the Waste (England and Wales) Regulations, Hazardous Waste (England and Wales) Regulations and the WEEE Regulations (2007).
- To monitor and review the destination of all waste streams.
- To monitor and review the amount and types of waste produced, as well as the final destination of the waste streams.
- To adhere to the aims of the University’s Waste Policy, which is stored in the folder: Records & Documentation/Policies/Waste in the document control system.

### SCOPE:

All waste produced at all of the University of Chester’s sites, including both recyclable and general waste.

### METHOD:

#### Collection of Recyclables and General Waste:

- All staff are responsible for ensuring waste is disposed of in the correct duo bin according to the colour coded system:
  - Black – General, non-recyclable waste (including plastic crockery, blue damp hand towels, crisp packets, cartons, aerosols, and soiled waste)
  - Green – Mixed recyclables (including cans, tins, empty cardboard, plastic pots, tubs, trays, bottles and lids, paper, magazines, catalogues, and envelopes)
- Where appropriate, there are specific waste bins with the following colour coded system:
  - Red – Plastics
  - Blue – Paper
  - Grey – Cans
  - Yellow – Clinical/sharps (including needles, syringes, clippers, and lancets used with finger-pricking devices)
- The Caretaking and Cleaning Departments are responsible for the emptying of all internal and external duo bins in offices, academic buildings, research facilities and student halls of residence including kitchens.
- Waste contractors are responsible for collecting recycling and general waste from the designated waste compounds.
- Staff are encouraged to use the WARPit website (resource distribution network: <https://www.warp-it.co.uk/uniofchester>) to reuse furniture and other equipment within the University.

- Bulk removal of furniture, WEEE waste, and other equipment (that is not reused within the University) is arranged using the appointed waste contractor.
- Cleaning Services are responsible for emptying recycling bins that are situated in central locations. Warrington Campus offices and classrooms no longer have individual bins, neither does Thornton Science Park.
- Food waste is segregated at dining rooms across campuses and some University accommodation.
- Glass is recycled at dining rooms and in some bin stores at the University's sites.

There is a colour coded bin bag system in operation in all buildings on campus. The coding is as follows:

- Black – General, non-recyclable waste
- Clear – Recyclable waste and food waste
- Yellow – Clinical waste/sharps (designated areas only)

#### Hazardous Waste, Clinical Waste, IT & WEEE Waste:

- All hazardous waste is segregated from other waste, stored securely and disposed of in accordance with the Hazardous Waste (England and Wales) Regulations.
- All waste chemicals are stored in departmentally secure chemical stores.
- Bulk collections of hazardous waste are arranged by the relevant department.
- The Hazardous Waste Registration is held by the Head of Operations (Estates & Premises) and renewed each year if still applicable.
- The Facilities and Estates Hazardous Waste documentation is maintained by the Estates & Premises and stored on the Estates shared W drive.
- All IT waste is collected from the source by Learning and Information Services (LIS).
- All Facilities WEEE waste is collected from the source by Facilities and Estates (caretakers) and stored in the designated WEEE waste compound, where it is collected by the responsible contractor.
- Printer cartridges are collected by departmental administrators from marked boxes located around the University for staff to deposit used printer toner cartridges. Departmental administrators contact nominated providers for collection of marked boxes.
- Clinical waste is stored in yellow bags and receptacles, and is collected by a nominated contractor.
- Waste cooking oil is disposed of by the Catering Services Department.

#### Record Keeping and Monitoring Waste:

- The Head of Operations (Estates & Premises) controls and maintains the Waste Master Spreadsheet, containing details about waste streams, container locations, collections, waste carriers, and waste codes and permits. This spreadsheet is stored in Network Shares (W:)/B&M Waste/ALL WASTE. These Waste and Recycling Reports are stored in Network Shares (W:)/B&M\_Waste/B&M reports.
- The Head of Operations (Estates & Premises) and the Head of Sustainability review these figures and use them in setting objectives and targets for waste minimisation, segregation and evaluating the success of such measures.
- The Head of Sustainability collaborates with B&M Waste Services to conduct quarterly audits of five general waste bins to establish what is not being recycled, and to set SMART targets for sustainable waste and physical resource management. These audits are conducted every year in February, May, August and November, commencing in May 2015.
- Non-Hazardous Waste Analysis Reports are stored in the folder: Records & Documentation/Audit/Waste Analysis, in the EMS Document Control System.
- Records relating to departmental waste disposal are currently held by the departments.
- Waste Transfer Notes (WTNs) for general, recyclable, glass and food waste bins are held by the Head of Operations (Estates & Premises), stored in Network Shares (W:)/B&M\_Waste/B&M reports/EDOC Waste Transfer Notes 2015).
- Consignment Notes for hazardous, IT, WEEE and clinical waste are held by the relevant Department.

The Head of Operations (Estates & Premises) is responsible for liaising with departments offering advice on the most efficient methods of collection and disposal of all waste and recycling.

The Head of Operations (Estates & Premises) offers departments advice on the management of Hazardous and WEEE waste (e.g. storing records correctly).

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to achieve the Institution's objectives and targets regarding waste.
- a failure to monitor waste and recycled material to measure improvement.
- a failure to comply with the Environment Protection Act (1990) Section 34: Duty of Care, Waste (England and Wales) Regulations, Hazardous Waste Regulations (2005), or WEEE Regulations (2007).
- a non-conformance with the requirements of the Scheme or the clauses of the international ISO 14001 standard.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

**CHANGES TO THE PROCEDURE****REASON FOR THE CHANGE**

22/04/15, Alex Lerczak – Updated the method following a meeting with the Head of Sustainability and the Head of Operations (Estates & Premises).

15/05/15, Alex Lerczak and Jacquie Gaffney – Updated the method together.

26/05/15, Alex Lerczak – Updated the Purpose, Scope and Method following a meeting with the Head of Operations (Estates & Premises).

21/07/15, Alex Lerczak – Combined the Waste Management Procedure with the Monitoring Waste Procedure, updating information after meeting with the Head of Sustainability and the Head of Operations (Estates & Premises).

03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park. Added information about the Waste Master Spreadsheet and its file path.

17/08/15, Alex Lerczak – Added information about colour coded systems for duo waste bins and specific bins in appropriate areas.

18/02/16 – Approved by Peter Hay and job titles updated

**Environmental Procedure****PROCEDURE:** 3.6.3 Emissions to Air

Department: All

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen's Park Campus), and Warrington Campus

Author: Steve Ryan, Deputy Director of Estates and Premises

Approved by: Director of Estates and Facilities

Date of Approval: 06.07.15

**PURPOSE:**

- To minimise emissions and discharges to air from air-conditioning and refrigeration equipment.
- To minimise pollution risks by ensuring equipment containing refrigeration gases is maintained.
- To ensure compliance with the Fluorinated Greenhouse Gases Regulations SI 2009/261, Environmental Protection (Controls on Ozone-Depleting Substances) Regulations SI 2011/1543, the Ozone-Depleting Substances (Qualifications) Regulations SI 2009/216 and the Clean Air Act 1993.

**SCOPE:**

All air-conditioning/refrigeration equipment, fire suppression equipment, boilers and fume cupboards.

**METHOD:**

Air-conditioning and Refrigeration Equipment:

- The University uses equipment containing ozone-depleting substances (ODSs) and fluorinated greenhouse gases (FGGs) including air conditioning units, refrigeration units, and fire protection equipment.
- A contractor is employed to maintain the air-conditioning and refrigeration equipment across all University buildings.
- A log of all equipment containing fluorinated greenhouse gases (FGGs) and ozone depleting substances (ODSs) and the quantity of each type of gas is held by the Deputy Director of Estates.

- All equipment is serviced and leak tests are conducted at frequencies as required by the FGG and ODS regulations. (and further details – legal register).
- Only competent engineers with relevant qualifications, stipulated in the Ozone-Depleting Substances (Qualifications) Regulations SI 2009/216 and F-gas regulations, are authorised to carry out work on equipment containing F-gases or ODS.
- Training records and qualifications for all University engineers are held and maintained by Human Resources Management (HRM). These records can be obtained by submitting a request to HRM.
- Contracts, maintenance and training records are stored by the Facilities Department.

**Boilers:**

- The University does not have any boiler over the 20MWh threshold to warrant an Environmental Permit, however all boilers are maintained to prevent emissions of dark smoke and ensure compliance with the Clean Air Act 1993.
- Contractors carry out boiler maintenance and emissions testing every six months.
- In the case of emissions of dark smoke from the boilers, the maintenance department are responsible for minimising the emissions and notifying the contractor.

**Fume Cupboards:**

- The individual departments operating the fume cupboards are responsible for the maintenance of the fume cupboards. All fume cupboards are labelled and checked annually to ensure that they are operating efficiently.
- All laboratory technicians are trained in the use of fume cupboards.
- Maintenance and training records are stored by the operating department.
- Estates & Facilities controls and maintains the records for annual local exhaust ventilation (LEV) inspections.

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to comply with relevant legislation
- a failure to minimise emissions to air
- non-conformance with clauses of the EcoCampus Scheme and the ISO14001 standard.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

**CHANGES TO THE PROCEDURE**

REASON FOR THE CHANGE
01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.
08/12/14 Lisa Harper – updated procedure in line with operations.
19/01/15 Michelle Giordmaina – updated Director of Facilities job title.
18/03/15, Alex Lerczak – Updated the site information, added Date of Approval and Head of Estates as the author.
26/05/15, Alex Lerczak – Updated the method, clarifying what records are held and where they are stored.
03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
20/10/15 Alice Elliott – removed Jared
18/02/16 Steve Ryan – updated title

Environmental Procedure
<b>PROCEDURE:</b> 3.6.4 Emissions to Water
Department: All Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen’s Park Campus), and Warrington Campus Author: Steve Ryan, Deputy Director of Estates and Premises Approved by: Peter Hay, Director of Estates and Facilities Date of Approval: 18.02.16
<b>PURPOSE:</b>
<ul style="list-style-type: none"> <li>• To minimise emissions and discharges to water.</li> </ul>

<ul style="list-style-type: none"> <li>To minimise pollution risks by ensuring potentially polluting materials are stored safely and appropriately.</li> <li>To ensure compliance with the Water Resources Act 1991 and Environmental Permitting (England and Wales) Regulations SI 2010/675.</li> </ul>
<p><b>SCOPE:</b> All staff dealing with substances, materials and activities that do or may cause pollutants to be discharged to water.</p>
<p><b>METHOD:</b> <u>Sewerage System:</u></p> <ul style="list-style-type: none"> <li>The University has identified all of its drainage types and systems for Chester Main Campus (Parkgate Road Campus), Kingsway Buildings, Riverside Campus, Queen's Park Campus, Chester College Close, Bache Hall, Warrington Campus.</li> <li>The drainage designs for these sites are stored in the folder: Network Shares (X:)/QuantarcMasterDrawings\Drainage Surveys.</li> <li>CCTV drainage surveys have been conducted for all of the sites mentioned above except for Queen's Park Campus. These survey reports and paper designs are located in the Store Room CRG108 in the Facilities Department.</li> <li>Queen's Park Campus also has its own legend which is indicated on the designs.</li> <li>The legend for the drainage designs received from Cleanline Drain Cleansing Services in 2011 (designs produced by Cheshire Surveys Ltd) is only included on the drainage design for Warrington Campus. The colour coding for the drains is: <ul style="list-style-type: none"> <li>Brown – Combined (both foul and surface water)</li> <li>Red – Foul water</li> <li>Blue – Surface water</li> </ul> </li> <li>The University does not have consent to discharge anything other than rainwater into the surface water drains.</li> <li>The Head of Estates is responsible for issues relating to the drainage system.</li> </ul> <p><u>Emergency Spills:</u></p> <ul style="list-style-type: none"> <li>Spill kits are located in the maintenance compound.</li> <li>Only staff trained in the use of spill kits should attempt to tackle a chemical or oil spill.</li> <li>See procedures 3.7.1 Emergency Preparedness &amp; Response Procedure and 3.7.2 Emergency Spill Procedure for further details regarding how to respond to and manage chemical or oil spillages are held by Health &amp; Safety.</li> </ul>
<p><b>EFFECTS &amp; ACTIONS ON NON-CONFORMANCE:</b> If this procedure is not applied it will result in:</p> <ul style="list-style-type: none"> <li>a failure to comply with relevant legislation</li> <li>a failure to minimise on-site pollution risks,</li> <li>non-conformance with clauses of the ISO 14001 standard.</li> </ul> <p>Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action &amp; Preventative Action Procedure</p>

## CHANGES TO THE PROCEDURE

REASON FOR THE CHANGE
01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.
08/12/14 Lisa Harper – updated Head of Estates job title.
19/01/15 Michelle Giordmaina – updated Director of Facilities job title.
18/03/15, Alex Lerczak – Updated the site information, added Date of Approval and Head of Estates as the author.
26/05/15, Alex Lerczak – Updated the method following a meeting with Steve Ryan and Chris Jackman.
08/06/15, Alex Lerczak – Updated the method after locating all of the drainage designs for the University's sites and meeting with the Head of Estates.
03/07/15, Alex Lerczak – Updated the information regarding the drainage designs and the legends for the different designs.
03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
20/10/15 Alice Elliott – Removed Jared
18.02.16 Steve Ryan – job title updated and Peter Hay approved.

## Environmental Procedure

### **PROCEDURE:** 3.6.5 Hazardous Substance and Oil Storage

Department: All

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen's Park Campus), and Warrington Campus

Author: Steve Ryan, Deputy Director of Estates and Rachel Jones, Health & Safety Advisor

Approved by: Director of Estates and Facilities

Date of Approval: 18.02.16

### **PURPOSE:**

- To minimise emissions and discharges to land, air and water.
- To minimise pollution risks by ensuring potentially polluting materials are stored safely and appropriately.
- To ensure compliance with the Control of Pollution (Oil Storage) (England) Regulations SI 2001/2954, the Hazardous Waste (England and Wales) Regulations SI 2005/894 and the Environmental Permitting (England and Wales) Regulations SI 2010/675.

### **SCOPE:**

All staff that handle, store, transport or dispose of hazardous substances or oils.

### **METHOD:**

All staff who handle, store, transport or dispose of hazardous substances or oil must operate in accordance with this procedure. Heads of Departments are responsible for ensuring their staff are trained in the use of chemicals in accordance with the relevant health and safety procedures.

#### Chemical and Oil Storage:

- Hazardous substances are stored indoors, where possible, in designated storage cabinets.
- Where hazardous substances are stored outdoors, they are stored in secure compounds with bunds.
- Chemicals used in departmental teaching laboratories are stored in departmental hazardous waste storage cabinets/compounds.
- All waste chemicals are removed by approved waste contractors. The Facilities and Estates Hazardous Waste documentation is maintained by the Head of Operations (Estates & Premises) and stored on the Estates shared W drive.
- Contractors must arrange for suitable storage of chemicals or oils prior to commencing works. The Technical Project Manager is responsible for ensuring contractors are aware of storage requirements.
- Only trained staff are authorised to access the hazardous substances and hazardous waste stores and compounds.
- Training records and qualifications for staff are held and maintained by the Human Resources Management (HRM). These records can be obtained by submitting a request to HRM.

#### Emergency Spills:

- Spill kits are located in the maintenance compound.
- Only staff trained in the use of spill kits should attempt to tackle a chemical or oil spill.

### **EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to comply with relevant legislation,
- a failure to minimise on-site pollution risks,
- non-conformance with clauses of the ISO 14001 standard.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

## CHANGES TO THE PROCEDURE

### REASON FOR THE CHANGE

01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.

19/01/15 Michelle Giordmaina – updated Director of Facilities job title.

18/03/15, Alex Lerczak – Updated the site information, added Date of Approval and Steve Ryan as the author.
23/04/15, Alex Lerczak – Updated information about the Hazardous Waste Register and added the Head of Operations (Estates & Premises) as an author.
26/05/15, Alex Lerczak – Updated the Method following a meeting with the Head of Operations (Estates & Premises).
03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
20/10/15 – Alice Elliott – Removed Jared
18/02/16 – Steve Ryan – updated title, removed Jacquie and added Rachel.

## Environmental Procedure

### **PROCEDURE:** 3.6.6 Energy & Water Management

Department: Estates and Facilities

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen's Park Campus), and Warrington Campus

Author: Alice Elliott, Head of Sustainability, Tamara Hunt, Sustainability Officer, Steve Ryan, Deputy Director of Estates and Premises, and Phil McNeil-moran, Building Energy Management Systems Engineer

Approved by: Director of Estates and Facilities

Date of Approval: 18/02/16

### **PURPOSE:**

- To maintain compliance with energy-related legislation including the CRC Energy Efficiency Scheme Order SI 2010/768 and Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations SI 2007/991.
- To monitor and manage the University's energy consumption.
- To develop and implement a Carbon Management Plan (CMP) in accordance with HEFCE requirements.
- To reduce energy consumption and carbon emissions in line with targets set out in the CMP.
- To adhere to the aims of the University's Energy Policy, which is stored in the folder: Records & Documentation/Policies/Energy, in the EMS Document Control System.

### **SCOPE:**

All energy use including electricity, gas and oil at all of the University of Chester's sites, including indirect emissions (Scope 3).

### **METHOD:**

- The Head of Sustainability has overall responsibility for energy management across all University campuses and sites. Responsibilities include implementing and managing the CMP and energy reduction initiatives, setting out a strategy for achieving reductions in CO<sub>2</sub> emissions in line with UK Government and HEFCE targets, and ensuring legal compliance with the CRC Energy Efficiency Scheme Order SI 2010/768 (which the University is not qualified for in the current phase) and the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations SI 2007/99.
- The Sustainability Officer is responsible for helping the Head of Sustainability to identify and implement carbon reduction opportunities.
- The Sustainability Executive is responsible for reviewing and supporting carbon reduction initiatives, and the Senior Executive Director of Estates and Facilities is responsible for approving and providing resources.
- The Energy and Carbon Lab is responsible for overseeing the implementation of carbon reduction measures, and ensuring energy reduction is embedded across operations, and savings are reported.

### Building Energy Controls:

- University buildings utilise building management systems which control heating and air-conditioning systems, as well as hot water controls. This is controlled by the Building Energy Management Systems Engineer.
- A programme of upgrading building efficiency through Trend 963, the Energy Management System controls, is currently being implemented.
- The Demand Logic pilot is in operation which monitors energy usage. This is reviewed by the Sustainability Officer and Building Energy Management Systems Engineer.

### Carbon Management & Energy Efficiency Opportunities:

- The University's Carbon Management Plan is stored in the folder: Records & Documentation/Action Plans/Carbon Management Plan, in the EMS Document Control System.

- The CMP sets carbon reduction targets and details how these will be achieved.
- The Head of Sustainability, Sustainability Officer and the Energy and Carbon Sustainable Innovation Lab are responsible for identifying energy efficiency and carbon reduction opportunities (carrying out cost/benefit analysis to determine the feasibility and calculate carbon savings).
- Opportunities are presented to the Sustainability Executive, with details of costs and forecasted savings, for approval.
- The CMP is reported to and reviewed annually by the Senior Management Team.
- All operational or behavioural opportunities to reduce carbon emissions should be communicated to the Head of Sustainability or Sustainability Officer.

Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations SI 2007/991:

- The Sustainability Unit ensures all buildings display valid Display Energy Certificates (DECs) and have the appropriate Advisory Report.
- The DECs and Advisory Reports are prepared by a registered consultant, who conducts the annual review of each building when required.
- The DECs are displayed in the entrance/reception area of each building.
- Energy Performance Certificates are also prepared for qualifying buildings.
- Air conditioning inspections are carried out in accordance with the Energy Performance of Buildings Regulations and certificates held by the Facilities Clerical Assistant (Gordon Barlow).

Monitoring and Reporting:

- Buildings at the University have sub-meters to monitor electricity, gas and water consumption which is fed into the Trend Energy Manager (TEM), a web-based energy performance monitoring, reporting and analysis tool.
- The TEM is monitored by the Building Energy Management Systems Engineer and Sustainability Officer.
- Monthly reports are produced for each building monitored by TEM.
- Caretakers manually read the electricity and gas meters at some of the University's properties and store the readings on a Meter Reading Spreadsheet, which is reviewed by the Building Energy Management Systems Engineer and Sustainability Officer.
- This spreadsheet is stored in the folder: Sustainability Unit/Energy/Meters and Phasing/ Meter Readings, in the EMS Document Control System.
- The bills for electricity, gas and oil are controlled by Finance.
- The Sustainability Officer works with the Energy Consultant and Finance to validate energy bills against sub-meter data to ensure accuracy.
- This data is used in setting objectives and targets, which feeds into the CMP and Estates Master Plan.
- The Demand Logic pilot is in operation which monitors energy usage by extracting data directly from the Building Management System. If unexpected energy usage is detected, Demand Logic notifies the Head of Sustainability, Building Energy Management Systems Engineer, Sustainability Officer, and Facilities Helpdesk, who will investigate and initiate any corrective actions required.
- The bills for water consumption are controlled by Finance.
- Caretaking and Site Managers read water meters across the University sites on a monthly basis.
- The water readings that are taken from Chester Campus and the Riverside Campus are recorded on a water consumption spreadsheet.
- This spreadsheet is stored in the folder: Sustainability Unit/Energy/Meters and Phasing/Meter Readings, in the EMS Document Control System.
- The Head of Sustainability reviews these figures as part of auditing key sustainability impacts.
- These figures are used in setting objectives and targets for water usage and minimisation as part of corporate objectives.
- The Greenstone reporting system is being implemented. This will provide an overview of our annual energy consumption and CO<sub>2</sub> footprint.
- We aim to report Scope 1, 2 and 3 emissions within the CMP. The University intends to include additional Scope 3 emissions such as procurement, waste management, commuting and business travel in an annual Sustainability report.
- Data relating to Scope 3 emissions are collated and will be stored on spreadsheets controlled by the Sustainability Unit.
- Data from projects completed by Maintenance or the Technical Project Team, outside of scheduled works are reported to the Sustainability Unit to monitor energy and cost savings.

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it may result in:

- a failure to monitor progress and track changes in energy consumption against objectives and targets
- a failure to meet carbon reduction targets
- non-conformance with clauses of the Scheme or the ISO 14001 standard.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

**CHANGES TO THE PROCEDURE**

<b>REASON FOR THE CHANGE</b>
19/01/15 Michelle Giordmaina – updated Director of Facilities job title.
18/03/15, Alex Lerczak – Updated the site information, added Date of Approval, and questions in brackets. Updated the scope and method, changing Estates Manager to Head of Estates and Energy Manager to Sustainability Officer.
24/04/15, Alex Lerczak – Moved the Monitoring and Reporting section to the 4.1.3 Monitoring Energy procedure. Added authors for the procedure.
15/05/15, Alex Lerczak – Updated procedure following a meeting with the Sustainability Officer, adding information about the University’s Energy Policy.
26/05/15, Alex Lerczak – Updated procedure information following a meeting with the Head of Sustainability and Sustainability Officer.
21/07/15, Alex Lerczak – Combined the Energy Management Procedure with the Monitoring Energy Procedure, updating information after meeting with the Head of Sustainability and the Sustainability Officer.
05/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
20/10/15 Alice Elliott – Alex H (Loreus) agreed adding water to energy.
18.02.16 Steve Ryan – changed job title and approved by Peter Hay

**Environmental Procedure****PROCEDURE:** 3.6.7 Construction and Refurbishment

Department: Estates and Facilities

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen’s Park Campus), and Warrington Campus

Author: Gary Hughes, Deputy Director, and Steve Ryan, Deputy Director

Approved by: Peter Hay, Director of Estates and Facilities

Date of Approval: 20.04.16

**PURPOSE:**

- To minimise negative environmental impacts resulting from construction, maintenance and refurbishment projects, and ensure appropriate consideration of sustainability issues, including resource efficient design, on-site re-use and recycling of materials whenever practicable and the sustainable procurement of new, low impact materials.
- To identify opportunities for environmental improvement in the design, construction and use of buildings using WRAP’s Designing for Resource Efficiency (DfRE) and Resource Management Plan (RMP) tools and processes.
- To adhere to the sustainable construction and refurbishment policy

**SCOPE:**

All construction and refurbishment projects across all of the University of Chester’s sites.

**METHOD:**

The Technical Project Manager, Head of Estates and surveyors are responsible for ensuring sustainability is considered in the design, construction and use of all buildings.

The Facilities department is responsible for:

- Detailing project specifications.
- Approving projects.
- Create drawings.
- Inviting tenders.
- Agreeing contract terms.
- Selecting contractors with appropriate experience and accreditations.
- Planning meetings and scope meetings with services.
- Checking any relevant environmental or other licences and permits for all construction and refurbishment projects. A University system, Quantarc is in place as a recording mechanism

for asbestos. Surveys are kept within an online portal provided by our asbestos survey company.

- Ensuring socio-ethical and environmental considerations are included at the project design stage (including re-use of existing materials and purchase of sustainable goods and materials) where practicable.
- Skip waste transfer certificates are required from contractors when disposing of materials off-site. These are held by the Head of Operations (Estates & Premises).
- Identifying the protection of existing on-site ecological assets with the aim of achieving net positive enhancements towards meeting broader estate management objectives
- Ensuring legal compliance during all phases of the project.

All construction projects are logged and recorded through the Summer Works Facilities Database to identify approval stages for each project including the above bullet points. The database includes information about current and future works. The Summer Works Facilities Database is controlled by the Facilities Administration Assistant (Nick Dudley), who liaises with the Technical Project Team to update the spreadsheet.

#### Monitoring and Measuring:

- For qualifying large-scale buildings or refurbishment projects (over £300K), a Site Waste Management Plan (SWMPs) must be completed by contractors which will record the amount of material re-used or recycled for example against the targets and measures agreed via the initial targets set using DfRE and RMP processes. A tender process is also in place for each project, this will identify waste and materials management methods for each contractor. Each contractor will be expected to meet the agreed targets in their Resource Efficiency Action Plans forming an integral part of their contract.
- Information from the Capital Works, minor works, and high-profile projects is fed in through the Energy and Carbon Lab on a quarterly basis.
- The Summer Works Facilities Database is periodically shared with the Sustainability Unit to cross-reference against their information requirements.

#### **EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a potential failure to comply with statutory environmental legislation.
- a failure to fully realise and apply potential resource efficiencies in use of materials and energy, and a reduction in environmental impacts for a project
- a failure to identify opportunities for improving environmental performance of buildings.
- a failure to comply with the Sustainable Construction Policy
- non-conformance with clauses of the EcoCampus Scheme or the ISO14001 standard.
- Non-conformance with the university's Carbon Management Plan.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

## **CHANGES TO THE PROCEDURE**

### **REASON FOR THE CHANGE**

22/04/15, Alex Lerczak – Added the Head of Sustainability and Facilities Clerical Assistant as authors, amending the method accordingly. Added information about the Works List spreadsheet in the method.

28/05/15, Alex Lerczak – Updated the method following a meeting with the Head of Sustainability and the Head of Operations (Estates & Premises).

15/07/15, Alex Lerczak – Updated the method after a meeting with the Technical Project Manager and Facilities Administration Assistant (Nick Dudley). Information about the storage of records added, as well as details about the Summer Works Facilities Database. The SWMP regulations were revoked by the UK Government in December 2013, so this requirement was removed from the purpose. However, it has been left in the method as we still have SWMPs produced for best practice.

03/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.

20/10/15 Alice Elliott – Removed Jared

20/4/16 Alice Elliott – redraft and suggested amends in reference to the Design Construction workshop held in February and new related policy. Approval.

## Environmental Procedure

### **PROCEDURE:** 3.6.8 Grounds Management Procedure

Department: Estates and Facilities

Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen's Park Campus), and Warrington Campus

Author: Mark Newman, Head of Operations (Estates & Facilities)

Approved by: Peter Hay, Director of Estates and Facilities

Date of Approval: 17.02.16

### **PURPOSE:**

- To describe grounds management activities to ensure that biodiversity is protected and that grounds are managed sustainably.

### **SCOPE:**

Management and maintenance of all grounds, including prevention of pollution and environmental protection.

### **METHOD:**

#### Grounds Management:

- The Head of Operations (Estates & Facilities) is responsible for overseeing all gardening and grounds maintenance work at all sites.
- The Grounds Management Team is responsible for the maintenance of the grounds and gardens at Chester and Warrington Campus.
- External contractors are in place at Queens Park Campus to maintain the grounds and gardens. They are also in place at Chester Campus to maintain the sports pitches.

#### Grounds Management Activities include:

- Tree management – tree surveys are conducted every four years. There are conservation areas and Tree Preservation Orders that require specific management.
- Maintenance of grassed areas including sports fields.
- Maintenance of planted areas including flower beds, woodland and areas of interest.
- Establishment and maintenance of bird, bat and bee boxes.
- The clearing of litter and detritus.
- Monitoring and maintenance of onsite highways, in conjunction with the Maintenance Department, to ensure they are free of obstruction and in good condition.
- Pesticides and biocides are diluted in the chemical storage areas into labelled containers.
- Oil, diesel and petrol are also labelled and stored using bunded chemical storage cabinets.
- In the event of a spillage, the procedure 3.7.2 Emergency Spill Procedure is followed.

#### Waste:

- Where possible, green waste is composted onsite and used as fertiliser on the grounds where required. Remaining green waste is placed in a green waste skip and taken away by a nominated contractor.
- Any non-compostable waste is disposed of according to procedure 3.6.2 Waste Management Procedure.
- Activities include working with other departments to encourage recycling and composting, for example - collection of coffee grounds from catering outlets.

#### Contractors:

- The use of pesticides or biocides is carried out by contractors in accordance with the requirements of relevant legislation and guidance documents. Risk assessments and method statements are submitted by contractors which are reviewed before any work is carried out.

#### Promotion and Protection of Biodiversity:

- The use of herbicides is minimised to small areas and paths and used as part of a treatment programme to manage invasive species.
- Bark mulch is used in other areas to help control weeds in flower borders.
- Mechanical methods are used to control weeds where possible.
- Work is not carried out when or where it would disturb species protected by law, for example, birds, bats, badgers, (N.B. Facilities Department and/or Grounds & Gardens Manager are responsible for appropriately advising contractors whose work may disturb animal species),
- Native flower species are planted in borders to actively encourage insects.
- Mulching mowers are used to return the nutrients to the land when cutting grass.

- Log piles are left in designated areas to promote biodiversity.
- In-situ chipping of felled trees, to allow chippings to be used as mulch on the grounds.
- Establishment of the valley at the north of the main site as a low-maintenance, self-sustaining ecosystem.

The Biodiversity Action Plan provides further details of actions and initiatives at the institution. This is stored in the folder: Records & Documentation/Action Plans, in the EMS Document Control System.

Records of Ecological assessments relating to grounds management are stored by the Head of Operations or the relevant Project Manager.

Training records for the Ground Management Team are held by the Human Resources Management & Payroll Services.

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to promote and protect onsite biodiversity
- a possible breach of relevant environmental legislation
- a non-conformance with the EcoCampus Scheme and ISO 14001.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

**CHANGES TO THE PROCEDURE**

<b>REASON FOR THE CHANGE</b>
01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.
08/12/14 Lisa Harper – updated procedure in line with operations.
19/01/15 Michelle Giordmaina – updated Director of Facilities job title.
18/03/15, Alex Lerczak – Updated the site information, added Date of Approval, and Jacquie Gaffney to the author. Replaced Estates and Premises with Grounds and Gardens.
30/03/15, Alex Lerczak – Jacquie Gaffney’s title changed to Head of Operations. Method updated following meeting with the Head of Operations.
23/04/15, Alex Lerczak – Updated the method following a meeting with the Head of Sustainability and the Head of Operations (Estates & Premises).
21/07/15, Alex Lerczak – Updated the method’s information and file paths for records after meeting with the Head of Operations (Estates & Premises).
05/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
17/02/16, Mark Newman – Changed Jacquie Gaffney to self. Changed Job Title to Head of Operations (Estates and Facilities). Addition of short note regarding the valley. Approved.

<b>Environmental Procedure</b>
<b>PROCEDURE:</b> 3.6.9 Transport
Department: All Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen’s Park Campus), and Warrington Campus Author: Alice Elliott, Head of Sustainability, and Mark Newman, Head of Operations (Estates & Facilities) Approved by: Peter Hay, Director of Estates and Facilities Date of Approval: 18/02/2016
<b>PURPOSE:</b> <ul style="list-style-type: none"> <li>• To reduce the use of fossil fuels and emissions from transport to and from all University of Chester sites.</li> <li>• To reduce the number of commuter and business related single occupancy car journeys.</li> <li>• To promote the use of public transport to and from all sites.</li> </ul>
<b>SCOPE:</b> All commuting and business related travel by staff and students to and from all of the University of Chester’s sites.
<b>METHOD:</b>

#### Sustainable Travel Plan and Guides:

- The Sustainable Travel Plan (How You Travel) and site-specific travel guides for the University of Chester are produced and updated by the Head of Sustainability, these can be accessed through the Green Chester website.
- The Head of Sustainability co-ordinates travel surveys annually across all sites.
- Results of the surveys are incorporated into the annual review of the Sustainable Travel Plan and travel guides to determine its effectiveness and inform decisions on future sustainable transport initiatives.
- The Transport Code of Practice and Driving at Work Policy set out clear guidelines to identify the most sustainable travel options when traveling to, or for work. These are located on the University's intranet: Portal, in Support Departments/Facilities/Transport & Car Parking.

#### Vehicle and Cycle Parking:

- All sites have a limited number of car parking spaces. A parking permit scheme is in place for students and staff.
- Students studying at Chester and living in University owned or managed accommodation are not eligible to apply for a parking permit unless they have a registered disability. All other students studying at the Chester campus, having a return trip in excess of 10 miles, are eligible to apply for a permit to park during core teaching hours.
- Students are only permitted to park on the Chester campus, Queens Park campus Rigg building and Kingsway building car parks. There is no student provision at Riverside or any other Chester sites.
- Students living or studying on the Warrington campus are eligible to apply for a parking permit. This will be valid only at Warrington.
- The University does not have designated visitor parking spaces, but visitor spaces can be arranged by booking in advance.
- Details about the University's Car Parking Guidelines are located in folder Records & Documentation/Policies/Transport in the document control system.
- There are secure cycle shelters at all sites which are accessible to both staff and students, free of charge.

#### Staff and Student Promotion and Engagement:

- The Head of Sustainability promotes alternative modes of transport (including bus, rail and cycling) through the Green Chester website and sponsored events and initiatives, social media, posters, email, newsletters, and through the Sustainable Travel Plan.
- It is the Head of Sustainability's role to gain approval for incentive schemes, such as the Cycle to Work scheme and the National Car Share scheme.
- The University shuttle bus is available free of charge to all staff and students with a staff/student card.
- The Green Chester website and University's intranet: Portal, provide details of all travel options, incentives, schemes and events, and are updated by the Head of Sustainability and Head of Operations (Estates & Premises).

#### University Fleet Vehicles:

- As part of the procurement process for the University's fleet vehicles, a general sustainability criteria is considered which is based on both price and environmental performance in terms of CO<sub>2</sub> emissions.
- A commitment to explore the use of electric and hybrid vehicles is built into the procurement process.
- The Head of Operations (Estates & Facilities) keeps a record of all the petrol and diesel fuel used by the institution's vehicles. These records are stored in Network Shares (W:), in the folder: Transport\_Files\_Share/Fuel Stats.
- The Head of Sustainability reviews these figures and uses them for delivering and evaluating the success of fuel reduction measures.
- Vehicle trackers are fitted to Facilities departmental vehicles to assist managers to assign labour more efficiently across all sites. Automated weekly reports are sent to the appropriate Line Manager who can use them to identify trends and implement actions to improve efficiency.
- Data collected from University parking permit applications is used to assist in calculating the carbon emissions (scope 3) produced by staff and students travelling to and from University

sites. This data is reviewed by the Sustainability Unit and contributes to the Estates Management Record.

Inter-site Student Transport:

- As part of our commitment to students free transport is provided for them between Parkgate Road and Thornton sites.
- The providing contractor is required to return data relating to fuel consumption and passenger numbers.
- The Head of Sustainability and head of Operations review these figures and uses them for monitoring and evaluating the delivery of the service adapting as necessary to achieve greatest efficiencies.

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to monitor and reduce the use of fossil fuels and emissions from transport to and from all University of Chester sites.
- a failure to reduce the number of commuter and business related single occupancy car journeys,
- a failure to promote the use of public transport to and from all sites
- a failure to limit the numbers of staff and students driving to campus as the institution expands,
- a failure to comply with the requirements of Sustainable Travel Plan and guides
- a non-conformance with the requirements of the Scheme or the clauses of the international ISO 14001 standard.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

**CHANGES TO THE PROCEDURE**

<b>REASON FOR THE CHANGE</b>
01/04/14, Alice Elliott – Entered initial information, edited scope of EMS, changed EMS Manager to Head of Sustainability.
08/12/14 Lisa Harper – updated procedure in line with operations.
19/01/15 Michelle Giordmaina – updated Director of Facilities job title.
18/03/15, Alex Lerczak – Updated the site information, added Date of Approval, and a question about authors in brackets. Added How You Travel and information the Head of Sustainability and incentive schemes.
30/03/15, Alex Lerczak – Jacquie Gaffney’s title changed to Head of Operations. Updated the method following meeting with the Head of Operations. Information updated about Vehicle and cycle parking, using information from the University of Chester’s Car Parking Guidelines.
23/04/15, Alex Lerczak – Updated the method following a meeting with the Head of Sustainability and the Head of Operations (Estates & Premises).
21/07/15, Alex Lerczak – Combined the Transport Procedure with the Monitoring Transport Procedure, updating information after meeting with the Head of Operations (Estates & Premises).
05/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.
17/08/15, Alex Lerczak – Added information about the general sustainability criteria which is considered during the procurement process for the University’s fleet vehicles.
17/02/16, Mark Newman – Removed Jacquie Gafney and replaced with self. Added QPC to sites students are eligible to park at. Added section referring to inter-site student transport.
18/02/16 Approved

<b>Environmental Procedure</b>
<b>PROCEDURE:</b> 3.6.10 Space Management
Department: All
Site: Chester (including Parkgate Road Campus, Riverside Campus, Kingsway Buildings, and Queen’s Park Campus), and Warrington Campus
Author: Laura Davies, Head of Space and Statistical Returns
Approved by: Peter Hay, Director of Estates and Facilities

Date of Approval: 18/02/16

**PURPOSE:**

- To maximise the use of academic, office and accommodation space across all University sites.
- To measure and monitor changes to space across all University sites to ensure a sustainable approach to moves, contractors and their supply chains, including the use of furniture, recycling of waste, and efficient heating and cooling of space in relation to refurbishments.

**SCOPE:**

- All academic, office and accommodation space across all of the University of Chester's sites.

**METHOD:**

- Monthly Space Management meetings are held to identify space across all University sites. The meetings are chaired by the Director of Estates and Facilities and include key departments (Timetabling, and Learning and Information Services).
- The staff occupancy list is circulated quarterly to all departments across all sites, tracking changes to spaces and ensuring maximum efficiency across all office use and new office requests.
- Staff occupancy is updated as staff moves take places across all sites to give an accurate representation of space utilisation across non-teaching spaces.
- Facilities staff conduct an annual walk-around inspection across all University sites to visually identify utilisation of space and record information. This allows space to be allocated correctly and efficiently.
- An annual space audit is conducted to track timetabled space and ensure a sustainable approach to space management, ensuring that the correct size room is used and thereby ensuring an efficient approach to heating and lighting.
- Storage space is tracked and measured to ensure the most sustainable utilisation of space is identified and rotation of stock is carried out across all sites.
- Space is allocated to ensure the most effective use of space and encourage open plan and multiple occupation of space, where appropriate.
- A centralised approach to space management, in co-ordination with the Head of Sustainability, ensures recycling and resource efficiency is central within the process.
- An annual review of the Estates Management Record and Space Audit is conducted with the Head of Sustainability to identify improvements in energy, waste and space trends that can be factored into global processes.

**EFFECTS & ACTIONS ON NON-CONFORMANCE:**

If this procedure is not applied it will result in:

- a failure to maximise the use of academic, office and accommodation space across the University's sites.
- a failure to measure and monitor the changes to space usage across the University's sites.

Departures from this procedure are addressed using procedure 4.2.1 Nonconformity Corrective Action & Preventative Action Procedure

## CHANGES TO THE PROCEDURE

**REASON FOR THE CHANGE**

10/06/15, Laura Davies – Purpose, Scope and Method entered into blank procedure.

21/07/15, Alex Lerczak – Updated the procedure following a meeting with the Head of Sustainability.

05/08/15, Alex Lerczak – Removed information concerning Thornton Science Park.

20/10/15 Alice Elliott – Removed Jared

24/05/16 Alice Elliott – Changed Chair to Director of Estates and Facilities (from CFO). Approved.