

# The University of Greenwich Waste Strategy

---

## Core Waste Strategy Document

**Version 1.1 03.12.19**

**Author: Simon Goldsmith**  
**Sustainable Development Unit.**



## Contents

1.	<b>Introduction:</b> .....	2
a)	<b>The University of Greenwich, a sector leader for sustainability</b> .....	2
b)	<b>National waste policy context &amp; legislation</b> .....	3
c)	<b>ISO 14001 (Sustainability Management System) &amp; Sustainability Management Board</b> .....	3
d)	<b>Our Waste Strategy</b> .....	4
e)	<b>Innovation through collaboration with our staff and students</b> .....	4
f)	<b>Progress</b> .....	5
g)	<b>Costs</b> .....	5
2.	<b>Targets, progress, monitoring, validation, reporting and actions</b> .....	6
a)	<b>Recycling and residual waste disposal (Figure 1)</b> .....	6
b)	<b>Progress against recycling targets (Figure 2)</b> .....	6
c)	<b>Key actions to help meet objectives and targets:</b> .....	7
i)	<b>Ensure Waste Strategy is effectively implemented</b> .....	7
ii)	<b>Meet or exceed legal compliance</b> .....	7
iii)	<b>Reviewing waste reduction rates against targets</b> .....	8
iv)	<b>Set recycling targets/per waste stream/building/campus</b> .....	8
v)	<b>Providing the waste collection infrastructure for waste generators</b> .....	8
vi)	<b>Reducing waste reduces our carbon footprint</b> .....	8
vii)	<b>Reporting progress</b> .....	8
viii)	<b>Ensure effective resourcing and support is available to meet Strategy</b> .....	9
3.	<b>Material resources used and wastes generated</b> .....	9
a)	<b>Waste generation</b> .....	9
i)	<b>How we generate wastes</b> .....	9
ii)	<b>Key areas where wastes are expected to be generated</b> .....	10
iii)	<b>Hazardous wastes</b> .....	11
iv)	<b>Disposable items and plastics</b> .....	11
b)	<b>Focusing on key waste producers and managers</b> .....	12
i)	<b>Procurement &amp; Business Services (P&amp;BS) Department, Procurers at UoG &amp; Suppliers</b> .....	12
ii)	<b>Estates &amp; Facilities Directorate (E&amp;FD) and its contractors</b> .....	12

iii) Schools of Science, Engineering, Pharmacy & NRI.....	13
iv) Other Academic Faculties & Departments, Professional Directorates & Students.....	13
v) Third Parties .....	13
4. Our Approach: Towards ‘Zero Waste’ .....	15
b) Target the waste producer .....	16
c) Focus on significant and problematic waste streams.....	16
d) Safe, legally compliant management, storage and disposal of wastes and recyclables.....	16
e) Integrating within existing procedures, strategies and policies .....	16
f) Giving staff information and responsibilities .....	18
g) Auditing of waste streams.....	18
h) Collaboration with waste contractors .....	19
i) Communications, engagement and training.....	19
j) Tools to help improve waste procedures .....	19
5. Contacts: .....	20
6. Changes to this document .....	20

## 1. Introduction:

The University of Greenwich is responsible for many sustainability impacts, including waste. Waste can be an illustration of a number of key indicators, including: efficiency, culture, compliance, management and responsibility. This Waste Strategy sets out the approach the University is taking to reduce resource use, maximise reuse and recycling and minimising any residual wastes disposed of to incineration and landfill. Our end goal is to become a ‘zero waste’ organisation. This can only be delivered through the effective support and engagement of all staff and students. It will require awareness, creativity and new, innovative ways of working that will have wider social, economic and environmental benefits, underlining our commitment to delivering sustainability in all that we do.

### a) The University of Greenwich, a sector leader for sustainability

We are proud to be recognised as one of the leading universities in the UK in delivering sustainability. Over the past few years we have won many awards for our work. Our success is driven by the behaviours and support of our staff and students. Our [Sustainability Policy](#) provides the focus for our sustainability plans, supported by the strategically focused Sustainability Management Board and underpinned by our ISO 14001:2004 certified Sustainability Management System (SMS). Our approaches to ensuring we reduce our waste generation and improve our recycling and reuse is an essential element in our continuing success.

Our Sustainability Policy highlights the importance of tackling waste: '*to prevent pollution by reducing emissions and discharges and promote the zero waste principle (rethink, reduce, reuse, recycle) in order to minimise environmental impact of waste disposal and use of natural resources*'.

**b) National waste policy context & legislation**

Waste is strictly regulated in the UK. Government policy seeks to influence waste producers to reduce their disposal, increase recycling rates and ensure all legal compliance requirements are met. Taxation has been used to penalise organisations generating waste, for example, through the land-fill tax which is set at £91.35 per tonne (2019) for general waste and set to increase by approximately £3.00 annually.

Much of our national policy is derived from the European Union. The core aim is to ensure waste is managed according to the waste hierarchy and to set targets for recycling rates within the EU and UK. The UK government produced a [review of waste policy](#) in 2011, reinforcing the importance of effective waste management and waste reduction.

The environmental risks of poor waste management are significant so specific legislation is in place and strictly enforced. This covers the University's Duty of Care to ensure that our wastes are disposed of via organisations that manage and dispose of the wastes in a compliant manner. We need to properly manage the storage of all wastes we generate particularly those that are hazardous and avoid the escape of wastes from storage containers that could result in littering. Our SMS provides a framework that includes waste management to help us meet our legal compliance requirements. There are many laws that apply to waste, for information about them please contact [sustainability@gre.ac.uk](mailto:sustainability@gre.ac.uk).

**c) ISO 14001 (Sustainability Management System) & Sustainability Management Board**

**ISO 14001:2015**

ISO 14001 is a Sustainability Management compliance system that helps us better understand and respond to our responsibilities around waste and other impacts. This Strategy supports our SMS to improve waste management, waste reduction and recycling programmes across the institution. The 2015 standard requires us to undertake lifecycle assessment of our operations including our waste generating and disposal activities.

The University uses resources that create many types of wastes. These are generated through everyday procedures such as teaching, research and operational activities, these include hazardous and non-hazardous wastes. Our SMS helps us understand and manage our resource use and waste generation. Through internal and external audits we can review processes and procedures to ensure they meet legal compliance requirements. For specific procedures including Duty of Care obligations and our Waste Management Procedure email [sustainability@gre.ac.uk](mailto:sustainability@gre.ac.uk). It also sets out the 'objectives' and 'targets' we have to meet. It helps drive ongoing improvement to illustrate best practice at an operational and organisational level.

### **Sustainability Management Board**

The Sustainability Management Board (SMB) provides a strategic level of review and agrees actions to better co-ordinate our approaches in many related areas. The Head of Facilities and Operations is the University officer responsible for waste at the SMB. The SMB provides our system of governance and it reviews and identifies whether resources are sufficient to meet the objectives set out. The SMB also agrees targets to be met, including waste and sets out the framework that can help deliver them.

## **d) Our Waste Strategy**

The ‘Waste Hierarchy’ is the management process integrated at the core of our Strategy.

- Wastes are only generated through the resources that are used. The University should **avoid** and reduce wastes and recyclables being generated in the first place. The University can avoid costs in procurement and disposal by avoiding the procurement of resources that are not needed or could be more efficiently used.
- Furthermore by **reusing** resources we are able to maximise the value and minimise the sustainability impact per item or unit used.
- **Recycling** is the next best option where resources can be transformed into new products.
- Residual wastes will be sent to **energy from waste** incineration plants, and,
- Any wastes that cannot be incinerated will be sent to licenced **landfill** sites.

Our Strategy will seek to target a zero waste approach. Further information about our Waste Hierarchy process can be found in Section 4.a.

This document is the Core Waste Strategy which provides information to deliver best practice waste management. The University recognises that all staff and students have a responsibility to minimise and manage waste effectively. To help this strategies appropriate to key stakeholders will be produced to directly help them. This will provide a more focused set of programmes and tools for key staff and departments, enabling a significant improvement in our waste management culture.

The following target groups will have their own waste strategies including specific good practice guidance:

- Procurement & Business Services Department, Procurers and Suppliers
- Estates & Facilities Directorate and their Contractors
- Schools of Science, Engineering, Pharmacy & Natural Resources Institute (NRI)
- Other academic Faculties & Departments, Professional Directorates & Students.

## **e) Innovation through collaboration with our staff and students**

An important goal of this Strategy is to enable staff and students to use their knowledge and experiences to help us improve. As an educational institution we can bring in many disciplines to assist with this, including:

- Psychology (to better understand how to influence behaviours)
- Humanities and Marketing (in helping us better communicate how to influence behaviours)

- Architecture (to better plan our waste systems) and Business to make better purchasing decisions)
- In addition to almost every other discipline we teach.

We will help staff and students develop projects and curriculums to illustrate the relevance and potential of linking up academic and operational activities for mutual benefit. Our focus on seeking to move our activities up the Waste Hierarchy will require us to be innovative, creative and engaging and will capitalise on our collective intellectual capabilities.

## **f) Progress**

Waste minimisation and recycling improvements have been slower than anticipated and it is hoped that this Strategy will provide a better foundation for measuring future objectives, managing the delivery of effective actions and ensuring targets can be met.

- We have made progress with our recycling rate (2017-8) reaching 50% although this is short of the target 70% recycling rate that is achievable but will take time to reach.
- An annual target of reducing waste amounts sent to landfill/incineration has also been set. The goal is to reduce waste by 5% a year. From the 2009/10 baseline waste has reduced by 30% by 2017/8 and for the past 3 years it has reduced by over 5% per annum.

These targets are set by the SMB and reviewed through our SMS. See Section 2 for further information about our targets.

## **g) Costs**

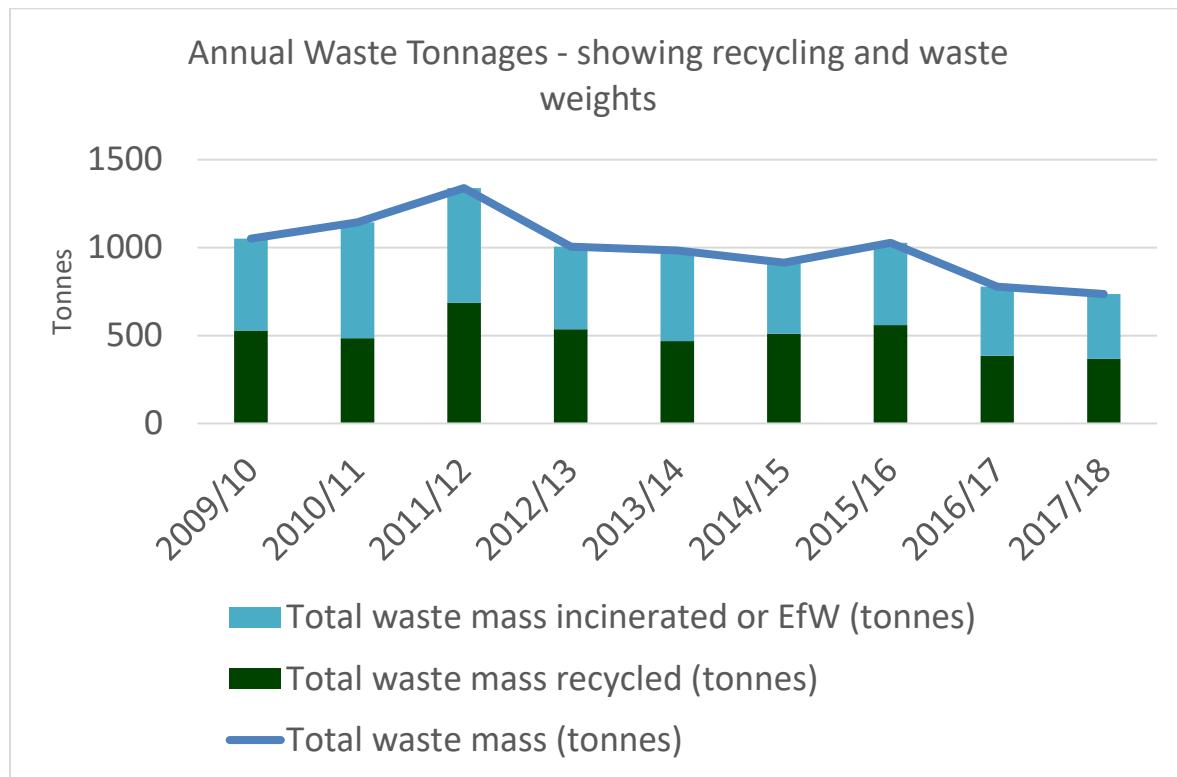
Wherever possible the University seeks to reduce avoidable costs. More efficient resource use, reductions in waste generation and disposal and improvements in recycling all benefit the cost base of the University. Our waste costs are approximately £180,000 per year (2014-15 figs) a significant amount that can be reduced by applying this Strategy. Some waste streams are more costly to manage than others. For example our hazardous waste stream in our labs is approximately four times more expensive than our general waste and recycling. Where staff and students dispose of general waste in hazardous waste receptacles the cost is significant but easily avoidable.

## 2. Targets, progress, monitoring, validation, reporting and actions

The University's Sustainability Policy sets a requirement to meet the 'Waste Hierarchy'. To help focus on this the institution has set recycling and disposal objectives and targets as set out in the ISO 14001.

The following graphs illustrate progress.

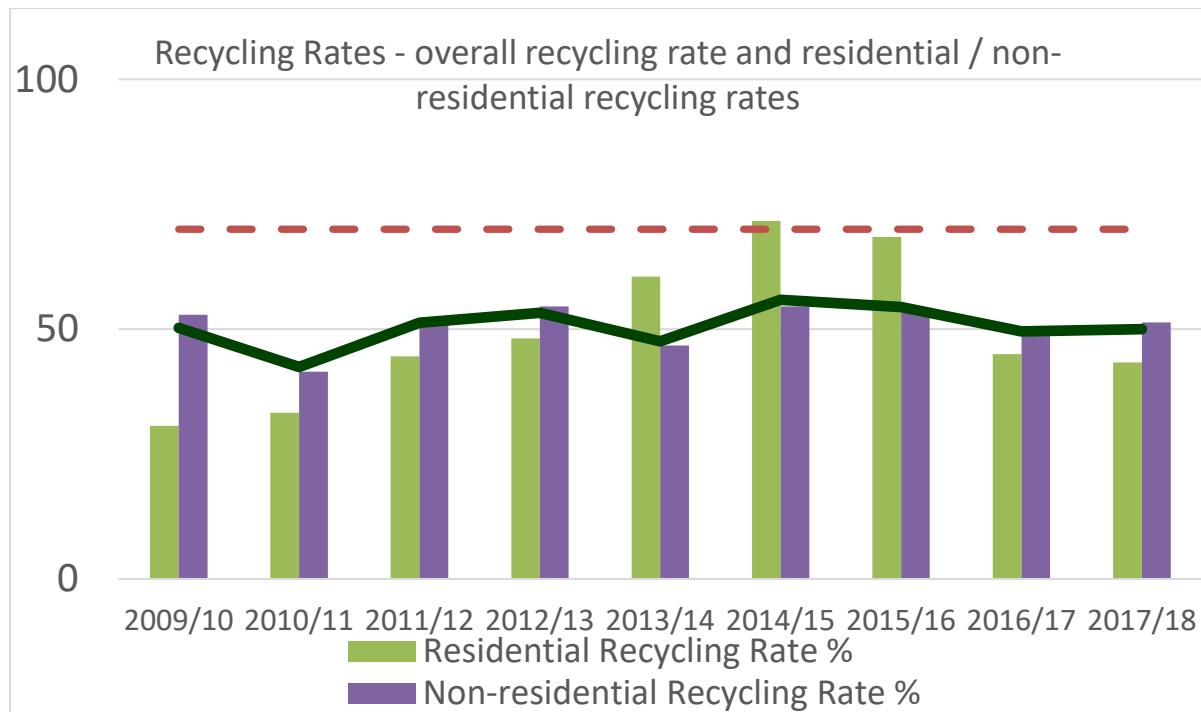
### a) Recycling and residual waste disposal (Figure 1)



A target has been set to reduce waste arisings by 5% a year, which has been achieved in the three years to 2017/18. Since 2009/10 waste has reduced by 30%.

Our long-term goal is to become a 'Zero Waste' organisation (see Section 4) meaning that in time no wastes will be sent to landfill or incinerated. This will require a change in culture and understanding about our resource use and subsequent recycling and reuse.

### b) Progress against recycling targets (Figure 2)



In 2017/18 (the last data set available) the University recycled approximately 50% of its waste, an increase of .6% from the previous year. Our recycling rates are significantly below the targets set in our SMS's Objectives and Targets (60% for 2013-14 with the target of 2014-15 of 65% and a target of 5% improvement every year).

Overall this shows that progress has been slower than expected and is possibly due to a number of reasons:

- Lack of a waste strategy to assist in better understanding and focusing on waste management programmes.
- A lack of communication and engagement of key stakeholders.
- A lack of coordination between departments to implement improved waste practices.
- Staff resourcing and clear responsibilities set for managing waste overall and at a local level.
- A senior University staff member with responsibility for waste and recycling.

**c) Key actions to help meet objectives and targets:**

**i) Ensure Waste Strategy is effectively implemented**

This Waste Strategy provides the framework to help us better manage our wastes, their storage, and disposal. It will be reviewed and evaluated to ensure it is appropriate and capable of meeting its key objectives. Progress will be presented at the SMB where recommendations will be identified for further action.

**ii) Meet or exceed legal compliance**

Waste management is heavily regulated with significant financial, reputational and environmental risks associated with poor and non-compliant practices. The University's Sustainability Policy states we have a requirement for: "*Maintaining or exceeding compliance with all relevant UK legislative and regulatory*

*requirements and retain our ISO 14001:2004 certification.”* We will ensure that all our own practices are compliant and that third parties with responsibilities for legal disposal of our wastes do so in accordance to the law. The SMS provides a means to help ensure compliance via local auditing and other activities.

**iii) Reviewing waste reduction rates against targets**

The University will utilise improved and more accurate data provided from waste contractors for our residual and recycling waste streams. This will be reviewed monthly/quarterly and annually and communicated to all key stakeholders. Progress against targets will be reviewed and with actions delivered as appropriate. Improved data and reporting will help in the delivery of specific actions to ensure targets are more effectively met. Data from contractors will be periodically validated to ensure that we are confidently reporting on the accuracy of the data we submit and report.

**iv) Set recycling targets/per waste stream/building/campus**

The University has overall targets for waste and recycling. To assist improvement more localised targets will be considered to help focus effort, particularly where significant or hazardous wastes are generated and where accurate data collection allows.

**v) Providing the waste collection infrastructure for waste generators**

It is imperative that generators of waste can easily understand where their waste should be deposited to maximise recycling rates and minimise waste contamination. University of Greenwich designed Meridian dual recycling:waste bins are rolled out at over 95% of our estate, providing clear and updatable communication panels to reinforce waste and recycling messages. These provide clear information about what is and isn't recyclable including plastics and other waste types. Directorates, caterers and other specific waste generators have specific waste and recycling bin systems to ensure wastes are managed effectively.

**vi) Reducing waste reduces our carbon footprint**

The carbon footprint of the University extends far beyond the carbon emitted through the electricity and gas consumed by the University. Our procurement and waste management, including disposal, also have a carbon impact. Better waste management will improve the carbon performance of the organisation.

Currently conversion factors exist that can indicate the approximate carbon impact of different disposal options for our wastes. These will be reviewed, particularly when we have more accurate data for our waste streams to report on the carbon footprint for our wastes (Scope 3 carbon emissions).

**vii) Reporting progress**

Up-to-date waste and recycling data will be uploaded to this webpage <http://blogs.gre.ac.uk/greengreenwich/action-areas/waste/> for staff and students to review and analyse. We will seek evidence from the waste contractors that the data it provides us is accurate and

validated. The University submits its data annually via the Higher Education Statistical Agency's Estates Management Record and our progress and actions will be reported through the University's Annual Sustainability Report. This is published in the Autumn-Winter, it illustrates key data and provides advice and information to engage staff. Headline figures will be communicated to staff via monthly/bi-monthly sustainability emails to all staff. Progress towards targets and actions will be reported by the Head of Campus Services to the SMB.

**viii) Ensure effective resourcing and support is available to meet Strategy**

The Head of Campus Services in the Estates & Facilities Directorate management team has responsibility for directing the Strategy. He/she will ensure that sufficient resource and support is made available for its delivery and will report to the SMB on an annual basis and as required.

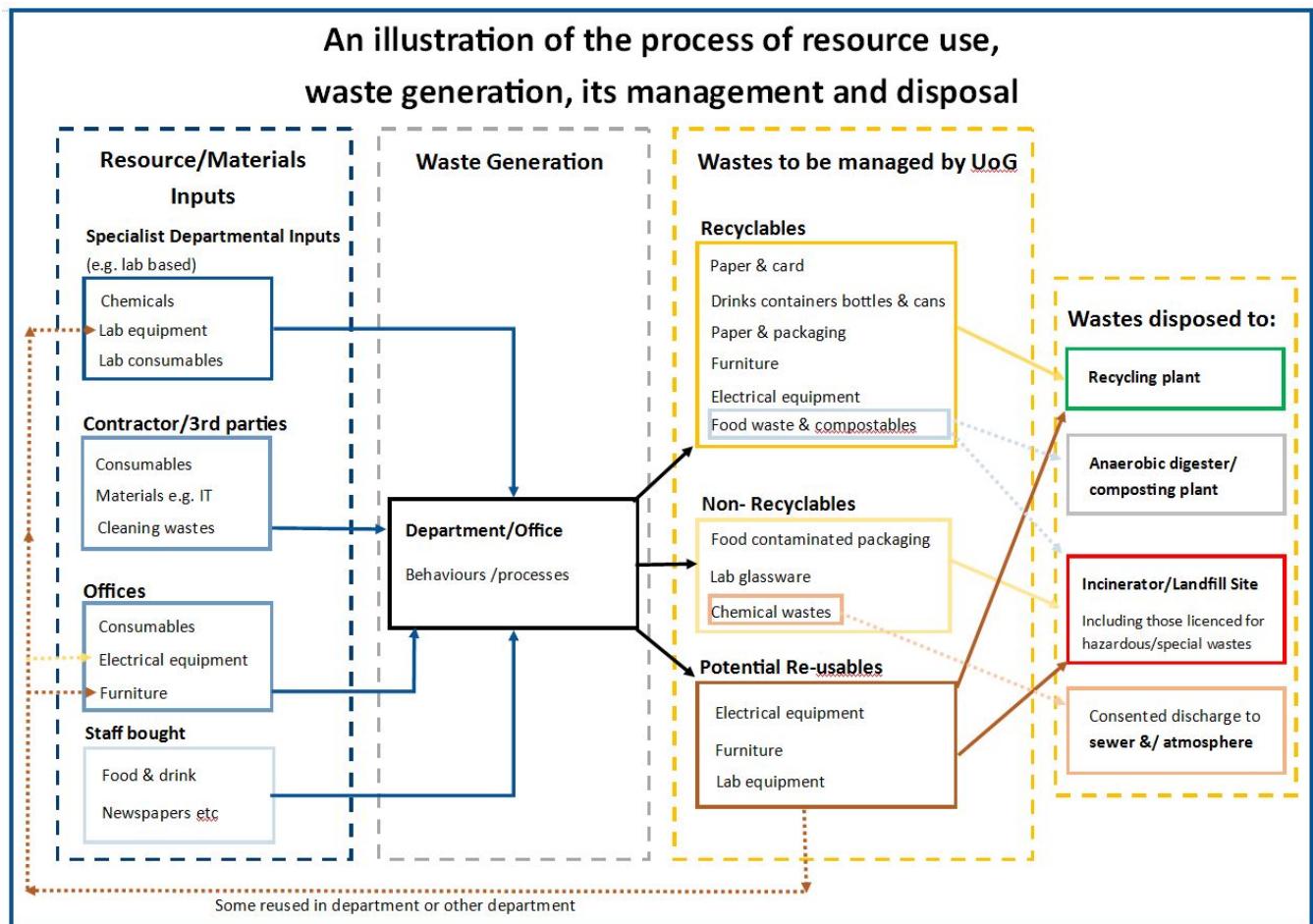
### **3. Material resources used and wastes generated**

By understanding the resources we use and how they are used we can potentially reduce their need and put in place more effective processes to seek to reuse or recycle wastes generated and avoid incineration and particularly landfilling. Departments that create significant amounts of wastes will be asked to undertake waste mapping exercises and attend programmes to target resource use reduction, reuse and recycling and improved waste disposal.

**a) Waste generation**

**i) How we generate wastes**

The Figure 3 illustrates the process of how wastes are typically generated. Starting from when resources are purchased and brought onto the campus, it moves on to how they are used and over different time scales become wastes that have to be stored then collected for disposal. By implementing procurement procedures and reviewing how we use materials we can reduce the waste we generate and increase rates of recycling.



(Figure 3)

By undertaking waste audits, reviewing procurement and analysing contamination, staff can begin integrating systems that ensure wastes will be segregated, stored and collected safely. Where appropriate waste streams will be split up, to ensure recycling rates and the value of the recyclate is maximised.

## ii) Key areas where wastes are expected to be generated

The table below helps staff better understand where to focus attention on key areas in terms of the types and amounts of wastes and those that are potentially hazardous and need careful management. Systems should be in place to manage the areas identified as red, orange (where appropriate) and those labelled (H).

Types of Wastes Generated	Paper (N)	Paper (Confidential) (N)	Cardboard (N)	Consumables (N)	Food (N)	Plastics (N)	Metals/Cans (N)	Glass (N)	Clothes	Oil (Cooking & Mineral) (H)	Light Bulbs/Tubes (H)	Electrical wastes (H)	Chemical (H)	Biological (H)	Furniture (N)
<b>Where wastes are generated:</b>															
<b>Faculties/Directorates Operations</b>	Red	Yellow	Yellow	Yellow	Yellow	Green	Green				Yellow	Yellow			
<b>Lecture Theatres</b>	Yellow				Yellow	Yellow	Yellow								Yellow
<b>Catering Outlets</b>	Green		Red		Red	Red	Red	Yellow		Red	Yellow	Yellow	Red		
<b>Staff Offices</b>	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow				Yellow	Yellow			
<b>Student Campus Spaces</b>	Yellow		Green		Yellow	Yellow	Green				Yellow	Green			
<b>Laboratories</b>	Yellow		Yellow		White	White	Yellow	Green		Yellow	Red	Red	Red		
<b>Workshops</b>	Yellow		Yellow		Yellow	Yellow	Red	Green		Red	Red	Red			
<b>Estates &amp; Facilities (operations)</b>	Green		Yellow	Green	Yellow	Red	Yellow	Green		Red	Red	Red			Yellow
<b>Grounds</b>						Green				Yellow				Red	
<b>Student Halls</b>	Yellow		Yellow		Red	Red	Red	Red	Red	Yellow	Yellow	Red			Yellow

Table 1

Key: Amounts Generated: Blank (None), Green (Low), Amber (Medium), Red (High), non-hazardous (N) hazardous (H) waste type.

### iii) Hazardous wastes

The above table illustrates areas where hazardous materials are generated and need responsible storage and disposal. We have identified all areas where such wastes are created and contract only waste contractors who are legally allowed to collect such wastes. Licences and permits are checked to ensure they are allowed to take away such materials and we check all relevant paperwork to maintain compliance. Data is collected annually from all waste collectors including those collecting hazardous materials for submission to the HESA EMR and for internal review.

### iv) Disposable items and plastics

The volume of waste generated that come from the use of disposable items is a challenge and without close management can easily rise. The university reviews areas where disposables are offered with plans in place to replace these with reusable alternatives or systems to design out the need for such items. In 2018 Queen Mary café went disposable cup free and in 2019 Pilkington Café did the same. Such approaches can be undertaken across the university to reduce disposables and plastics. In 2018 we stopped giving away plastic straws and stirrers (although we do give them out to anyone with a disability need who requires them). The University is working with directorates and contractors (including our catering contractor) to reduce plastics by promoting reusable containers and promoting the use for example of free tap water at outlets and increasing the numbers of drinking water fountains.

## b) Focusing on key waste producers and managers

Wastes are generated throughout the institution. Certain faculties, directorates and departments have a significant role in the improved management of wastes these are included below and will have their own waste strategies developed to help their staff and stakeholders make progress.

### i) Procurement & Business Services (P&BS) Department, Procurers at UoG & Suppliers

Ultimately almost all that we buy in will generate a waste in its packaging, use and disposal. All of these wastes will cost the University money to manage and dispose of. For detailed information, tools and support review the 'Procurement Department, Procurer and Supplier Waste Strategy (PPSWS).' Key stakeholders with responsibilities for procurement decisions include:

#### P&BS Department

P&BS can, through sourcing, selection and contract awarding arrangements, can identify suppliers that seek to ensure wastes are either minimised or returned to the supplier. For example, suppliers may offer a packaging take-back scheme where packaging can be reused or recycled by the supplier, saving costs and resources. Such a programme could be set up as part of a requirement of the suppliers contract. P&BS can influence the supply chain by setting out key sustainability requirements or provide guidelines to prospective suppliers helping them provide a service that meets our waste and wider sustainability strategies.

#### Buyers

All staff (and some students) who buy goods can positively influence our Waste Strategy. By following the Waste Hierarchy and advice and guidance set out in Section 3.c., especially the 'PPSWS', staff can reduce the wastes we generate and maximise the recyclable component of this stream.

#### Suppliers

Our Waste Strategy can only be effective if we influence those organisations that provide us with goods (and sometimes waste) as a by-product. Through partnerships with our buyers, our P&BS Department, our academics, students and organisations undertaking measurement of sustainability keen to develop projects, we can deliver economic, social and environmental benefit simultaneously which in turn deliver a truly sustainable waste strategy.

### ii) Estates & Facilities Directorate (E&FD) and its contractors

This Directorate can generate and manage a variety of wastes through its own operations and those of its contractors including services such as catering, cleaning, portering, maintenance and construction and refurbishment activities. Works undertaken, for example, to build new, refurbish and maintain older buildings will always generate wastes. Amounts in terms of weights and volumes can be significant and some wastes can be potentially hazardous (such as asbestos). E&FD have systems in place that seek to ensure wastes are minimised, effectively managed and disposed of legally. As most wastes are generated by contractors, the University must always ensure that these organisations meet

their waste related responsibilities. In all projects contractors will be expected to ensure that the Waste Hierarchy is used which should also reduce costs through the efficient use of resources. E&FD also manage the significant wastes generated from student halls, which are often contaminated or poorly segregated. A specific E&FD strategy will help ensure departments are joined up to help student residents undertake better behaviours at halls and around the campuses. The ‘E&FD and Contractors Waste Strategy’ provides details and support to ensure best practice, with general principles illustrating how the Waste Hierarchy is to be used can be found in Section 4.b..

**iii) Schools of Science, Engineering, Pharmacy & NRI**

The ‘Waste Strategy for Labs’ focuses on the wastes collected, although the other wastes disposed of to drain and air are highlighted above are covered briefly in Section 4.k.. Hazardous wastes have higher risks to the environment and society and are more expensive to deal with. This means that labs should seek to try and reduce the amounts of hazardous wastes they generate and also to avoid contamination or the disposal of non-hazardous wastes in hazardous waste containers as contamination can increase disposal costs significantly. Also lab users should always avoid putting hazardous wastes in general waste receptacles as this can have health and safety and compliance risk implications for the University.

**iv) Other Academic Faculties & Departments, Professional Directorates & Students**

Everyone at the University has a role and responsibility to help us meet our Waste Strategy. Whether this includes segregating wastes into recyclables and residuals during their daily office work, putting their drinks bottle in the recycling bin after lunch in the cafeteria or looking at ways that could reduce the amount of paper we need to print out (and ultimately recycle). Further information, tools, suggestions and other support is available in the ‘Waste Strategy for Academic Faculties & Departments, Professional Directorates & Students.’

This will help the University save money as we will need to buy in less and spend less on recycling and waste disposal. Working together we will have a very strong chance of meeting our recycling and waste minimisation targets which in turn will help us improve our People and Planet University League Score.

**v) Third Parties**

Anyone coming on site can help us meet our strategy and its targets. Visitors should follow the guidance provided on the recycling and waste bins located around the University.

These key areas to consider are included with the objectives of each corresponding strategy included in the following table:

Sustainable Waste Strategy	Target/s	Key Objectives
<b>Core</b>	Stakeholders interested in our corporate approach, those interested in policy and strategy, sustainability and specifically waste management.	<ul style="list-style-type: none"> <li>• To meet best practice and help ensure legal compliance and with ISO 14001.</li> <li>• Provide details of the waste strategy and how it relates to all key areas of waste generation.</li> <li>• Provides information to all stakeholders to help them understand and create approaches to meet our goals.</li> <li>• Help us meet our Objectives and Targets for waste minimisation and recycling.</li> <li>• Help reduce costs for procurement and disposal.</li> <li>• Help us maintain sustainability leadership position and illustrate responsibility.</li> </ul>
<b>Procurement &amp; Business Services Department, Procurers and Suppliers</b>	Those staff that have a role in buying goods and services on behalf of the University, The Procurement & Business Services Department that develops the policies and systems staff have to meet, Suppliers keen to improve the service offer to the University.	<ul style="list-style-type: none"> <li>• Provide clear guidance to help buyers reduce the resources they buy in and subsequently reduce the wastes that are generated through their use.</li> <li>• Help improve procurement policies, systems and support for staff throughout the procurement cycle.</li> <li>• Help engage staff in the procurement and decision making process.</li> <li>• Help engage suppliers to provide services that help us reduce our waste.</li> <li>• Encourage suppliers and contractors to adopt Sustainability measurement systems, e.g. CIPS Sustainability Index</li> <li>• Help reduce costs and risks.</li> </ul>
<b>Estates &amp; Facilities Directorate and their Contractors</b>	All E&FD staff including managers, contractors (including cleaning, portering, grounds maintenance staff), external contractors undertaking works, departments of Faculties and Directorates that generate significant and 'hazardous wastes.'	<ul style="list-style-type: none"> <li>• To meet legal compliance and conform with ISO 14001 requirements.</li> <li>• Ensure all E&amp;FD activities meet the good practice waste management objectives and utilise the tools and frameworks provided.</li> <li>• Improve communication and align systems where significant or special waste streams are generated.</li> <li>• Reduce disposal costs.</li> <li>• Generate revenue where appropriate.</li> <li>• To put in place systems to manage local waste management issues and challenges including programmes dealing with contamination of wastes, tackling low recycling rates, littering etc.</li> </ul>
<b>Schools of Science, Engineering, Pharmacy &amp; NRI</b>	Academic staff, lab technicians, researchers and students, local E&FD staff, Health and Safety staff.	<ul style="list-style-type: none"> <li>• To meet legal compliance and conform with ISO 14001 requirements.</li> <li>• Ensure waste is effectively managed that will reduce contamination and costs.</li> <li>• Help maintain effective lines of communication and effective waste management strategies with local E&amp;FD office.</li> </ul>
<b>Other academic Faculties &amp; Departments, Professional Directorates &amp; Students</b>	All staff, students and visitors.	<ul style="list-style-type: none"> <li>• To provide information to help stakeholders better manage wastes they generate in their day-to-day activities (excluding where significant or special wastes are generated).</li> <li>• To help reduce waste generation.</li> <li>• Improve recycling rates.</li> <li>• Reduce contamination rates</li> <li>• Reduce incidences of littering.</li> <li>• Help build a culture of responsibility.</li> </ul>

Table 2.

## 4. Our Approach: Towards 'Zero Waste'

The central goal of this Strategy is for it to be understood and applied by all staff and students and key third parties working with the University. It has been designed to be as user friendly as possible and will be backed up by tools, communications and other support to ensure the targets can be achieved. A key high-level and long-term target is to become 'Zero Waste.' This will require stakeholders to consider how waste is generated and to seek to influence the procedures that create the waste and improve disposal systems. Ultimately all resources that are consumed will be reused or recycled, with nothing sent to landfill or incineration.

To get to Zero Waste we will apply the 'Waste Hierarchy', this helps deliver better waste management practices with the aim of eliminating wastes. This can create many opportunities for the University: saving money, increasing our responsibility and sustainability league scores, create academic and research projects and influence our wider stakeholders to deliver solutions that can help us and others.

The following sections provide examples of our approach.

### a) Always consider the Waste Hierarchy

The Waste Hierarchy is a useful tool helping improve waste behaviours towards a goal of best practice. The diagram below illustrates options we should be considering at the top and those we need to avoid on the bottom. By understanding there are better ways of managing our waste we can begin to apply actions to help meet them. For example, often items are purchased and not used becoming waste as they become or no longer fit for purpose. Items can be hired or borrowed temporarily to meet a short term need, or even repurposed or upgraded to maintain their life. Recycling enables what could become waste to be remade into other useful resources. This is beneficial and better than disposing residual wastes to incineration or landfill. The University uses incineration with energy recovery and for a very small amount of wastes some landfill is still utilised.

Figure 4.



**b) Target the waste producer**

By considering why and where wastes are generated we begin designing them out, maximising reuse and recycling and ultimately eliminating residual wastes. This can be undertaken in almost every activity that uses resources. This may require departments to change their procedures to encourage, for example, waste avoidance or re-use, it will need to be communicated to staff with support available to enable the procedural change towards a 'Zero Waste' goal. See Figure 3 and Table 1 for illustrations in support of this.

By helping staff and students focus on their role as producers of waste they can begin to consider and apply options to improve. They won't achieve 'Zero Waste' immediately, it will take time, so on-going improvements looking at key waste streams (in terms of amount or their potential hazard) is a good place to start.

**c) Focus on significant and problematic waste streams**

Some wastes are more problematic, in terms of handling and disposal than others. These add significant risks for the University and also costs for their management. Other wastes may hold less risk though their quantity may be significant so reducing them is important for meeting our targets. The University will identify key waste streams where specific local procedures need to be considered (see Table 1 for illustration).

**d) Safe, legally compliant management, storage and disposal of wastes and recyclables**

The University has a legal duty to ensure we responsibly manage, store and dispose of our wastes. We have a requirement to provide equipment, systems, guidance and training to enable good waste management practice and receptacles appropriate to the wastes and the capability to segregate our waste streams. Such safe management and storage helps minimise risks in terms of health of our stakeholders and potential to pollute the environment through leakage or other escape.

**e) Integrating within existing procedures, strategies and policies**

An effective Waste Management Strategy augments and improves existing procedures, strategies and policies, where they exist. Many areas that create and manage waste already have systems in place. This Strategy will align with these systems and provide tools to improve their effectiveness. The Strategy will help improve processes, enable efficiencies and savings and reduce risks. It will integrate and support such systems including:

<b>Key Waste Management Intervention Stages</b>	<b>Waste Hierarchy Options</b>	<b>Existing Strategy/ System</b>	<b>System/ Guidance Required</b>	<b>Review Process</b>
General recycling and waste awareness	Waste Avoidance/ Prevention, Reuse, Recycling	Staff induction, Sustainability Policy, Green Impact, regular communications	Using all relevant communication and engagement channels to maintain awareness and provide guidance	Feedback
The decision regarding need of the resource within a University function	Waste Avoidance / Prevention, Reuse	None at present	As part of Sustainable Procurement Policy (SPP) and guidance given to seek to avoid procurement unless essential	Review of actions undertaken, reduction of procurement £ values/ amounts
Procurement of item/s	Waste Avoidance/ Prevention, Reuse, Recycling, Energy Recovery	Sustainable Procurement Policy	Ensure SPP is appropriate with specific guidance to assist all decision makers to reduce waste such as option to lend items to other department for reuse	Annual review of actions and procurement behaviours to identify if policy and tools are applied and if improvements occur
Delivery of goods & packaging bought in	Waste Avoidance/ Prevention, Reuse, Recycling, Energy Recovery	Reduction in delivery visits by contractors by stipulation of maximum delivery days, e.g. for stationery	Part of SPP guidance requiring use of recyclable packaging, reduction of packaging used, take back of packaging	Review suppliers and buyers to see if applied and levels of success
To improve efficiency or resources in use, increase reuse and recycling and reduce contamination	Waste Avoidance/ Prevention, Reuse, Recycling	None at present	Part of SPP guidance seeking to ensure products purchased enable efficient use of resources or reduce waste	Review waste generation and adapt guidance and support as appropriate
At end of item's life ensure systems are effective to enable segregation and safe storage	Recycling	None at present	Campus E & F Directorate support and waste management systems in place to ensure outcome	Review waste generation and adapt guidance as appropriate. ISO 14001 audits

Tasks and procedures of cleaner and portering staff for taking waste from departmental bins to central storage	Recycling, Energy Recovery, Minimising wastes to landfill	Management of cleaning and portering role requirements	Systems reviewed to ensure they meet requirements and training provided and waste management systems can meet needs	Review waste management system and adapt as appropriate. ISO 14001 audits
Key waste management intervention stages	Waste Hierarchy Goal	Existing strategy /system	System/Guidance required	Review process
Management of central waste stores	Recycling, Energy Recovery, Minimising wastes to landfill	Campus FM and Portering contract management systems	Review to ensure all support and systems are in place to ensure best practice	Review waste management system and adapt as appropriate. ISO 14001 audits
Relationship and support from waste contractors	Waste Avoidance/ Prevention, Reuse, Recycling, Energy Recovery, Minimising and eliminating wastes to landfill	Waste contractor management systems	Discuss the requirements set out in Waste Strategy and identify how waste contractors can help meet/exceed them. Ensure reporting systems are accurate and robust	Review of application of contract, ensure continual communication. ISO 14001 audits. Review documentation including quantities, legal documentation
Duty of Care audits of all waste contractors	Ensuring wastes managed legally and according to contract requirement/ service provided	Integrated into ISO 14001	Set up procedures for undertaking Duty of Care waste audits	Set our annual audit schedule for waste contractors

Table 3.

### f) Giving staff information and responsibilities

All staff have a responsibility to help us achieve our ‘Zero Waste’ goal, though for some staff it is an important role to maintain. Staff should review the appropriate waste sub strategy for more specific guidance or contact their campus E & F office or the Sustainable Development Unit.

### g) Auditing of waste streams

Periodic auditing will be undertaken within departments and from staff within E & F to review progress, especially where significant amounts or special and hazardous wastes are generated. Support from E & F will be given to help minimise the use of resources, means to ensure maximum recycling and the safe disposal of recyclables and residual wastes. Where possible waste & recyclables collection data from waste contractors will be reviewed and if possible targets set against this for reduction. Where appropriate ISO 14001 internal auditors will review key areas of impact.

## **h) Collaboration with waste contractors**

The services provided by our waste contractors are important in helping us ensure we can reduce our waste and manage what we dispose of according to best legal and sustainability practice. The University has a role to ensure that the waste contractors meet their Duty of Care responsibilities and the University will review and audit our waste contractors to ensure they are acting legally and meeting best practice for the sector. Support will be sought from our waste contractors to improve waste awareness raising and communications to our stakeholders, providing ‘bin’ audits and reports that can be used to help focus further improvement programmes. The University will have regular contractor meetings to ensure we work together to set programmes to ultimately meet our Zero Waste target.

## **i) Communications, engagement and training**

Ensuring awareness and engagement of all staff and students in responsible waste management is essential, particularly to those generating significant or hazardous wastes. The following communications and engagement channels will be used:

Channel	
<b>Website</b>	The SDU and E & F Directorate website will provide relevant information to support all staff to practice responsible waste management. This will be kept up-to-date, provide the strategy, tools to help implementation and templates for departments to adapt to communicate locally.
<b>Posters</b>	Posters will be placed and updated periodically in communal areas and posted on the back boards of the University’s recycling bins. A range of different poster versions will be made available on the website and sent to Sustainability Champions for staff to update as required, or according to the communication campaign set out by the SDU/Campus E & F offices.
<b>Emails/ Newsletters</b>	The SDU will send out emails/newsletters every 2 months on broad sustainability issues including updates as to waste reduction progress, in addition to tips, case studies and other information.
<b>Green Impact</b>	Sustainability Champions will be supported to ensure they have the information and tools to help drive local waste reduction programmes.
<b>Training</b>	All staff with a responsibility for managing key waste streams or with roles in the waste management process (including procurement) will be provided training and on-going support.

## **j) Tools to help improve waste procedures**

The University has developed a number of tools to help staff improve their sustainable waste management. We will work with staff locally to help improve these or develop new ones and share our learning within and outside of the University. A full list and the opportunity to download these are located on the website ([link](#)).

## 5. Contacts:

Office/Department/ Directorate/Faculty	Contact	Can assist with:
Greenwich Campus E & F Office	Room A059, Queen Anne Building. Call: ext. 7701. Email: <a href="mailto:fmhelpdesk@gre.ac.uk">fmhelpdesk@gre.ac.uk</a>	Dealing with local waste issues, including collection, contamination, bin locations, bin types, disposal of bulky items, waste hazards (such as broken glass or slip hazards), littering managing waste streams
Medway Campus E & F Office	Room P026, Pembroke Building. Call: ext. 43039. Email: <a href="mailto:fm-me@gre.ac.uk">fm-me@gre.ac.uk</a>	See above
Avery Hill Campus E & F Office	Flat 46/47 Aragon Court, Southwood Site. Call: ext. 8848/9668. Email: <a href="mailto:fm-ah@gre.ac.uk">fm-ah@gre.ac.uk</a>	See above
Sustainable Development Unit	Flat 50, Aragon Court, Southwood Site, Avery Hill. Call ext. 8794. Email <a href="mailto:sustainability@gre.ac.uk">sustainability@gre.ac.uk</a>	Legal compliance, communications, tools, engagement, solutions.

## 6. Changes to this document

If you think changes are required please contact [sustainability@gre.ac.uk](mailto:sustainability@gre.ac.uk). If necessary, changes to this document will be made and recorded below, and a new version will be created.

Version no. updated	Change made	Name	Date updated
1.1	Multiple updates to document	SG	03/12/19