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# Waste Management Plan

# 2022

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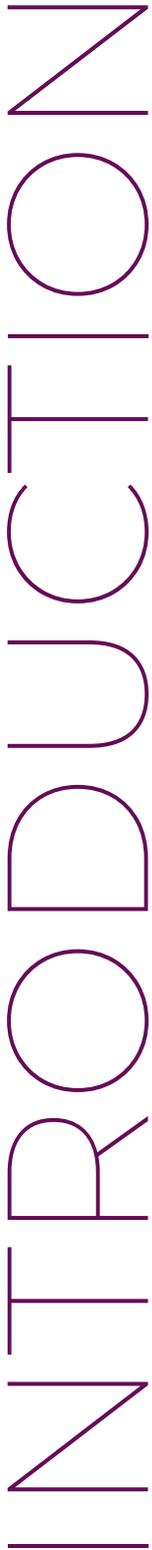
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NUI Galway recognises that the future of humanity is threatened by unsustainable interactions between our societies, economies and our environment. We are on a journey to lead the transition to a sustainable future and have identified sustainability as one of four core values in our University Strategy 2020-2025.

Waste management is a key priority for students and staff and perhaps the most visible day-to-day environmental issue on campus. Over the years we have worked hard to put in place benchmarks, collect accurate data and start monitoring how we use, recycle and dispose of waste on campus. In line with Sustainable Development Goal 12 (SDG12) we are committed to **responsible consumption & production**.

Covid19 has distorted our figures for 2020 & 2021 with an almost 70% drop in waste produced during the time, and even further in the catering outlets. Using 2019 as the last reliable guide, we produced a total of 650 tonnes of waste across the campus. Of this, we recycled approx. 360 tonnes or **56%**. The remaining waste is processed and sent to a waste recovery, and since 2018 we are proud to be a **Zero Waste to Landfill** organisation.

If you were to consider that 12 years ago 0% of our waste was recycled and just 5 years ago the recycling rate was 45% there has been significant improvement but there is still a great deal we can all do to improve on our current environmental performance.

This Plan outlines the university's performance, **current policies**, future **initiatives** and **commitments** with regards to sustainable waste management. By improving waste practices and behaviours we aim to conserve natural resources, make cost savings and improve waste awareness amongst our students and staff. We are working closely with our key stakeholders, who include students and staff, contractors, suppliers of goods and services and our campus caterers, to accelerate progress on our waste and recycling commitments.

# Performance & Progress

While significant progress has been made over the past 10 years it is difficult to illustrate how far we've come due to lack of data gathering at the time. We've gone from 0% recycling rate in 2008 to over 50% recycling in 2019 and achieved Zero Waste to Landfill from 2018 onwards.

Measuring performance on campus is a challenge, given the multiple catering partners we work with and waste contractors involved. The Covid19 pandemic has also severely distorted our figures for 2021/22.

The table below shows the performance of each catering venue as well as the General Campus (teaching venues, grounds etc.) & Student Halls of Residence (please note we did not have data for 2019 so using 2021 data as a guide):

## 2019 Campus Waste Data

	Apleona	MasterChefs	SAOL	Sodexo	SUCS	Total
General Waste	7941	4352	2361	40640	8859	64153
Mixed Recycling	14342	5331	1341	15910	5833	42757
Glass	0	1980	0	960	5050	7990
Food Waste	21985	6085	2772	37038	5610	73490
<b>Total</b>	<b>44268</b>	<b>17748</b>	<b>6474</b>	<b>94548</b>	<b>25352</b>	<b>188390</b>
<b>Total Recycled</b>	<b>36327</b>	<b>13396</b>	<b>4113</b>	<b>53908</b>	<b>16493</b>	<b>124237</b>
<b>Recycling Rate</b>	<b>82%</b>	<b>75%</b>	<b>64%</b>	<b>57%</b>	<b>65%</b>	<b>66%</b>

General Campus	HALLS (2021 Data)	Combined
216,646	88,140	368,939
215,687	18,103	276,547
19,200	6,720	33,910
0		73,490
<b>451,533</b>	<b>112,963</b>	<b>752,886</b>
<b>234,887</b>	<b>24,823</b>	<b>383,947</b>
<b>52%</b>	<b>22%</b>	<b>51%</b>

Catering partners are required to abide by our Waste Management Policies and track the amount of waste they produce as well as the recycling rate. Each venue must provide for food & mixed recycling bins as well as general waste at a minimum and provide adequate signage.

Awareness campaigns have been organised within venues to encourage students to utilise these bins. We have organised Waste Characterisation Studies in both the catering venues and across the campus to ascertain the level of recyclable materials currently going into the general waste stream. Our latest survey in 2016 showed that there was a high rate of plastics going into the general waste, and as such we know there is much to improve on. We are planning to organise an updated survey in late 2021 to ascertain if improvements have been made.

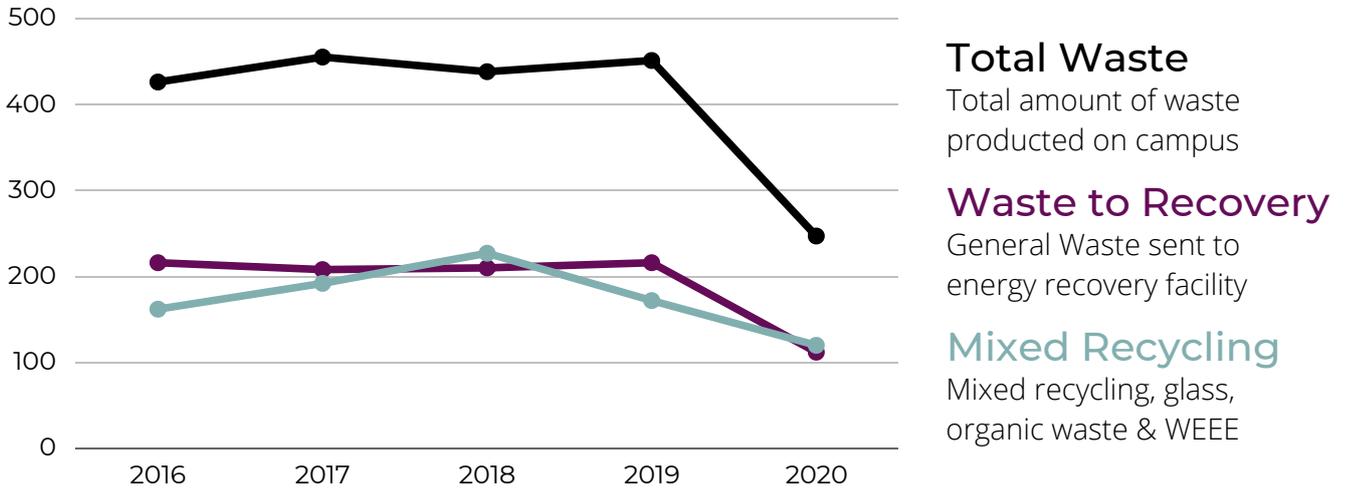
## Waste Characterisation Survey Results 2016:

Waste Category	Weight (kg)	% of Total
Organic Waste	16.3	12.4%
Papers	16.4	12.5%
Cardboards	15.65	11.9%
Composites	13.85	10.5%
Textiles	2.6	2.0%
Healthcare Textiles	0	0.0%
Plastics	46.7	35.5%
Glass	13.8	7.5%
Metals	14.65	1.4%
Special Municipal Waste	0	0.0%

# Performance & Progress

## General Campus Waste

Annual weight in tonnes (note - does not include catering venues, for which we only have complete data for 2019. Note also significant drop in 2020 due to Covid19)



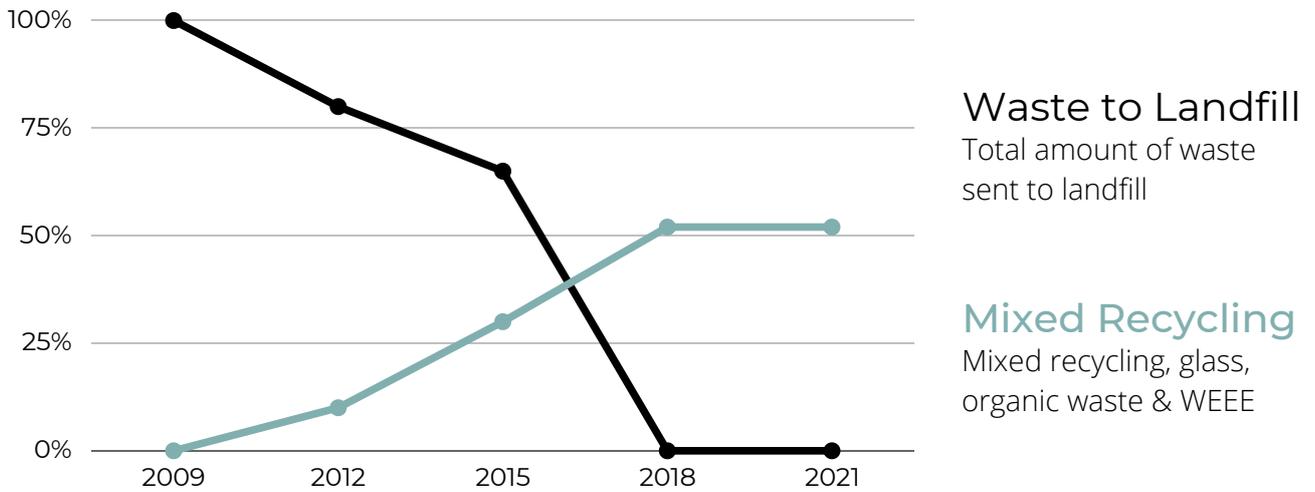
Our primary goal is to encourage all staff and students to reduce the amount of waste we are generating on site. The graph above shows that the total amount is pretty stable (ignoring for exceptional 2020-21 Covid impact). Prior to Covid, we were approaching a point where mixed recycling was overtaking the general waste stream, and this is something we will be striving to continue in the coming years.

**52%**

Our average recycling rate over the past two years.

# Total Recycling Rate

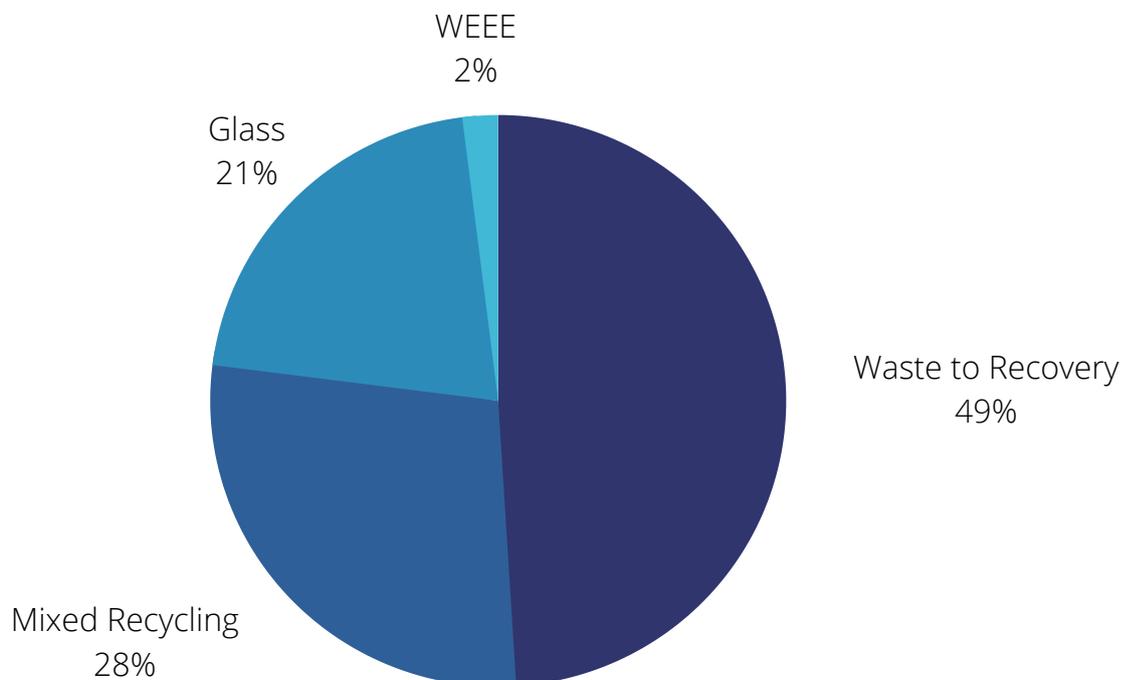
Increase in recycling over the past 10 years



This chart helps illustrate the dramatic improvements that have been made on campus over the past 12 years, when all of our waste on campus was sent to landfill. In that time, we have raised our recycling rate to over 50% and achieved Zero Waste to Landfill status with thanks to our waste contractor Barna Waste.

# Waste Composition

Breakdown of Waste Streams



# Recycling Initiatives

NUI Galway Waste League Table - August 2021			
Rank	Building Name	Monthly Average Recycling Rate %	2021 Average Recycling Rate %
1	James Hardiman Library Áras na Mac Leinn	62%	56%
2	Health Unit / BOI Theatre / Soils Lab Aras Ui Chathail/Telephone Exchange/Mail Rm	53%	55%
3	INSIGHT Building IDA Centre Dangan	55%	45%
4	Research and Innovation	51%	44%
5	Alice Perry Engineering Building	24%	42%
6	IT Building Service Road 2	47%	40%
7	Block D, E and Áras na Geailge Áras ní Emainigh	56%	39%
8	The Quadrangle Gate Lodge	38%	36%
9	Arts/ Science Building	40%	36%
10	Orbsen / NCBES Service Road 2	20%	33%
11	Áras Moyola Building	45%	32%
12	Clinical Science(UHG)	32%	28%
13	Old Anatomy Building Áras de Brun	23%	27%
14	Aras Cairnes St Anthonys	23%	25%
15	Kayak Club/Hauman Rights/Huston Film School Adult Education	12%	24%
16	Arts Millennium Building	69%	24%
17	Dangan Sports Pavillion Block T / Security	8%	14%
18	Pharmacology Riverside House	14%	15%
19	Martin Ryan Institute and Annex	17%	12%

## Building League Table

In order to promote better recycling across our many buildings, we introduced a league table and now each building competes against each other to see who has the highest recycling rate. Below is the latest league table:

## Binless Office

Three Waste Characterisation Studies commissioned by the Buildings and Estates Office in recent years suggested that an average of 67% of waste in the general stream could in fact have been recycled if segregated and channelled correctly

Bin the Bin focuses on enhanced recycling in the workplace and asks everybody to help achieve this goal. As the name would suggest it removes the traditional under-desk office bin for which there is no segregation option and thus no recycling and replaces them with dedicated recycling stations in key communal locations on every floor of the building.

Since introducing this initiative in 2019, our recycling rate has increased from 45% to 52%.



# CURRENT PROCESSES

Across campus, a huge volume and variety of waste is produced and managed by our internal team and external partners.



## General Waste

Our primary waste contractors Barna Waste collect the general waste streams across campus, extract valuable materials at their local processing facility, then ship the remainder to a 'waste-to-energy' facility in Europe. This energy is captured for electricity generation.

## Recycling

There are hundreds of mixed recycling bins internally and externally across campus. These are collected and then sorted into cardboard, plastic and glass, before being broken down / baled and shipped to specialist facilities for reproduction into new goods.



## Organic Waste

At present we provide for organic food waste collection in our canteens, cafes and restaurants. Much of this ends up back at our waste contractor Barna Waste who operate the only large composting facility in the area. A substantial volume of food waste is collected both from the kitchens during preparation and leftovers from customers in the canteens.

## Glass & Cans

Glass bottle recycling banks and an aluminium recycling facility are located on South Campus opposite the Orbsen Building and North Campus beside the entrance to Corrib Village. Our waste contractor collects and processes these locally.



## WEEE Waste

WEEE (Waste Electrical and Electronic Equipment) is anything that has a plug or a battery and is at the end of its useful life. The B&E team collect WEEE waste across campus. This process allows valuable resources including plastics, metals and glass to be recovered for further use in manufacturing, and ensures hazardous waste is disposed of safely helping to protect our environment.

## Hazardous Waste

A wide variety of work is carried on across campus, especially in research buildings where different varieties of hazardous waste are produced. As such, each unit uses their expertise and takes responsibility for organising the safe disposal of the hazardous / chemical waste they produce.



## Shredding

DGD Shredding are our contractors who facilitate the disposal of confidential material across the campus. Lockable consoles are available in each building where staff can dispose of confidential material. This is collected and processed by DGD at their Limerick facility.

# FUTURE INITIATIVES

We are always exploring new ways to sustainably manage our waste across campus.

## 1. Composting of Organic Waste

At present we provide for organic food waste collection in our canteens, cafes and restaurants. As of October 2021, we will be commencing an organic waste collection across our vast 105 hectare estate in collaboration with our waste contractor Barna Waste who operate the largest composting facility in the region.



We produce a huge volume of organic waste like leaves, grass cuttings and hedge trimmings which is not currently being recycled. This organic matter is incredibly valuable and essential to add to food waste to provide for an optimum composting mixture.

As per the diagram to the right, once this matter is mixed with food waste and broken down into fertiliser, we will then ship this back on campus to use as fertiliser on our flower beds.



# TARGETS

We are setting ambitious targets to ensure we improve our waste management

While there are many short and long term objectives in mind, the below are specific actions we aim to take and deliver by the end of 2022.

01

## Increase recycling rate to 55% by 2025

While a lot of progress was made since 2010, our recycling rates have plateaued in recent years. Our introduction of new organic waste stream should help us achieve this target.

02

## Incorporate All Waste into Reporting by 2022

Until now, our waste data did not include the campus catering outlets which produce a significant amount of the overall waste on campus. From 2022 we intend to include this data in our reports to give a truer account.

03

## Introduce Organic Waste Stream by 2022

We plan to introduce a new organic waste stream which will be composted and turned back into fertiliser for our groundstaff to use across campus.

04

## Reduce total waste produced by 10% by 2025

In alignment with the waste hierarchy, we want to reduce the amount of waste on campus, through initiatives like reusable cups, paperless office, responsible procurement etc. Our goal is an achievable 10% overall waste reduction.

# ACTIONS

## What are the headline actions which we will be focusing on in 2022?

While there are many short and long term objectives in mind, the below are specific actions we aim to take and deliver by the end of 2022.

01

### Carry out Waste Characterisation Survey

This survey will ascertain the breakdown of substances currently going into each stream and highlight areas for improvement such as contamination of recycling streams.

02

### Improve Hazardous Waste Process

At the moment, given the legal and safety complexities of this waste stream, the process is quite fragmented. Each building is responsible at present for the disposal of their hazardous waste. We want to implement a unified approach to reduction and safe disposal of this waste.

03

### Introduce Organic Waste Stream

We plan to introduce a new organic waste stream which will be composted and turned back into fertiliser for our groundstaff to use across campus.

04

### Develop Waste Policies for Each Stream

At present we lack specific policies around the disposal, reuse or recycling of specific types of waste such as Hazardous Waste. We will work to have these drawn up & implemented by end of year 2022.

# CONCLUSION

It is clear a lot has been done to improve recycling and sustainable management of waste on campus. However there is far more that can be done. This Waste Management Plan will be updated yearly to illustrate our progress on achieving our key actions and highlighting our performance. We look forward to working with all stakeholders across campus to set and achieve ambitious goals.

*We thank you for your continued cooperation in helping NUIG become a world leading green & sustainable campus through responsible waste practices*

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## BUILDINGS & ESTATES

For further information on the details within this report or to discuss how you or your department can help us in managing waste on campus please reach out below.

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