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# Polystyrene (EPS) Recycling

**WORLD  
CHANGING  
GLASGOW**

THE SUNDAY TIMES  
GOOD  
UNIVERSITY  
GUIDE  
2022  
SCOTTISH  
UNIVERSITY  
OF THE YEAR





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## Why are we here

VG Volker  
Gruppe™

by BEW/

Asked on several occasions if we recycled polystyrene and if not why.

Real appetite by schools and colleges particularly in lab and IT environments to recycle polystyrene.

Polystyrene is very light and bulky and doesn't take much to fill a standard 1100 litre Euro Bin.

UoG has a real appetite to continue to improve our waste recycling and driving our targets for Net Zero by 2030



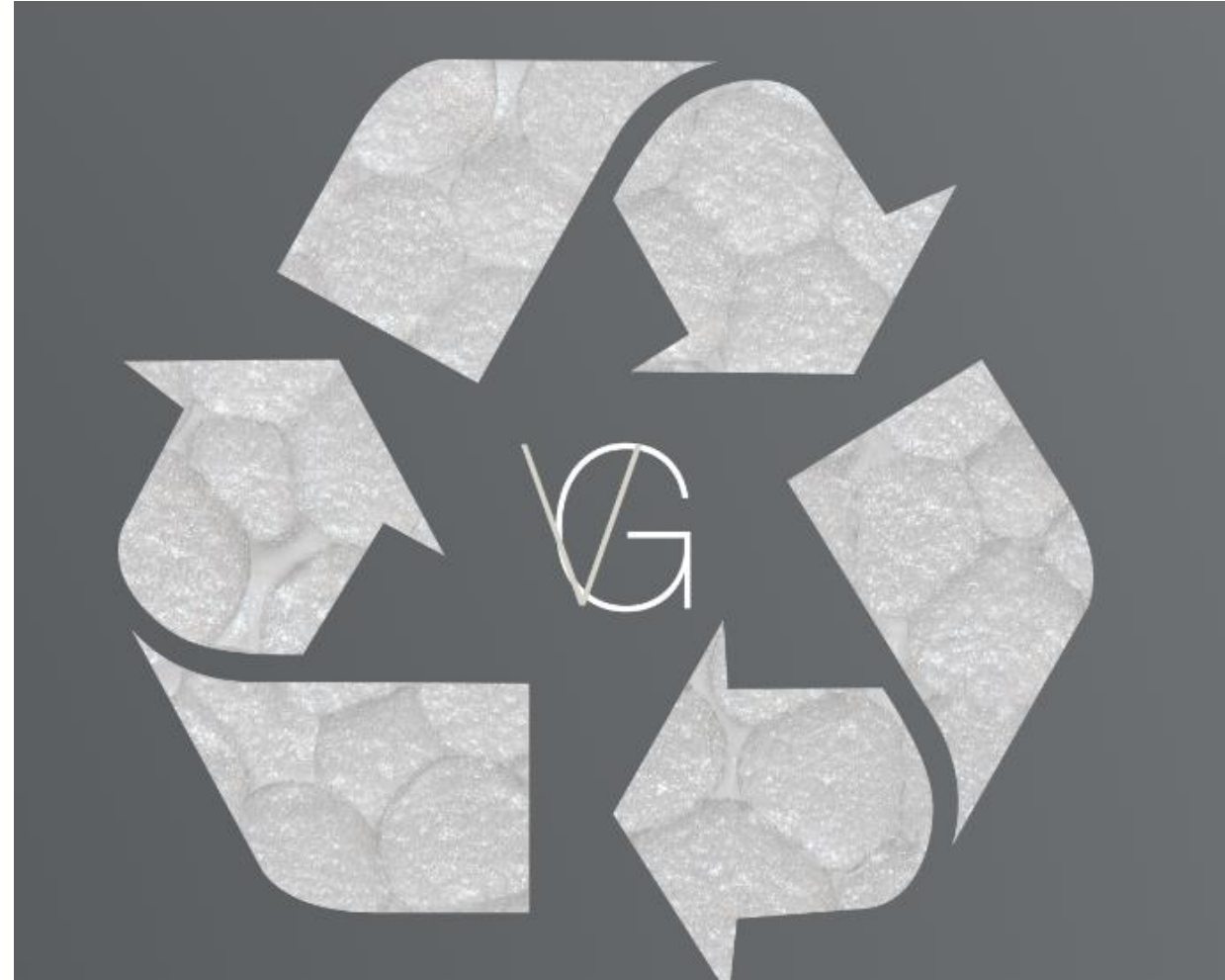


## Journey so far.

UoG did several trials with the current waste supplier which never really took off for various reasons.

Then reached out directly to Volker Gruppe who are a local company based in Chryston near Glasgow

In July 2023 we started a trail of 4 x locations across campus that generate small to medium volumes of EPS so that we can monitor and measure these volumes.





## Journey contd.

A standard 1100ltr Euro bin holds 1.47m<sup>3</sup>. if filled with polystyrene this would weigh circa 7.5kg of waste.

Average 1100ltr Euro bin weight for General waste is 50kg (Variance 42.5kg)

Potentially underweight bins being charged at full price, depending on how your waste contract is set up?







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## How it works

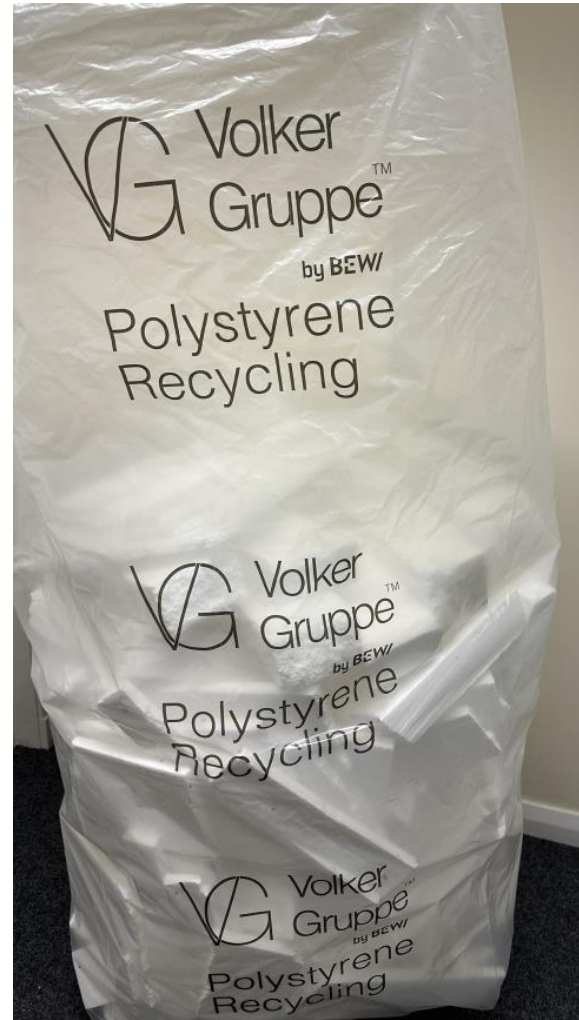
4 x locations identified 2 small & 2 medium across two campuses.

EPS waste collected in large polyethene mattress bags for smaller sites and large tonne bags for the larger sites.

Collections carried out on a milk run basis with bag replenishment carried at same time if required.

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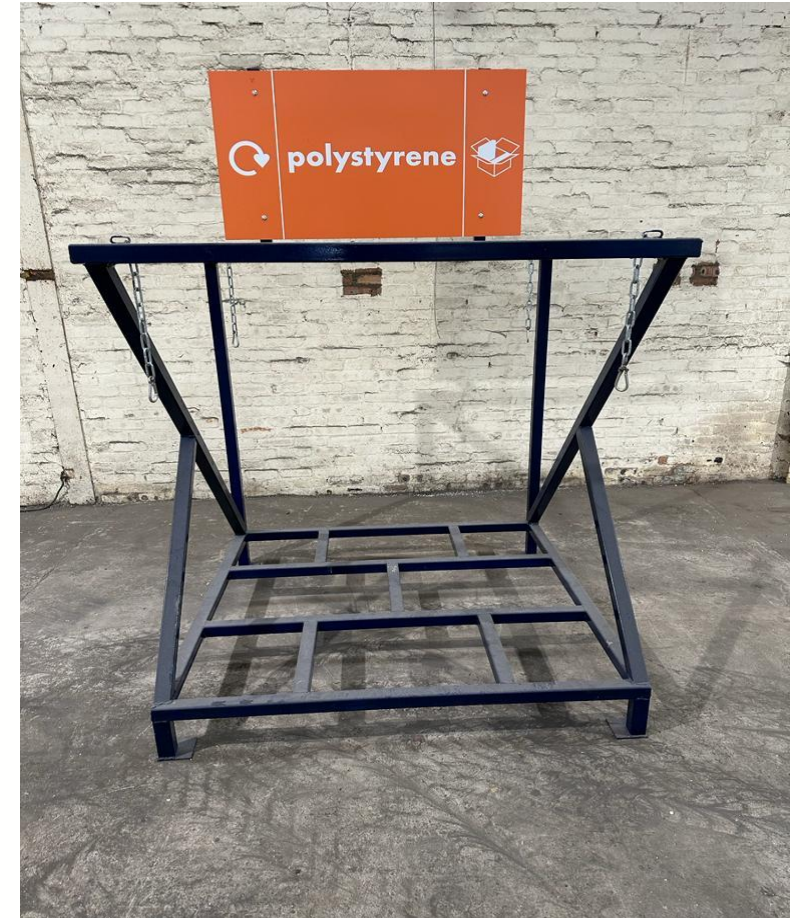
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## How it works

- Volker survey sites and advise best solution to maximise recycling.
- For large site where space is not an issue cages are provided to house the tonne bags which are also FOC.
- For smaller sites or where space is restricted, smaller polythene bags are offered to contain the EPS.
- Once sufficient volumes are accumulated a milk run is completed by Volker collecting all bags and replenishing new bags if required.







## How it works

- Volker only charge transport costs for recovering the EPS waste.
- Upon completion of the collections Volker provide recycling reports to UoG which are included in the overall recycling figures.
- Concurrently we are carrying out an external bin optimisation project with a view to reduce the number of external waste bins and increase the number of EPS recycling points across campuses.
- Did you know that for every 1kg of EPS recycled there is 5KG CO2 savings.





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2023

Date	VG/CH	PO No.	VG Number	E.W.C Code	Number of Bags	EPS Recovered Kg	Waste	Non-EPS Foam	Total Nett Kg
21.7.23	5355	20394214	VG23652JR	15.01.02	13	119.5	0	0	119.5
15.8.23	5425	20399566	VG23715JR	15.01.02	13	102	0	0	102
4.9.23	5478	20399566	VG23759JR	15.01.02	15	145	0	0	145
4.10.23	5561	20399566	VG23802JR	15.01.02	17	122	0	0	122
9.11.23	5668	20399566	VG23902JR	15.01.02	16	176	1	0	177
15.12.23	5780	20399566	VG23975JR	15.01.02	16	128	2	0	130
							3	0	
<b>6 Uplifts</b>					<b>Nett EPS</b>	<b>792.5kg</b>			<b>795.5kg</b>

2024

Date	VG/CH	PO No.	VG Number	E.W.C Code	Number of Bags	EPS Recovered Kg	Waste	Non-EPS Foam	Total Nett Kg
7.2.2024	5913	20399566	VG24109JR	15.01.02	15	165	0	0	165
27.2.24	5973	20399566	VG24142JR	15.01.02	14	154	0	0	154
2.4.24	6091	20399566	VG24224JR	15.01.02	12	132	0	0	132
19.4.24	6142	20399566	VG24273JR	15.01.02	9	79	0	0	79
							0	0	
<b>4 Uplifts</b>					<b>Nett EPS</b>	<b>530kg</b>			<b>530kg</b>



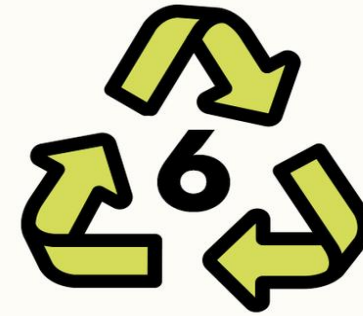


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## About Volker Gruppe



- Volker Gruppe is a specialist polystyrene ((EPS) recycler.
- EPS6 stands for Expanded Polystyrene, it carries the 3 arrows and the number 6 which you may or may not be familiar with, these are the generic 3 arrowed recycling logos that assist us to identify what is and is not recyclable.
- Our plant in Chryston, North Lanarkshire processes 1500 tonnes per year of packaging and construction grade EPS scrap, we want to grow this and hope you can join us on the journey.



**PS**  
**(POLYSTYRENE)**



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## Volker Gruppe

- Our company's function is in the recovery, recycling, and the reconstitution of EPS back into a usable product, namely XPS insulation board,
- Group Owners *Bewi Circular* operate 4 large turnkey extruders, the EPS we recover is made back into rPS recycled pellet.
- Polystyrene is a stand-alone material which means that you don't add or take anything away from it as it can be recycled several times in its cycle.





# The process

A closed loop for EPS





- Recycling of polystyrene is fairly easy in that the material is simple to process.
- Key elements however is its collection and segregation from other waste streams and the extraction from general waste and the normal recycling route.
- We offer a bespoke collection and recovery system for this very reason, which has been a huge benefit to the university of Glasgow and their aspirations for waste reduction towards Net-zero targets.







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Polystyrene is over 90% air and is used in a wide and varied range of products from Fish boxes to car seats from white goods to children's safety helmets.

On average you save around 5kg of Co2 for every 1kg of polystyrene you recycle, this is compared to the production of new EPS products.





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**EPS Waste generated at UofG is  
equivalent to covering half a  
standard football pitch**







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## Contact details



If EPS recycling is of interest to your organisation and you would like to know more about it or to discuss our journey in more detail. Feel free to contact myself or John details below.

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Thank you

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