

Reducing Food Waste in Primary Schools

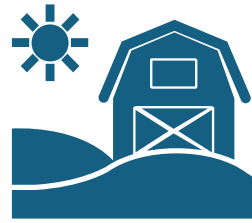
Louise Gillam, School Catering Dietitian, Torfaen CBC

Tracy James Senior Operations Manager, Catering and Cleaning,
Torfaen CBC

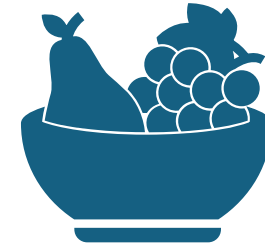
Why do we care? The bigger picture.



Economic loss - In the UK avoidable food waste costs £11.8 million a year



Environmental loss - In the UK avoidable food waste accounts for 22 million tonnes Co2equivalent



Nutritional loss – pupils missing out on key nutrition for the best start in life

Types of Food Waste

- Preparation Waste (Fresh v frozen. Waste higher in fresh veg – leaves, peel, other non-edible parts need disposing of)
- Serving Waste (pre-ordering should minimise)
- Plate Waste (most food waste occurs at this level)
 - top 3 categories are starchy foods, vegetables and fruit
 - 27% of total meal budget
 - 21pence per average meal
 - 23% of embodied carbon emissions of the meal

Plate Waste means reducing the gap...

(Between what we are allowed to
serve or what we think pupils
want. And what our pupils really
want on their menus)



Reducing the gap means actively listening

- ALL and ANY pupil engagement is key!

Annual Waste Warriors Competition – who said waste reduction can't be fun?

Feedback on menu choices from School Council Meetings, Cooking Sessions with the Cook

Getting parents on board before pupil start at school

Peer reviewed recipes and dishes - real quotes on dishes on website

More choice than ever so pupils not stuck with something they will not eat. More choice = less, not more waste



Waste Warriors

Annual inter schools competition running for the last 4 years

Pupils pick a week of the menu cycle and weigh the plate waste in the dining hall

THEY CAMPAIGN (the fun part!)

Pupils reweigh plate waste when that week of the menu cycle comes around again

THEY SUBMIT RESULTS AND FEEDBACK TO CATERERS





Waste savers



What pupils did between weigh in weeks

- Their own research into harm to the planet from food waste
- Delivery of Assemblies with PowerPoint presentations sharing findings
- Creating/displaying posters in the dining hall
- Designing and distributing of questionnaires to ask peers what the issues were
- Selfie Frame Photo Opportunities
- Gallery of Photos of pupils who cleared their plates
- Letters to caterers politely but succinctly explaining the issues in the pupils' own words





WASTE WARRIORS

Did you know?
That when cows
burp or fart they
release a gas
called methane
which is bad
for the earth.



If we win we will
get a free cooking lesson

WE NEED TO STOP WASTE

sheet to record your daily dinner hall waste

sheet to record your daily dinner hall waste

FOOD WASTE MONITORING 1 Day: Tuesday Date: 16.05.23

LOVE FOOD hate waste **ZERO WASTE** Scotland

Packed lunch waste:

Menu

Strips of chicken Breast with Sweet and Sour Noodle

Strawberry wirl

Total: 16.80 Kg

Food waste from plates



Total: 16.80 Kg

Liquid waste



Total: 3.65 Litres

Your school day - what is happening?

We had 2x less class in the hall today because 2x class was on a school trip.

Monday 16 May
Friday 19 May

LOVE FOOD hate waste **ZERO WASTE** Scotland

1st Weighing

Food waste from plates

13.85	23.15	67.40	78.05
+ 16.80	+ 24.25	+ 30.65	+ 18.70
<u>30.65</u>	<u>47.40</u>	<u>98.05</u>	<u>96.75</u>
11	1	1	1

Total for the week 7

Total: 96.75 Kg

Liquid waste

2.15	22.5	6.80	11.15
+ 3.65	+ 2.10	+ 4.35	+ 3.70
<u>6.80</u>	<u>4.35</u>	<u>11.15</u>	<u>14.85</u>
1	1	1	1

Total liquid for the week

Total: 14.85 Litres

FOOD WASTE MONITORING 1 Day: Friday Date: 18.05.23

LOVE FOOD hate waste **ZERO WASTE** Scotland

Packed lunch waste:

Menu

Food waste from plates

FOOD WASTE MONITORING 1 Day: Thursday Date: 18.05.23

LOVE FOOD hate waste **ZERO WASTE** Scotland

A sample of the weekly results

Woodlands 29% reduction

Before 96.75kg, After campaigning
69.04kg

Blenheim Rd/Coed Eva 28% reduction

Before 90.7kg, After 65.65kg

Henllys 16% reduction

Before 84.1kg After 70.75kg

Feedback from school staff

Thank you for involving Henllys in the project, it not only captured the children's attention but also staff. Every day when the children weighed the waste the staff would always try to guess the weight.....there was an improvement, however the children would like to continue the project with a huge launch in September. This will then become part of our Eco board and the school can keep a running record to see how we can improve further". - Henllys CIW School

This was exactly the authentic style project we were looking for! It has gone really well. The children have loved it! We weighed a few weeks back and then did our assembly to the school on our findings".

Nant Celyn School

Thank you so much for all your help, support and guidance! We have loved taking part in the 'Waste Warriors' scheme. We are definitely keen to become involved with any further initiatives.... I would personally like to thank you for all your help and support. The eco committee have loved this initiative, they have brought change for every one of our learners which is truly remarkable! Thank you!" - Blenheim Road School

Torfaen Pupils Plate Waste Work Shortlisted with the nationals and multinationals



And Torfaen pupils recognised elsewhere for their work in reducing plate waste





Feedback on menu choices at school council meetings





Feedback on menu choices at
pupil cooking sessions
(delivered by their school cook)

Cooks cook with pupils (whilst gathering their menu suggestions)





Getting parents on board at new intake sessions



Think you know School meals?

Did you know...

We care
School meals are packed with key nutrients for children's healthy growth, development, and concentration

We care
Our weekly school menus are nutritionally analysed by an NHS Dietitian to ensure your child receives 1/3 of their daily requirements

We care



Peer reviewed dishes on the
websites for the Gordon
Ramsey wannabes.....

[Home](#) » [Education & Learning](#) » [Schools & Colleges](#) » [School catering](#) » [Pork and carrot meatballs in gravy with mashed potato, broccoli, carrots, green beans and](#)

Pork and carrot meatballs in gravy served with mashed potato, broccoli, carrots, green beans and gravy



In this Section

- [➤ Beefburger in a bun served with chips and peas](#)
- [➤ Cheese and tomato pizza, chips and side salad](#)
- [➤ Cheese and tomato pizza, chips, peas and sweetcorn](#)
- [➤ Cheesy bean filled jacket potatoes](#)
- [➤ Chicken and mixed peas](#)
- [➤ Chicken goujons served with diced potatoes, peas, and bread](#)
- [➤ Chicken in a creamy tomato and mascarpone sauce](#)
- [➤ Chicken mayonnaise](#)

Why we chose this dish

Our Pupils' Choice

"I tried the meatballs and I think they are outstanding" Seb, Ysgol Panteg

"They are lush, they are my favourite school dinner" Kallyanna, Ysgol Panteg

"Out of this world, they were lush" Toby, Ysgol Panteg

"They are very, very good. Best meatballs I've had" Oscar, Ysgol Panteg

"They are very, very, very good. I absolutely love them" Isabelle, Ysgol Panteg

"Delicious and 1000 thumbs up!" Thomas, St David's

Our Dietitian's Choice

"These meatballs, made with pork and carrot provide a source of protein, iron and zinc. Whilst poor old carbs often take a bashing in the press, we need carbs for slow-release energy and to help our pupils stay focussed throughout the day, hence the addition of mashed potato. And, as always, a good selection of veg helping our pupils to reach their 5 a day."

Sustainable School Meals

Reduced carbon emissions – All our recipes have had their carbon emissions calculated by Edinburgh University. The beef meatballs dish served on previous menus was our highest carbon emitting recipe. By switching to pork and carrot meatballs, the dishes emissions have been reduced by a whopping 70%.

UK Farm Assured Standards - These pork and carrot meatballs are prepared from UK Red Tractor pork which is produced to independently inspected standards relating to treatment of the animals, food safety and traceability. It also means that we are supporting UK farmers who are facing challenging times.

- Chocolate brownie and glass of milk
- Cod fish fingers served with herby diced potatoes, baked beans and bread and spread
- Crusty crumb topped broccoli and cheese mac served with garlic bread and salad
- Double bubble salmon fillet served with mash, peas and garlic bread
- Double bubble salmon fillet with herby diced potatoes, peas or mixed salad, bread and spread
- Fruit & Ice Cream
- Fruit crumble served with custard
- Fruit jelly and biscuit
- Fruit selection and yogurt
- Fruity flapjack and milk drink
- Glamorgan style sausage hot dog served with chips, baked beans or peas
- Glamorgan style sausages (v) served with herby diced potatoes, baked beans and bread and spread



More Choice than ever on
menus leads to LESS waste, not
more

Biggest change as a result of pupil feedback

- We weighed our waste and noted that the majority was from the pre plated salad bar. With your help, we no longer have this problem, instead we have a pasta bar which is incredibly popular! With significantly less waste! At the start of our journey, we were averaging 5.8kg of waste a day. We reduced that to 2.1kg!”



Menu Revisions

- 4 week cycle (rather than 3)
- Pre-plated salad bar switched to a pasta salad bar
- Additional vegetarian or vegan option for all (additional, not instead)
- Lower carbon emission dishes highlighted
- Feedback from pupils is key to designing menus

Menu 2025 to 2026

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
Bubble Salmon* served with Herby diced potatoes, peas or mixed salad, bread and spread or Vegetable Noodles (v) served with a tortilla wrap ***** Jam and Coconut Sponge with custard	Homemade Beef Lasagne or Homemade Quorn and Spinach Lasagne (v) served with garlic bread and mixed salad ***** Fruit and yoghurt	Roast Chicken and Stuffing or Quorn Fillet and Stuffing (ve) served with dry roast and boiled potatoes, seasonal vegetables and gravy ***** Fruit flapjack and milk	Pork and Carrot Meatballs or Quorn Balls (v) served with mashed potatoes, broccoli, carrots, green beans and gravy ***** Fruit and yoghurt	Cheese and Tomato Pizza (v) served with chips, mixed salad or peas or Cheesy Bean Filled Jacket Potato (v) ***** Chocolate arctic roll

Pasta Bar

Also Available Daily

Plain/
Tomato Pasta
or Baked
Potatoes

Accompanied with

Tortilla wrap/
Garlic bread,
cheddar cheese
with a mixed salad
or baked beans

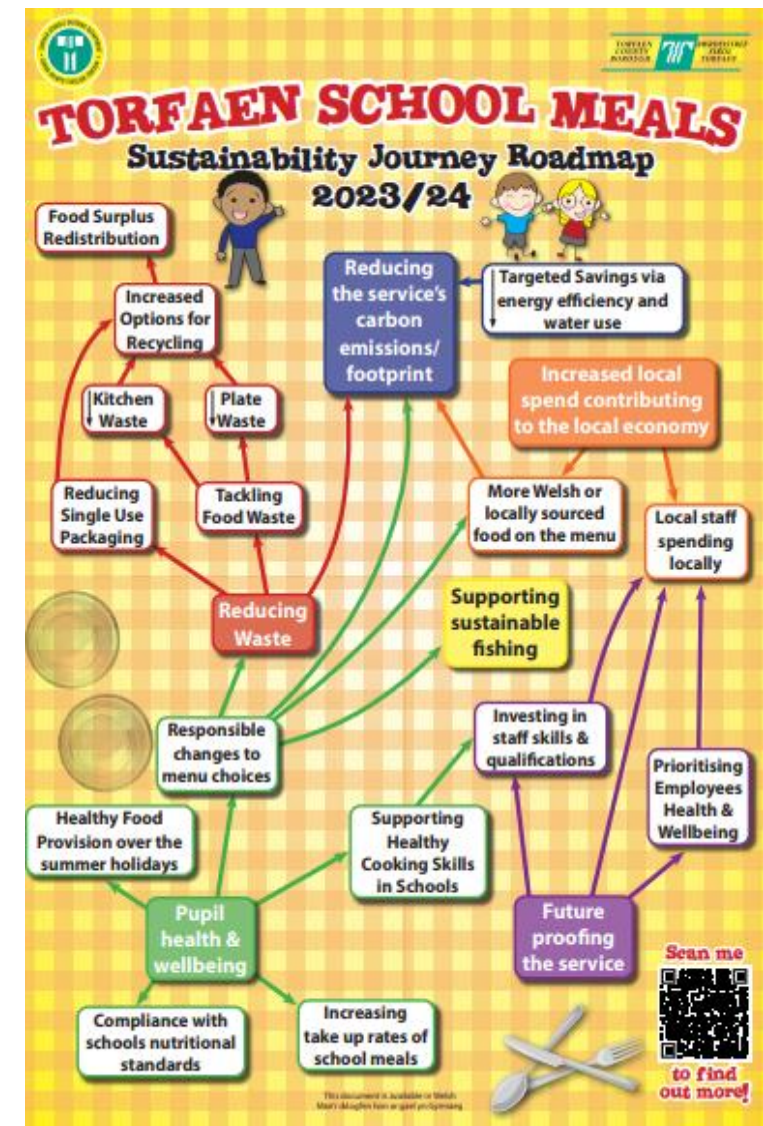
Monday	Tuesday	Wednesday	Thursday	Friday
Rich Homemade Bolognese	Mac and Cheese (v)	Tuna and Sweetcorn Mayo	Quorn Sausage (ve) in a Rich Tomato Sauce	Chicken and Mixed Peppers

V Vegetarian. All accompaniments to main choices are suitable for vegetarians. Jelly and trifle are not suitable for vegetarians. Ve Vegan. All accompaniments to main choices above are suitable for vegans with the exception of Yorkshire pudding. A fully vegan menu is available on request. Menus may vary in faith schools, please check with your individual school for details.

This symbol highlights the meal choices with lower carbon footprints



How waste reduction supports wider climate action and sustainability goals



Other areas of work

FOODS WITH THIS SYMBOL ARE
GOOD FOR THE PLANET



LET'S KEEP OUR PLANET COOL

Have you spotted a new logo on our menus?

This symbol highlights the menu choices with lower carbon footprints. Our recipes have been analysed by University of Edinburgh. These meal choices are confirmed as producing 1.5kgs or less CO₂e per kg. For more information on the carbon emissions of school meals scan the QR code.



University of Edinburgh analysis

Through a combination of responsible menu changes (60/40 red meat/quorn recipes, veggie and vegan dishes daily in addition to meat dishes

PLUS

Plate Waste reduction and changing waste disposal method

RESULT

Per kilo of food served we demonstrated a whopping **32% reduction in carbon emissions in just a year.**



**SERVICE
AWARDS
2025**

Best Climate Action
or Decarbonisation
Initiative
-WINNER

Renewed
efforts on
plate waste
will likely be
needed in the
future?
Keeping on our
toes.....

Top 3 categories of food wasted on school plates

(from published studies)

- 1) **Starchy carbs**
- 2) **Vegetables**
- 3) **Fruit**

New Regs (from October 2026)

- 1) Larger MINIMUM portion sizes of **starchy carbs**
- 2) Double portions of **veg** at lunch with larger MINIMUM portion sizes
- 3) More **fruit** at lunch with MINIMUM portion sizes
- 4) **WIDER gap** as to what we are allowed to offer and student preferences (beans/pulses)?

What's to come.....want to know more?



Tracy James, Senior Operations Manager
tracy.james@torfaen.gov.uk



Louise Gillam School Catering Dietitian
louise.gillam@torfaen.gov.uk