

# Swimming against the plastic tide - are we helpless?

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# Swimming against the plastic tide

Agenda:

Some facts, and myths, about plastics

A short quiz

**Are we helpless?**

- 10 ways to break the plastic habit
- Review existing local action
- Q&A / Discussion 'how do we mainstream action on plastic?'





In the UK: The waste generated  
per person each year already  
weighs more than  
four adult giant pandas



Only 8 percent of ALL plastic ever produced has been recycled ... *even now only 15% is recycled globally.*

Nearly half all plastic is used for single-use items,  
which almost instantly become rubbish.

# The (BIG) problem with plastic

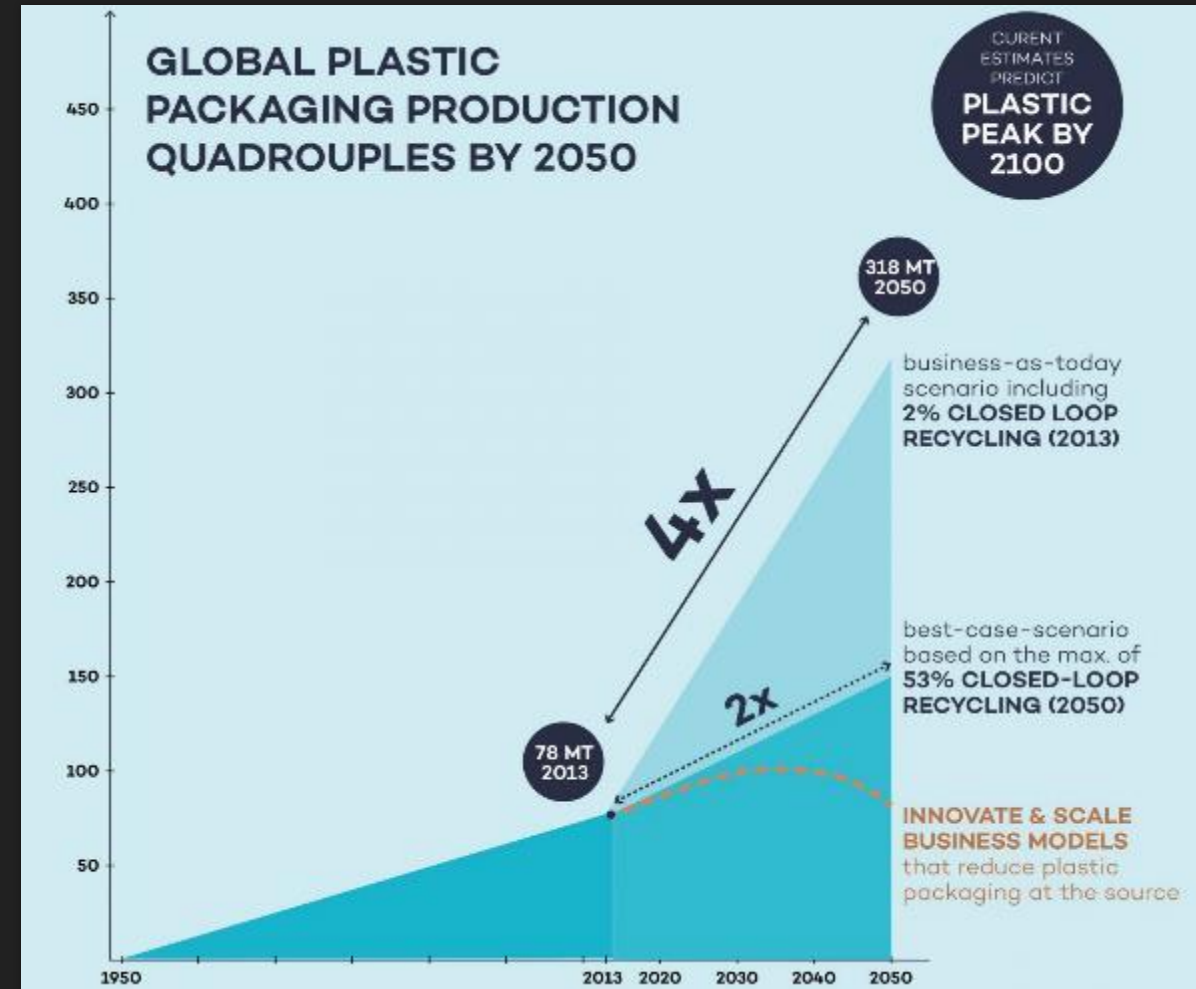
# It's a **GROWING** problem: global plastic consumption is set to double by 2034

Plastic use in **PACKAGING** is rising especially fast:

In '**business as usual**',  
plastic packaging will **quadruple** globally, by 2050.

In '**best-case-scenario**'  
(53% recycling, globally, by 2050),  
plastic packaging will **double** globally, by 2050.

Source: Greenpeace





# The smaller the fragments, the more worrysome ...

## **Microplastics - any plastic fragment under 5 mm long.**

**Primary** - pieces under 5 mm **before** entering the environment, e.g. vehicle tyre dust, fibres from clothing, toothpaste microbeads, 'nurdles' (plastic pellets).

**Secondary** - larger plastic products break down **after** entering the environment, e.g. plastic bags & bottles.

## **Nanoplastics – fragments under 1 $\mu\text{m}$ (i.e. 1000 nm).**

Little is known of their health effects in living organisms (including humans).

Can cross cellular membranes and affect cell function.

Accumulate in various organs e.g. gall bladder, pancreas, brain.



*Dec 2020: first time microplastic particles found in the placentas of unborn babies*

# Cost #1: environmental catastrophe

**Many bird and animal populations are collapsing to the point of extinction due to plastic:**

**Albatrosses** Live for over 50 years  
Mate for life  
Are devoted parents.  
Their chicks are starving to death because their stomachs are full of plastic.

**Fish** Actively prefer polystyrene particles to plankton.

**Marine plants are suffocating in the plastic soup:**

They produce 70% of the world's oxygen.  
If the plants go, the oxygen goes too.



IF YOU DON'T PICK IT UP THEY WILL.





# Cost #2: Plastic is climate change's 'evil twin'

**The plastic industry is 2<sup>nd</sup> biggest, fastest-growing, source of industrial greenhouse gas emissions.**

**One in ten barrels of oil** used to create new plastic.  
**4% of all global carbon emissions** is due to plastics – more than aviation.

**Incineration** of plastic is creating massive CO<sub>2</sub> emissions.

**Big oil needs the profitable plastic packaging sector** to sell what is now excess fuel.



# Cost #3: Damage to human health

Surprisingly little is known about the health effects of plastic, particularly microplastics.

What is known:

**Plastics e.g. Bisphenol A (BPA) cause endocrine disruption** connected with low fertility, language development disorders, cancer, obesity, ADHD.

**Styrene (in polystyrene & styrofoam) - a carcinogen; toxic to the brain and nervous system.** It's one of the most commonly littered items, and there's no market for recycling it.

**Plastics absorb toxic chemicals (e.g. PCBs, DDTs).** Toxins accumulate in seawater and become more powerful as they go up the food chain.

**Emissions from incinerating plastics** - heavy metals, dioxins,  $\text{No}_x$  and particulates that cause air pollution and clusters of cancer mortalities.

**PFOA (Teflon)** – 'the forever chemical'





# Cost #4: Financial burdens for consumers & taxpayers

**Producers currently only pay 10% of costs of dealing with their packaging waste. Taxpayers, via council charges, pay 90%.**

**Extended Producer Responsibility scheme** plans to make producers pay 100% of disposal costs, but this doesn't come in until 2023, at the earliest.

**'Un-flushables' create higher water bills:** water companies spend £88 million per year unblocking drains & sewers, caused by plastic wet wipes & period products put down the loo.

**Coastal litter:** costly for businesses reliant on coastal tourism.

## Cost #5: Eco-anxiety

### Despair, grief, anxiety, stress, depression ...

- as we notice the environmental changes and the rapid loss of species and natural environments.
- we can see this 'miracle material' is turning on its maker.
- we know we're creating nightmares for future generations.

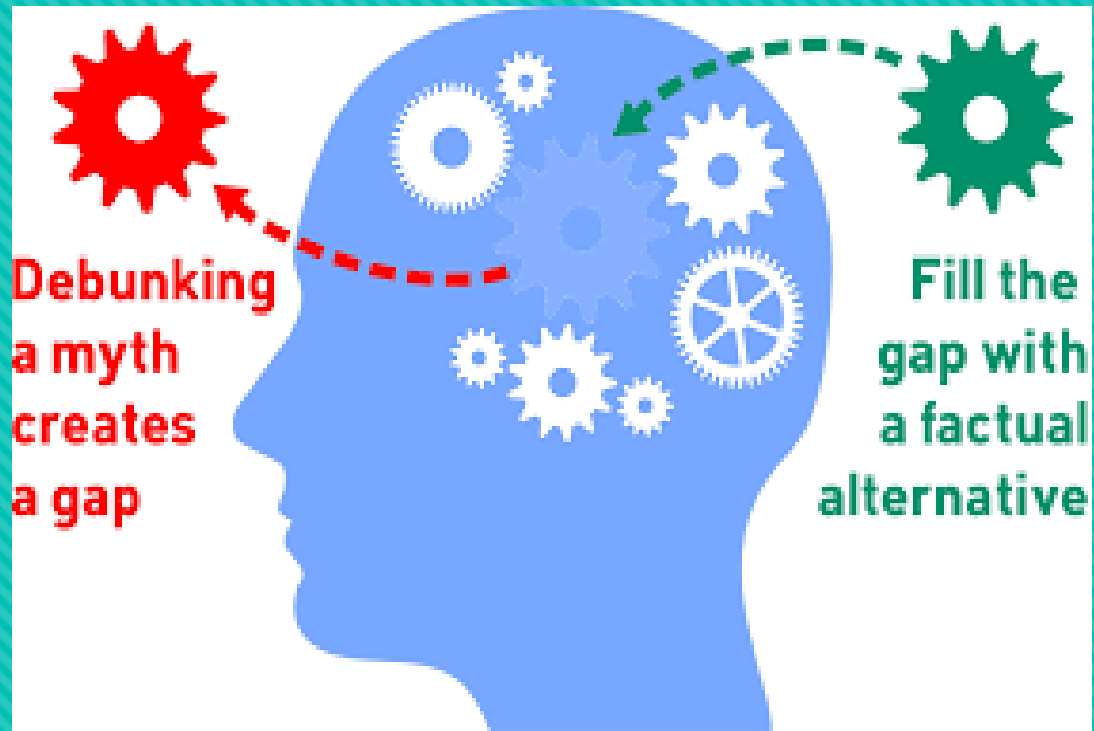
**When the bath's overflowing, we need to turn off the tap, rather than to improve our mopping.**

*Lego keeps appearing on a Cornish beach – the container washed overboard in 1997.*

*The pandemic has supercharged the amount of plastic we use  
– not just PPE, but product packaging too.*







## FIVE PERVASIVE MYTHS:

- 1) Recycling's the answer
- 2) Supermarkets are making headway
- 3) The UK's leading the world
- 4) Waste incineration is a good idea
- 5) Ocean plastic can just be scooped up

# Separating Plastic Fact from Plastic Fiction

# Myth #1: We can recycle our way out of this? **No!**

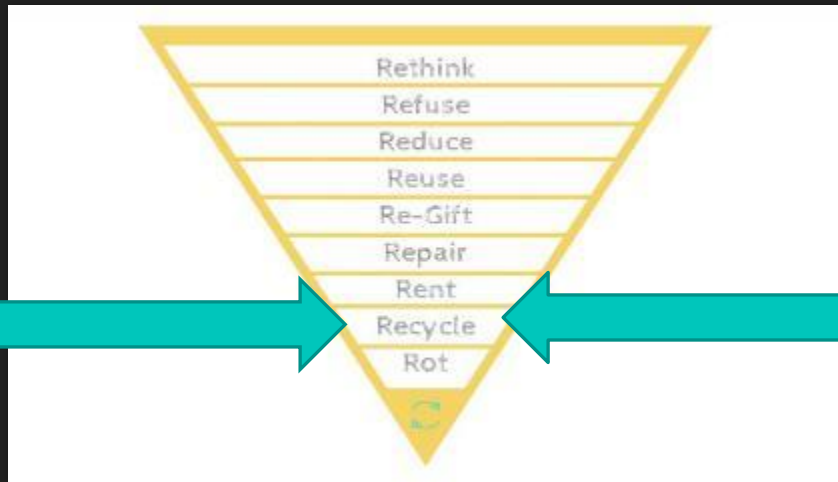
## Plastic can be DOWNcycled, not REcycled

Few plastics can be recycled back to original item (water bottles).  
Every time plastic is 'recycled', its value reduces.  
Few options to recycle fleeces or recycled plastic furniture.

## Recycling is uneconomic vs. cheap new plastic

The economics simply don't work.

## Many packages are simply not recyclable





# Myth #2: UK supermarkets are reducing plastic use. **No!**

**7 out 10 UK top supermarkets increasing their plastic footprints despite public commitments to cut use**

Total UK supermarket plastic use c. 900,000 tonnes p.a. (Up 12% from 2018 to 2019)  
Top 8 UK supermarkets pump out c. 58.3bn pieces of plastic p.a.

**Supermarkets aren't forcing their suppliers to act**

Big brands suppliers are driving the rise in plastic.

**'Progress' has stalled during the pandemic, a year when supermarkets have made bumper profits**

**UK supermarkets pay LOWEST in Europe for collecting/ recycling plastic waste**

UK: pay average of £18 per tonne towards recycling.

Other European countries: retailers pay up to £133 per tonne.



# Myth #3: “the UK’s leading the way”

(the problem’s those other countries not pulling their weight ...) **No!**

## England’s way behind international leaders on household waste recycling.

And in other ways:

**Bottle deposit schemes:** Norway (1970s), Iceland (1989), Denmark (2002)

**Reverse vending machines:** Germany (2003).

**Plastic free supermarket aisles:** Netherlands (2018).

**Complete plastic bag bans:** Rwanda (2008); France & Kenya (2017).

**Banned all single-use takeaway plastic plates, cups, cutlery:** France (2020)  
disposable products must be compostable in domestic composters.

**Complete ban on expanded polystyrene:** Zimbabwe (2017) fines up to \$500.





# Waste imperialism

## UK *still* exporting plastic waste for 'recycling'

- 2017 China stopped imports plastic waste
- UK waste now → Malaysia, Turkey, Indonesia.

+ Sachets sold by UK corporates (Unilever etc) **to Africa and Asia**



Childminding while waste-processing in Bangladesh



# Myth #4: 'Waste to energy' is a good idea, because the Scandinavians do it? **No!**

## **Burning waste is worse than burning coal.**

Each tonne of waste incinerated generates one tonne of CO<sub>2</sub>  
Very expensive way to generate power.  
Toxic emissions (dioxins, furans, particulates, NOx, heavy metals.)  
Fly-ash dust and fly-ash disposal are problems.

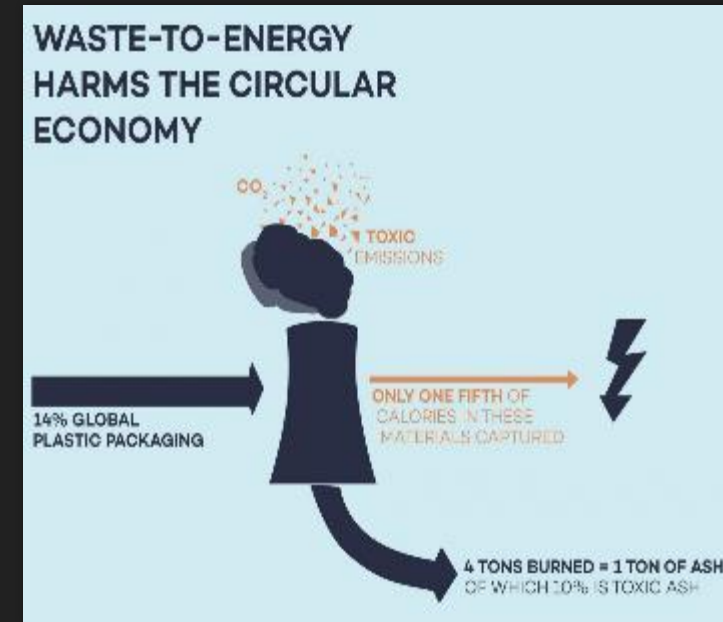
## **Incineration discourages overall waste reduction efforts.**

Strong correlation between high incineration and low recycling rates.  
What's burnt often isn't 'residual' waste; collected recycling is incinerated.

## **Scandinavians call their waste incineration 'crazy': why copy them?**

Sweden & Denmark now painfully changing approach, to meet net zero.

**NO WEY INCINERATOR:** 15 February is deadline for further objections to the proposed ALTON incinerator. Follow: <https://www.noweyincinerator.com/>



UK is currently building >100 incinerators.

**NO WEY  
INCINERATOR**



# Myth #5: We can just scoop the plastic out of the sea **No!**

## **Sadly, this would be impossible:**

Only 1% of marine litter floats; vast majority sinks to the sea floor.

'Great Pacific Garbage Patch' is only one of 5+ plastic gyres - each major ocean has one; each **doubling in size every 10 years**.

In international waters, who would pay?

It would take 67 ships one year to clean up 1% of the *floating* debris of just the Great Pacific Garbage Patch.

**We need action to stop ocean pollution worsening.**

**And we still need to deal with airborne microplastics!**



Say NO  
to  
Plastic



Quiz Time

Let's have  
some fun!

# Quiz

There are 10 questions ...



# Question (1)

**What's the world's most common type of litter that contains plastic?**



## Question (2)

**In Kenya, what's the penalty for using/producing/selling a plastic bag?**

- a) \$38 on-the-spot fine, or 10 hours of community service.
- b) \$3,000 fine, or one month in jail.
- c) \$38,000 fine, or 4 years in jail.



## Question (3)

**Name one of the nations ranked amongst the top 10 in the world for recycling** (using the latest figures from Eunomia)





# Question (4)

## What does the Green Dot symbol mean?

- (a) The packaging is made from previously-used plastics that have been recycled in Europe
- (b) The empty package can be recycled in any UK council's kerbside recycling scheme
- (c) The producer has paid a fee that contributes to European package recycling



## Question (5)

The kerbside recycling rates achieved by each of England's 345 councils are ranked in a league table each year.

**Where did East Hampshire District Council rank in the latest table?**

(a) 72<sup>nd</sup> out of 345

(b) 172<sup>nd</sup> out of 345

(c). 272<sup>nd</sup> out of 345



# Question (6)

**What is the name of Alton's new zero waste shop, which opened last November?**





# Question (7)

**The UK introduced plastic £5 notes in September 2015, to make banknotes more durable. Why was this new banknote controversial?**



## Question (8)

**Vehicle tyres and synthetic clothing are the two leading contributors to microplastic pollution from UK households.**

**Which of these items generates higher annual tonnages of microplastic waste?**

(a) Vehicle tyres

(b) Washing synthetic clothing



# Question (9)

In 2019, it was discovered that 96% of the UK's tea bags contained non-biodegradable polypropylene fibres (to allow them to be heat-sealed). The three leading UK brands have all taken steps to go plastic-free.

**Which of the three leading teabag brands was the first to become completely plastic free?**

- a) Yorkshire Tea
- b) PG Tips
- c) Tetley





## Question (10)

Most medical PPE is made from plastic materials.

**What type of plastic are respirators and surgical masks like the N95 (pictured) most commonly made from?** (To score one point)

**What's the recycling symbol number for this type of plastic?** (for second point)



# Quiz Answers



How did you do?

# Question (1)

**The world's most common type of litter that contains plastic is the cigarette butt**

Cigarette butts contain cellulose acetate (the plastic that's used to make sunglasses, textiles and photographic film).

An estimated 4.5 trillion cigarette butts are littered around the world each year.

(2 points for the correct answer)





## Question (2)

The answer is (c):

**In Kenya, the penalty for using/producing/selling a plastic bag is 4 years in jail or \$38,000 fine.**

(2 points for the correct answer)



# Question (3)

**You were asked to name a country that's in the top 10 in the world for recycling**

**Give yourself two points if you named ANY of nations below:**

- |                    |                        |
|--------------------|------------------------|
| #1 Germany 66%     | #6 The Netherlands 56% |
| #2 Wales 64%       | #7 Austria 55%         |
| #3 Singapore 61%   | #8 Slovenia 54%        |
| #4 South Korea 59% | #9 Belgium 54%         |
| #5 Taiwan 58%      | #10 Switzerland 63%    |

**#15 Scotland 44%**

(You can have one point if you chose Scotland, because it came 15<sup>th</sup>)



## Question (4)



The answer is (c):

**The Green Dot symbol means** the producer has made a financial contribution towards the recovery and recycling of packaging in Europe – the fee's only about £300.

It *does not mean* that the packaging can be recycled or has been recycled.

(2 points for the correct answer)



## Question (5)

The answer is (c):

**Kerbside recycling rates achieved in 2018-19  
by East Hampshire District Council ranked  
272<sup>nd</sup> out of 345 in the English league table**

(2 points for the correct answer)



## Question (6)

The name of Alton's brilliant new zero waste shop, that opened in November, is **FillUp Alton**. (Score 2 points)



Also try:

'Village Green' in Herriard



# Question (7)

**The new plastic £5 note was controversial because it contains tallow**, a waxy substance made from animal fat. This sparked outrage among vegans, vegetarians, Hindus, Sikhs and Jains.

(2 points for the correct answer)



We'll also accept the answer that drug users complained the stronger plastic notes left them with cut noses after snorting cocaine through rolled-up notes, an injury known as 'getting Winstoned'.



## Question (8)



**The answer is (a):**

**Vehicle tyres generate the higher tonnage of microplastic waste from UK households.** UK tyre tread abrasion generates 68,000 tonnes of microplastics per year

**Washing synthetic clothing** generates 2,300 - 5,900 tonnes of microfibres annually in UK.

(2 points for the correct answer)

# Question (9)

**The first of the UK's three leading teabag brands to become completely plastic free was:**

## **b) PG Tips**

Plastic used in teabags:

- Plastic glue to seal paper tea bags
- Plastic in the teabag fabric itself, which sheds microfibres in hot water
- Plastic outer-wrap packaging.



## Question (10)



**Medical respirators and surgical masks like the 'N95' pictured are most commonly made from polypropylene.**

One point if you got this right.



Give yourself a second point if you knew the recycling symbol number for polypropylene is 5 (which isn't recyclable).



# How did you do?



If you got all 10 questions right  
you'll have scored 20 points.

How has everyone done?

Well done!

Say NO  
to  
Plastic



How do we break the habit?

# David Attenborough on solving plastic pollution:

<https://www.youtube.com/watch?v=aTcMPy6L88E>





It's clear we need **DRASTIC** action and **SYSTEMIC CHANGE**

3 ingredients for Systemic Change:  
Government policy  
Investment in the Circular Economy  
**Shifting cultural norms.**

It can be difficult to know where to start  
... here are some suggestions ...



The image is a composite graphic. The top left shows a photograph of Christiana Figueres, a woman with short brown hair and glasses, wearing a blue blazer over a white turtleneck, gesturing with her right hand while speaking into a microphone. To her right is the United Nations logo and the text "UNITED NATIONS". Below the photo is a blue box containing a quote from her. At the bottom of the graphic is a dark blue section with a light blue circle and concentric arcs, containing text about creating system change and shifting cultural norms.

UNITED NATIONS

"We need both systemic transformation and individual behavioural changes [to tackle the climate crisis]. One without the other will not get us to the necessary scale of change at the necessary pace."

Christiana Figueres, Former UN Executive Secretary for Climate Change

How we create system change

SHIFTING CULTURAL NORMS

What can we do?

# (1): Join forces with others

**Approaching this planetary issue as one person is a recipe for disillusionment.**

The myriad plastic action groups must find a common voice.  
Zoom makes collaboration easier.

ACAN plastic group active; XR Farnham Plastics Group re-forming.  
LinkedIn groups e.g. Single Use Plastic Knowledge Exchange.

**Join in and stay in touch:  
It's more fun to collaborate!**

Local Businesses

?



What can we do?

## (2) Step out of the shop-spend-consume cycle

### Change what we buy – one item at a time

BUY Less; WASTE less; REPAIR things

Overwhelming choice of 'greener' products

Help ACAN to a Green 'Purchasing Alternatives Directory'

### Reuse is better than recycling

SWITCH to Re-Useables and Re-fillables

Support FillUp Alton and zero waste options

### Recycling is better than landfill/incineration

BOYCOTT Un-recyclables, such as Wipes

**Don't be discouraged:  
every inch forward helps shift the cultural norm**



What can we do?

### (3) Mainstream new solutions for lower consumption lifestyles

**Need to *mainstream* approaches – the idea of the ‘15 minute city’ is useful:**

**Develop Community Hubs**

**Expand local options for repair/freecycling** (Swishing, Never-Buy-Another-Welly)

**Community approaches needed** e.g. for (scattered) Terracycle Hard-to-Recycle schemes (contact lenses, toothpaste tubes, pens, baby-food pouches ...)

**Let's plan now, and spring into action after lockdowns**





What can we do?

## (4) Influence ~~local~~ **all** organisations to cut their plastic use

### Collaborate with local businesses and schools

BEN & ACAN seeking 'Plastic Pledges' as part of getting 'Plastic Free Community' status  
Encouraging local schools to go for 'plastic free' status.

### Change your own workplace

Conduct a simple plastic audit at your workplace or school.

### Lobby producers and supermarkets:

Lobby the most polluting plastic producers (Coca Cola, Pepsico, Nestle)

'Mass Unwraps' at your supermarket (lockdowns permitting)

– good opportunities to tell people about local plastic reduction activities.



What can we do?

# (5) Lobby councils to improve waste performance

**Recycling performance is poor across Hampshire, not only in East Hampshire - need to influence HCC:**

- Local investment in **waste-sorting infrastructure** has stalled.
- Hampshire prefers **incineration**, not 3<sup>rd</sup> world exports.
- But is incineration consistent with Climate Emergency?

**We need some fresh thinking!**

Need to move towards a **Circular Economy**.  
**Innovative Waste Reprocessing Facilities** are needed:  
e.g. Project Lodestar combines mechanical and chemical recycling in a single facility.

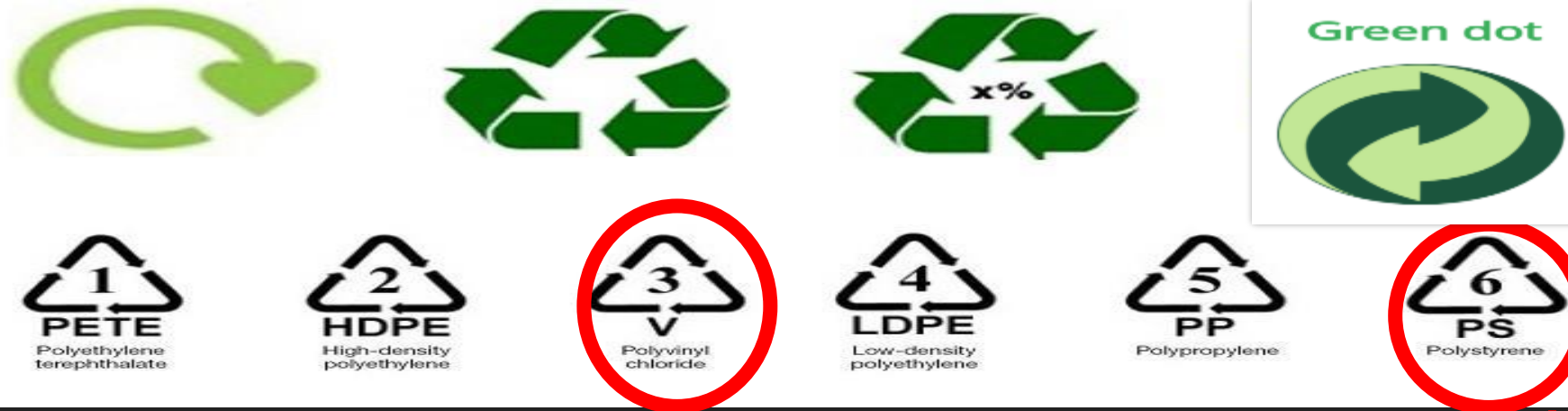
**Let's stimulate dialogue with EHDC's waste team ...**

345 English Councils	<b>EHDC</b>	Waverley
Rank in League Table	<b>272<sup>nd</sup></b>	<b>44<sup>th</sup></b>
Household waste recycled	<b>34.3%</b>	<b>54.6%</b>
Source: <a href="https://www.letsrecycle.com">https://www.letsrecycle.com</a>		

	East Hampshire District Council	Waverley Borough Council
Paper and Cardboard	All dry paper and cardboard, excluding TetraPak cartons.	All dry paper and cardboard, including TetraPak cartons.
Metals	Metal tins, cans & aerosols; no aluminium foil.	Metal tins, cans & aerosols, plus aluminium foil.
Plastics	Plastic bottles, including detergent bottles – without lids. No plastic pots, tubs or trays.	Plastic bottles, including detergent bottles - lids on. Plastic pots, tubs and trays, e.g. yoghurt pots, takeaway trays, ice cream tubs.
Glass	Collected monthly.	Collected fortnightly. Lids on.
Food Waste	Not collected.	Collected weekly.

What can we do?

## (6) Recycling: be clear exactly what IS recyclable



No Markets for Polyvinyl chloride (3) or Polystyrene (6)

DON'T BE FOOLED:  
**Green Dot symbol DOESN'T**  
mean item is recyclable.

**'Compostable'??** Not  
necessarily in garden bins!  
**We need local industrial**  
**composting facilities.**

Help ACAN to create a local *'Green Disposal Directory'*

**ONLY** the 3Ps (pee, paper & poo) down the loo!

**DON'T** contaminate your recycling bin

**GO BEYOND COUNCIL COLLECTIONS** - potato bags, etc can be recycled at larger supermarkets





What can we do?

## (7) Take action on litter

**Join Philippa on ACAN's fortnightly plastic patrols in Alton**  
fresh air and community spirit, to make a difference to your local area.

**Join 'Surfers Against Sewage' beach / river cleans.**

**Or organise your own. Joggers, go 'plogging'!**





# What can we do?

## (8) Support 'No Wey Incinerator' against 'Waste to Energy'

Veolia wants to replace its current Alton Waste Sorting Centre with a huge Waste to Energy Incinerator.

**NO WEY INCINERATOR is opposing this.**

**Look out for updates on website <https://www.noweyincinerator.com/>**

15 February is the deadline to re-affirm objections to the proposed incinerator, following new information submitted by Veolia.



What can we do?

## (9): Keep well informed

**You need to be well informed to do the right thing; and to persuade others!**

**Subscribe to ACAN and BEN newsletters**

**Follow @ecoem2020 on Instagram**

**Listen to** ... TED Countdown talks; City-to-Sea, Surfers v. Sewage, 'Unearthed' and many more.

Join Single Use Plastic Knowledge Exchange | Groups | LinkedIn

**Share your information** with ACAN, for its website library.

**Join a supermarket packaging 'teach-in'** with Colin (when lockdowns allow).



What can we do?

## (10): Be persistent!

### Shifting cultural norms requires persistence

**Keep telling** manufacturers, politicians, councils, supermarkets that solving the plastic problem really matters.

**Keep talking** to friends and family.

**Elect officials** who will stand behind eco-friendly initiatives.

**Keep taking personal action** (just don't accept all the blame!)



# Existing local 2021 plastic plans

(ACAN, XR Farnham, Binsted Eco Network)

1. Collaborate. **Grow our 'Action on Plastic' groups and networks.**
2. **Step away from 'shop-spend-consume'** Help create ACAN's '*Purchasing Alternatives Directory*'
3. Mainstream lower consumption lifestyles. **Community Hubs, Repair Cafes, Freecycling, Terracycle collection points.**
4. Lobby councils for better waste performance. **Dialogue with EHDC waste team.**
5. Be clear what's recyclable, and where. **Help create ACAN's '*Green Disposal Directory*'**
6. 'Plastic Free Communities' status. **Help BEN & ACAN secure Plastic Pledges from businesses & schools.**
7. Action on litter. **Join ACAN's plastic patrols.**
8. No Wey Incinerator. **15 Feb to re-affirm objections to Veolia proposal.**
9. Keep well informed. **Subscribe to ACAN/BEN newsletters, read, join supermarket 'teach-ins', Share info!**
10. **Be persistent!**



# DISCUSSION:

## How do we build - *and mainstream* - action on plastic?

### Contacts

ACAN [altonclimatenetwork@gmail.com](mailto:altonclimatenetwork@gmail.com)

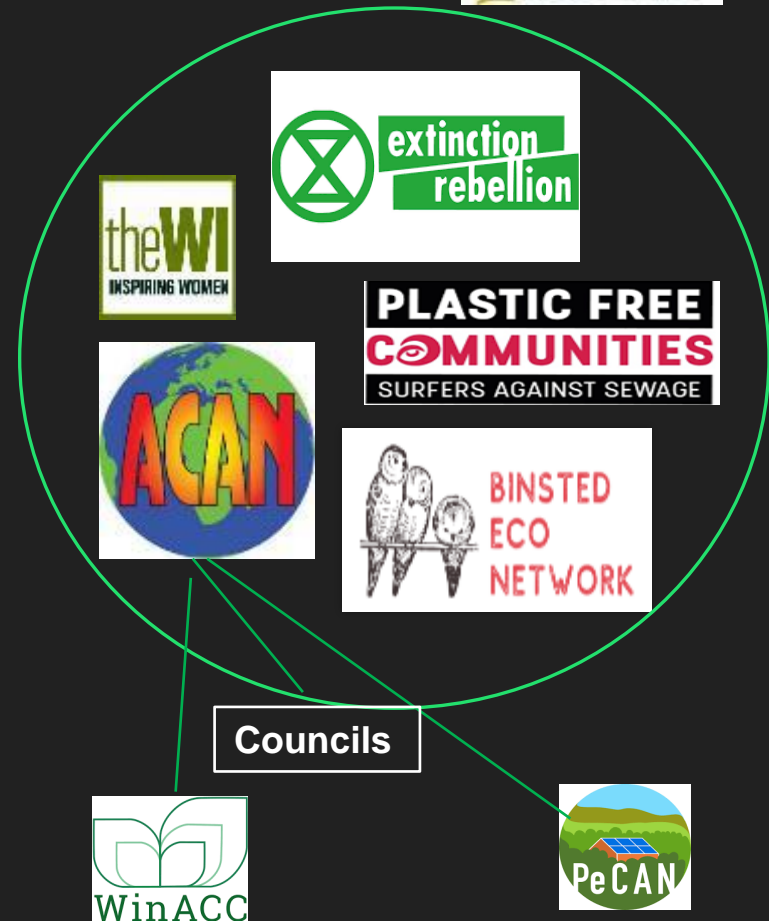
Binsted Eco Network [binstedeconetwork@gmail.com](mailto:binstedeconetwork@gmail.com)

XR Farnham [info@xrfarnham.org](mailto:info@xrfarnham.org)

Local Businesses



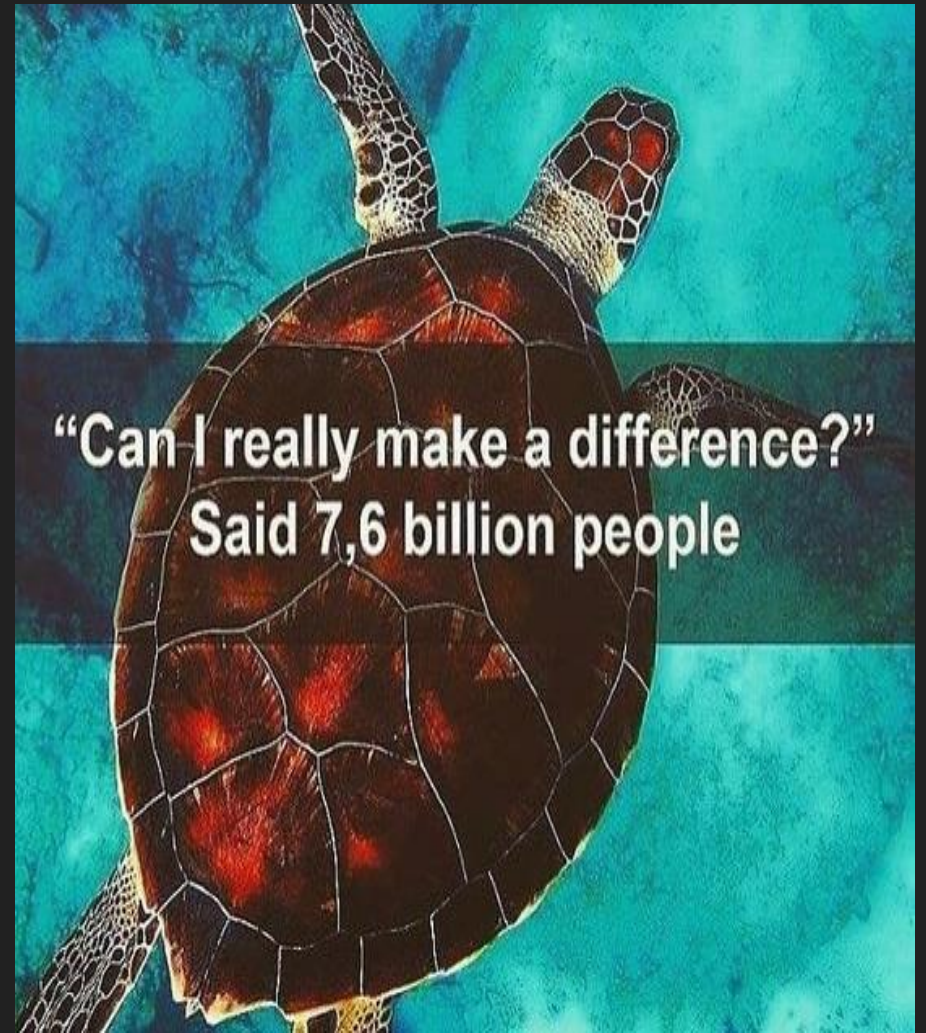
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Thanks for joining us tonight



BINSTED  
ECO  
NETWORK





What can we do?

# Further inspiration and information

Today's presentation is on ACAN's website  
[www.altonclimatenetwork.org.uk](http://www.altonclimatenetwork.org.uk)



Watch: City to Sea's unflushables video



Watch TED Talk: 'Think Twice Before Buying'  
by Lucía González Schuett [https://youtu.be/HGQg\\_nVPEq8](https://youtu.be/HGQg_nVPEq8)

Some other great resources:



[Single Use Plastic Knowledge Exchange](#) | [Groups](#) | [LinkedIn](#): new group, links to GoogleDocs list of useful information about single use plastic.

