Beyond Plastic
Finding a better way

The Beyond Plastic Group is part of Ryedale Environment Group and is keen to increase awareness of the problems caused by so much plastic in our environment and the steps individuals and families can take to reduce the amount of plastic they use.

Our Aims

- To campaign in different contexts to spread information about the application of alternatives to plastic
- To identify possible uses of alternatives to plastics in the different contexts of manufacturing retail and individual use
- To ensure that recycling of plastic is not seen as the only answer to the reduction of plastic use
- To identify and spread information about alternatives to plastic
- To highlight information about other organisations and enterprises also engaged in a campaign against the use of plastic

The group is completing a database of organisations and projects which are campaigning against the use of plastics

What is plastic?

Plastic is made from oil and coal and additives like colorants, stabilisers and plasticisers which may contain toxic substances like cadmium and lead.

Plastic is very versatile, durable, lightweight and relatively inexpensive and therefore it has been used widely in many different ways for example, in packaging, for medical and electrical items and in construction and textiles.

Because it is so useful, plastic production has soared and in 2021 the world produced almost 400 million metric tons of plastic. (Statista 2024)

Plastic is everywhere but it pollutes everywhere too. Dealing with plastic waste is one of the biggest issues facing our planet.

DID YOU KNOW

The UK is in the top 10 in the world for the amount of plastic waste it produces.1.7 billion pieces of plastic are thrown away every week in the UK (Big Plastic Count).

The UK is the worst for excess plastic packaging amongst 6 other EU countries.

NORTH YORKSHIRE collected 5,558 tonnes of plastic waste for recycling from kerbside and Household Waste Recycling Centres combined in 2023/2024 according to figures provided by NYC.

PROBLEMS WITH PLASTIC

Plastic can affect human health, destroy ecosystems and harm wildlife especially marine species.

- Plastic is very slow to degrade. Typically, paper takes 2- 5 months to degrade, cotton 12months, leather 25- 50 years but plastic takes 500 years which makes it have a severe impact on our environment. By 2050 there will be more plastic in our sea than fish.

- Over 8 million tonnes of plastic waste enter the world's oceans every year which accumulate in gyres where ocean currents rotate. Gyres are full of plastic waste including plastic bottles, bottle caps, and plastic bags.
  - One of these gyres - the Great Pacific Garbage Patch is three times the size of France and growing all the time.

- Plastic in the sea gradually breaks down into smaller and smaller pieces due to the action of the waves and sunlight. Really small pieces are known as microplastics .

- The largest source of microplastics is synthetic textiles containing polyester, nylon and acrylic fibres. (Horiba)

- Microbeads are even smaller microplastics. They are added as exfoliants to health and beauty products like cleansers and toothpastes to control viscosity. These easily pass through water filtration systems and end up in our oceans and lakes posing a threat to aquatic life.

- Sometimes aquatic life mistake plastic for food. When fish eat plastic toxins from the plastic start to accumulate and the fish slowly gets poisoned. A third of fish in UK waters have microplastics in their bodies.

- Studies found that young fish who have ingested microplastics swim more slowly and have stunted growth which has been attributed to microplastics.

- Microplastics have also been found in tap water and even breast milk.

THE DANGERS OF MICROPLASTICS AND LEACHED CHEMICALS

Examples include:

- Leaching of chemicals from plastic into the environment which then have an oestrogenic impact on the definition of gender in fish and mammals(independent.co.uk)(npr.org)

- Metabolic disorders are caused by leached chemicals e.g early menopause, reduced fertility, increased insulin resistance, high blood pressure. Pthalates are added to increase plastic flexibility and durability and are the main chemicals associated with these effects.(consumerreports.org)

- Levels of pthalates have also been measured by USA scientists in a variety of foods and drink packaged in plastic and cardboard. They were lower than legal limits of these chemicals but were still associated with metabolic disorders. (Health Harvard publishing)

- Studies in the university of Birmingham have been conducted on the combined impact of microplastics and PFAs on the water organism Daphnia(used to study the impactof pollution) have shown that the combined effect was to cause developmental failures,delayed sexual maturity and stunted growth.

- In addition the presence of such chemicals, and of fire retardant chemicals in clothes has been shown to wash out into the environment. It has ben suggested that washing machine outlets should be fitted with a filter to remove microfibers carrying chemicals.

- Supermarkets are a key part of the retail process and contribute hugely to the use of plastic in packaging at different stages of the sales process. While some supermarkets have engaged in the reduction of plastic packaging this is not yet widespread enough

- The use of plastic in mulching food crops and subsequent ploughing in of the mulch has been found in some farms. The use of alternative mulching materials seems important, maybe waste from winemaking or beer making.

- The market is full of cheap clothing made of various artificial fibres. The temptation is to accumulate multiple versions of different garments and/or to discard older garments. These find their way into landfill.

- The long term impact of microplastics on human health is not yet fully known but many reports have linked the particles to metabolic disorders, lung inflammation, changes to the reproductive process, changes in the gut microbiome, insulin resistance and even cancer.

WHAT HAPPENS TO OUR PLASTIC WASTE?

79% of the plastic waste we produce remains in our environment so we are saddling ourselves with a massive problem of disposal for the future.

Evidence from The Big Plastic Count indicates that in the UK:

- 58% of plastic waste is incinerated
- 11% goes to landfill
- 17% is recycled
- 14% is exported

BUT there are problems with all of these outcomes.

INCINERATION

- Can release high levels of toxic gases which pollute the air and harm animals and plants
- Incineration may emit more CO2 per tonne than burning coal (BBC survey) and therefore can actually contribute towards climate change
- The UK already has too much waste being incinerated
- It harms the circular reuse economy
- Incineration can cause its own problems with traffic, noise , visual impact etc.

Please see UK Without Incineration – UKWIN website **(https://ukwin.org.uk/)**.

North Yorkshire's Allerton Park Recovery Park is described on the Council's web page. (**https://www.northyorks.gov.uk/bins-recycling-and-waste/allerton-waste-recovery-park**)

LANDFILL

- Ordinary rubbish dumped in landfill breaks down naturally over time
- But… paper degrades in 2-5 months, cotton 12 months, leather 25-50 years, metal takes over 100 years to degrade but plastic takes around 500 hundred years to decompose!

RECYCLING

- Can't cope with the sheer amount of plastic waste being thrown away
- It is expensive in time and money
- Also, some plastic can only be recycled twice before it has to be put into landfill, incinerated or exported in any case so recycling is not the answer either

Scientists are trying to develop other, innovative ways to remove plastic including plastic eating fungi!

REDUCE PLASTIC USE

WHAT CAN I DO?

- Join campaigns to encourage supermarkets to ditch/reduce plastic wrapping of fruit and veg
- Join in The Big Plastic Count and find out your plastic usage and ways to reduce it.
- In Denmark there is a reverse vending bottle scheme where people are paid to deposit empty plastic bottles and they receive money in return. This also reduces the amount of littering of plastic bottles – another benefit. This is under consideration here! Please support it!
- Write to your MP asking them to do more to tackle the problem of single use plastic and to promote accessible refill and reuse systems and a bottle deposit scheme
- Don't wrap unless you have to
- Replace plastic with paper, card, glass, wood, metal etc.
- Use recyclable paper at Christmas. Avoid glitter which can't be recycled
- Use refillable water bottles and coffee cups
- Use water fountains where available
- Download the Water Refill app and use it to find places where you can refill your water bottle for free. Cafes etc usually have the logo in the window e.g. Pickering, Kirbymoorside

- Always try to bring your own bags when shopping
- Look for unwrapped fruit and veg at your local greengrocer or supermarket or at your local market
- Use a bar instead of shower gel, shampoo and conditioner e.g. Lush, Gruum or refill your old shampoo container at a refill shop
- Buy washing and cleaning products in cardboard boxes not plastic bags
- Bring containers with you when buying fish and meat to avoid those plastic bags!
- Use re-washable cotton cleaning cloths
- Use bamboo cutlery which can be washed (free at M&S) and reusable straws or take your own cutlery on picnics
- Reuse old jam jars for salad dressing, storing your spices, sugar etc.
- Reuse old bread and cereal bags as sandwich or freezer bags.
- Get your milk delivered in reusable glass bottles e.g.

  Ryedale - CL Dunn: 07598881228
  Scampston Dairy: Scampstondairy@gmail.com / 07879611290

- Grow your own veg and herbs!
- Buy local to reduce food miles and excessive packaging and plan ahead to buy just what you need to avoid throwing out stuff
- Cut up old tea towels or clothes and reuse as cleaning cloths
- Avoid those hotel mini toiletries which will be thrown away once used up
- Use washable cleaning wipes for kiddies
- Organise a toy swap at your local playgroup, nursery or school
- Make homemade rinse aid by putting white vinegar into the rinse aid compartment of your dishwasher – simple! Try mixing vinegar, water, lemon and bicarb of soda as a natural cleaner which works well and keeps plastic toxins down
- Add 200g of bicarbonate of soda to a washing load and whites and colours will come out brighter as it helps balance the Ph levels to get clothes cleaner
- Try not to buy clothing containing polyester and acrylic etc. Choose natural fibre clothing like organic cotton, hemp, or bamboo which don't cause microfibre pollution. They may cost more initially but they will last much longer and are much more environmentally friendly
- Use washable cloth nappies rather than disposable
- Try not to buy fizzy drinks in plastic bottles
- Use local refill shops for dried goods, cleaning stuffs etc. Shopping in refill shops is often more cost effective as well as good for the environment!
- In Ryedale there are several refill shops including Health Matters in Helmsley, Scoops and the Beecham Weigh in Malton, The Old Weigh in Pickering, Moorside Stores Kirbymoorside
- Use second hand online shops like Facebook Market Place, Vinted, Ebay, Freecycle and Gumtree to look for second hand goods and save money!
- Use recycled toilet paper e.g. from Who Gives A Crap, Naked Sprout, Reel
- Buy in bulk if you can - saves on travel and petrol and keep it local if you can!
- Use the 'do you really need it' test when thinking of buying new things for clothes as well!
- Swap bubble wrap for newspaper or reused tissue which is cheaper and creates less waste

Use the Morsbag! This local organisation aims to reduce the use of plastic shopping bags.

REDUCE REUSE RECYCLE

WHAT ALTERNATIVES TO PLASTIC HAVE BEEN EXPLORED

Plastics are utilised in many different contexts and in many different forms. Hence any alternatives must enable a particular function of the plastic to be effective.

Examples of alternatives are:

Stainless steel. glass, bamboo, ceramics, natural fibre cloth, seaweed, fungi, fibrous waste from wine and beer making, polyester, wood, beeswax
(howstuffworks.com)

Alternatives must be easily available and functional without addition of harmful chemicals e.g. formaldehyde.

This is added to the bamboo cups substituting for plastic ones and is released when the cup is disposed after use.

Disposal of the alternatives to plastic should be safe without risk to the human health or the environment.

In addition the use of alternative materials is more likely to be taken forward by manufacturers and retailers if an equivalent financial profit is made so use of an alternative should not create greater expense in collection, processing and manufacture.

Several successful business enterprises have been set up in order to provide items and materials made out of alternatives to plastics. An example is seaweed. This is being used as seaweed plastic. Seaweed farmers incomes are boosted and carbon emission and plastic waste are reduced.(boldbusiness.com) Another example is beeswax
(Wrappy organic reusable beeswax food wrap. An alternative to cellophane).

A further example is that of fungi which can metabolise plastics and fungal mycelia which can be used to make parts for electronics vehicles and sports equipment(the verge.com) (fungiproduct.com)

So several alternatives are already the basis of successful business enterprises.