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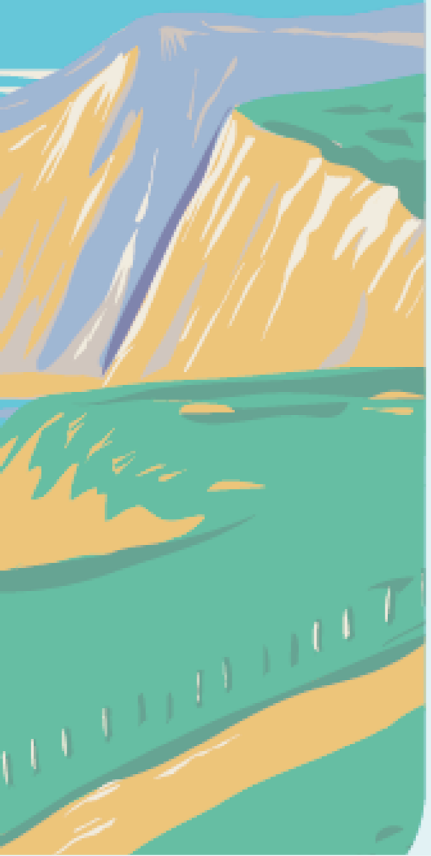

THE ULTIMATE GUIDE TO PACKAGING

Making the best choice for your business - **and** the environment

PACKAGING - ITS COMPLICATED

Choosing the right packaging for your business whilst reducing single use plastic and your carbon footprint can be confusing.

Within this guide we have listed the advantages and disadvantages to packaging options to help you make an informed choice for your business.

CONTENTS

1/3 of plastic produced is used to make packaging!

GLOSSARY

Single-use plastic (SUP) - disposable plastics which are used only once before they are thrown away or recycled

Carbon Footprint - the total amount of greenhouse gases generated by our actions.

Degradable – anything that can be broken down either biologically or chemically (every product is degradable is some way!)

Biodegradable –the material naturally breaks down, and its components blend back into the environment.

Compostable - Compostable materials are organic and will decompose, leaving only nutrients that can be returned to the earth. Compostable materials do not leave anything behind.

Biomass -Renewable organic material from plants and animals.

Plant-based - The term 'plant-based' refers to the source of the material itself (e.g. corn starch), not how the resulting plastic will behave after it's been thrown away.

INFRASTRUCTURE

Even when products are advertised as recyclable, compostable or biodegradable this is entirely dependent on the waste infrastructure available

What is the current system in Dorset?

- Across Dorset, waste providers (e.g. Dorset Council, Biffa) offer collections of general waste, food waste and recycling (mixed paper, cardboard, tins & cans, glass, plastic bottles, pots, tubs and trays).
- The systems we use to collect, sort and reprocess recycling were created before many plastic alternatives were widely used.
- They are designed to target and separate traditional plastic polymers, fibre and metals. In the case of plastics this is typically set up to optically sort PET and HDPE plus a few others.
- All other plant-based equivalents introduced into these sorting systems are unlikely to be separated and end up being sent to energy recovery rather than recycling.

INFRASTRUCTURE

How does this impact you and your business?

- Packaging manufacturers have been able to respond quickly to changes in demand by sourcing alternative materials such as sugar cane and bamboo; however large-scale recycling and waste infrastructure takes much longer to respond and evolve.
- This means that current sorting and processing facilities are unable to process many of the newly developed forms of packaging, and may not be able to for some years.

Where does it end up?

- Plastic that can't be recycled in the UK will generally be sent for incineration.
- Some plastic alternatives, e.g. sugar cane, can contaminate recycling. If alternative plastics, such as compostables, get into the recycling system, then they can cause problems, reducing the quality of the recycled plastic and meaning that it cannot be recycled any more.

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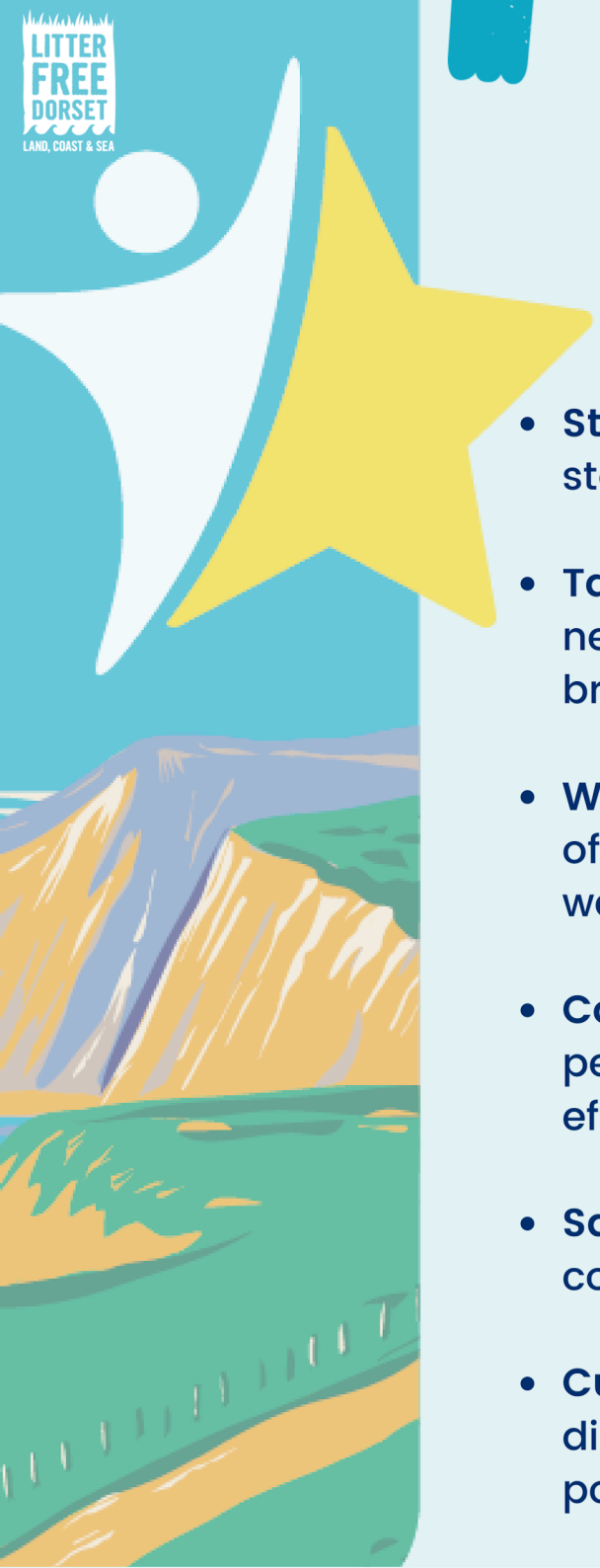

SIMPLE SWAPS

- **Straws** – Remove any remaining plastic straws, opt for paper ones or offer stainless steel straws that can simply be washed and reused again and again
- **Takeaway food containers** – Styrofoam/polystyrene cannot be recycled and will never decompose so switch to cardboard or even better, encourage people to bring their own.
- **Water Bottles** – Switch from plastic water bottles to cans or glass bottles and offer customers free water by joining the refill scheme. How about selling reusable water bottles instead?
- **Coffee Cups** – Offer discounts for people using reusable coffee cups OR charge people for using disposables coffee cups (the latter is proven to be much more effective)
- **Sachets** – plastic sauce sachets can't be recycled so replace them with refillable condiment bottles or dispensers, or simply give customers a small portion.
- **Cutlery** – Use standard cutlery that can be washed and reused, or if you need disposable items, switch from plastic to wood or bamboo, and use as little as possible.

SIMPLE SWAPS CAN EVEN SAVE MONEY!

2p per straw

0.1p per use - including washing!

11p per 10ml sachet

6p per 10ml serving

On average, someone who pops in to get a free drinking water refill will spend between £2.50 and £5 in store.

COST COMPARISONS

Item	Type	Price per unit (£)	Recyclable?	Biodegradable / compostable? (Not in Dorset)	Reusable?
8 oz coffee cups	reusable cups (customer's own or mug library)	0p	X	X	✔
	paper & PLA / cornstarch eg. Vegware	15p	X	✔	X
	paper with plastic liniing	13p	X	X	X
	foam / polystyrene	9p	X	X	X
takeaway boxes	reusable lunch boxes (customer's own)	0p	X	X	✔
	bio alternative ed. bagasse (sugarcane)	18p	X	✔	X
	paper & PLA / cornstarch	14p	X	X	X
	foam / polystyrene	10p	x	x	x

THE 3 KEY QUESTIONS

If you have exhausted all the opportunities for reducing packaging and you have introduced as many reusable packaging options as possible then you might start looking into alternatives to plastic packaging.

It can be very confusing to determine which type is the best for your business and for the environment. What seems to be the best option on paper might not be in practice if the packaging cannot be collected and processed as it was designed to be.

Our advice would be to ask the following questions of suppliers when you are looking into different plastic alternatives:

1. What is is made of?
2. How does it degrade?
3. Where and how is it collected & processed?

What is it made of?

Most plastic alternatives are made from 100% renewable biomass sources such as corn starch. However, some are made of a mixture between oil derived plastic and renewable materials – these do degrade more quickly than oil derived plastic but **still have plastic in them.**

How does it degrade?

Degradable - is not an environmental claim. Plastics degrade and are damaging to the environment as they break up into smaller pieces known as 'micro plastics' – which will remain in the environment, wash into water courses or be ingested by wildlife.
Biodegradable - an object that can be biologically broken down by microorganisms.
Compostable – when a product biodegrades to produce carbon dioxide, water and soil within a specified period of time and in certain conditions.

Where and how can it be collected and processed?

It all depends on the systems in place where you live. For example, standard compostable packaging is designed to be processed in an industrial composting facility. It won't compost in your home compost bin, or in the marine or natural environment. Industrial composting facilities are not yet widely available. **Therefore, we recommend checking with the company selling you the product where and how it can be collected and processed.**

TOP TIPS FOR SUPPLIER PURCHASING

We know it can be hard to negotiate with suppliers, but there are always choices you can make!

1. Source ingredients locally as much as possible to cut down on food miles.

2. Most soft drinks are available in glass bottles or aluminium cans instead of plastic bottles.

3. Swap to plastic free tea bags. Even if it's just for your staff room!

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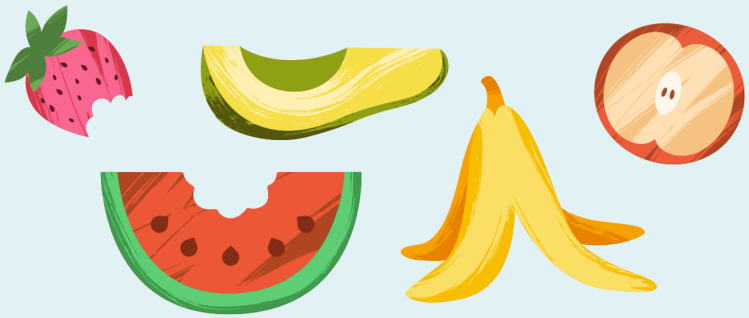
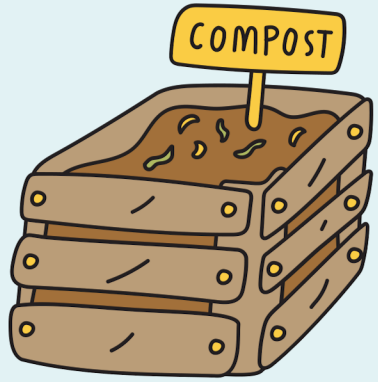
IS IT REALLY COMPOSTABLE?

"Biodegradable" currently does not reference a time scale; **it could take a lifetime to decompose**, unlike compost which must degrade in 12 weeks.

It is important to note that because a product says it's biodegradable or oxo-degradable, it doesn't mean it degrades everywhere. Often materials need specific conditions to biodegrade.

No matter what's on the label, compostable or biodegradable cups, straws and plates **can't go in your food and garden bin**. Compostable packaging needs to be industrially composted which can't currently be composted in Dorset.





TYPES OF PACKAGING

Advantages

- Economic benefits can include direct savings on purchasing and disposal costs because of repeated reuse.
- It is more sustainable as in the long run, less packaging waste is being produced and discarded.
- Reusable packaging can be designed to suit your needs.

Reusable packaging

Reusable packaging is packaging that can be used over and over again. Reusable or returnable packaging is designed for repeated reuse.

Disadvantages

- Reusable packaging can be more expensive than other options.
- Not all customers want to pay extra for reusable items.
- Some reusables require more resources to manufacture.

Make the change: Charge customers for a disposable coffee cup to encourage them to bring their own reusable one!

TYPES OF PACKAGING

Compostable packaging

Example supplier: Vegware

Advantages

- Made from plant materials which are renewable unlike oil which is from a limited and finite resource.
- Can still be industrially composted if contaminated with food and drink.
- If processed in an industrial composting facility the resulting product can be put onto land as compost.
- If processed in an industrial composting facility, then diverts waste from landfill

Disadvantages

- The systems needed to get used compostable packaging to industrial composting facilities for processing is not currently available in Dorset, however you can set up a Vegware Return and Recycle Point in your business.
- If alternative plastics such as compostables get into the recycling system then they reduce the quality of the other recycled materials.

Make the change: Start a mug library to cut down on disposables!

TYPES OF PACKAGING

Plant-based packaging

Advantages

- Made from seaweed which is sustainable unlike oil which is from a limited and finite resource.
- **Can be home composted.** Will break down within 4-6 weeks in a natural environment.
- If being disposed of through incineration, then they are better for the environment as they are made from plant-based materials which means they do not emit harmful chemicals when burnt.

Example supplier: NOTPLA

Disadvantages

- The infrastructure needed to get used compostable packaging to composting facilities for processing is not in place in Dorset yet.
- Businesses would need their own composting facility or alternatively encourage customers to take it home and compost it.
- Cannot currently be recycled in Dorset but it can be composted in your home compost!

Make the change: Set up a Return & Recycle point in your business

TYPES OF PACKAGING

Cardboard / Wood / Paper packaging

Advantages

- Made from renewable materials.
- Can be recycled in many public bins and kerbside collections.
- Familiar to customers, so more likely to be recycled properly.
- This packaging is relatively cheap to buy.
- Easily printable for customised branding.

Disadvantages

- Not water or grease resistant.
- If contaminated with food and drink they are difficult to recycle.
- Some have plastic lining - watch out for this!
- Some materials e.g. bamboo, require more energy to manufacture than an equivalent plastic product.

Make the change: Only provide cutlery if customers ask!

LOGOS TO LOOK OUT FOR

The Green Dot

What does it mean?

- It does not mean that the packaging is recyclable.
- It shows that the company has contributed economically to the recycling industry.

Widely Recycled

What does it mean?

- 75% or more local authorities in the UK recycle this packaging.
- It's currently the closest the consumer can get to confirm that their packaging will be correctly recycled.

The Mobius Loop

What does it mean?

- This icon suggests the potential recyclability of the material, not that it has been recycled.

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IS THE PACKAGING NECESSARY?

Removing unnecessary or excess packaging is the best solution and is likely to result in the least environmental impact.

Alternatives to plastic are an option, but not a solution. Moving away from all types of single use packaging is vital in reducing waste and lessening our impact on the environment.

Sometimes, what appears to be the best option might not be if the packaging cannot be collected and processed as it was designed to be.

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IN CONCLUSION...

The suppliers and manufacturers (e.g. NotPLA, VegWare) have been able to respond quicky to changes in demand by sourcing alternative materials. However, the recycling industry takes much longer to respond and evolve. **Therefore, these materials are not a good fit to our current systems.**

The best thing is to **REDUCE** the amount of packaging needed as much as possible.

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For further information visit: www.litterfreedorset.co.uk