

Position Paper: Packaging



Fidra's expertise and experience in developing sustainable solutions for food packaging and the circular economy has developed through local, national and international projects and initiatives. This document summarises Fidra's approach and position to food packaging in a circular economy.

Playing a part in our community

Fidra's hometown of North Berwick has a significantly higher volume of waste, proportionate to weight, compared to other parts of the region. This has been put down to the high levels of Expanded or Extruded Polystyrene packing used for takeaway meals served in this seaside town. Subsequently, Fidra became involved in local conversations about how the town could limit its reliance on polystyrene-based takeaway containers.

Polystyrene and plastics

Fidra recognises the value of plastics in our society, as well as the threats plastic pollution poses to our environment. We work at different inflection points throughout the supply chain to limit the impacts of plastic pollution. Fidra are involved in discussions about packaging with industry and supermarket leads.

Fidra takes a strong position against single use Expanded Polystyrene (EPS) and Extruded Polystyrene (XPS) for food packaging, due to the environmental impacts of these materials throughout their lifecycles. These range from the use of fossil fuels and industrial chemicals in the production phase, to the leaching of styrene (a potential carcinogen) during use and in disposal, as well as the difficulty to recycle EPS and XPS due to contamination levels and a lack of facilities.

Surveys completed by the Marine Conservation Society¹ have shown EPS and XPS to be a consistent component of coastal litter over the last decade². Such plastics in the marine environment adsorb pollutants from seawater, presenting additional hazards to marine species alongside the degraded products³.

Fidra understands that an alternative material must be used in the place of polystyrene which has led us to explore alternative options at a local, national and international level.

Compostable packaging

Due to growing public concern surrounding plastic pollution, especially in coastal areas, Fidra recognises that more businesses are moving away from polystyrene or plastic packaging, and towards either paper and board or compostable alternatives.

Whilst Fidra celebrates this transition, we acknowledge that due to food contamination, paper and board packaging has the same issue as plastics – it cannot be recycled and therefore often gets sent straight to landfill or incineration.

Compostable products can be made from a wide variety of raw materials, for example waste products such as corn-starch. They have the potential to be a viable option for food and drink packaging as they can be composted along with any food waste, eliminating concerns around food contamination. Yet, for compostable products to be an environmentally beneficial solution, the correct infrastructure is required to ensure these products are composted effectively.

Chemical contaminants

Through Fidra's work on chemical pollution from everyday items, the issues around the chemical content of food contact materials have been explored. Fidra believes that there is insufficient regulation of paper and board food

¹ www.mcsuk.org/

² <https://www.mcsuk.org/media/gbbc-2018-report.pdf>

³ ^{xi} Takada H, Mato Y, Endo S, Yamashita R, Zakaria M (2006). Pellet Watch: Global monitoring of persistent organic pollutants using beached plastic resin pellets. *Marine Pollution Bulletin*, **52** (12), 1547-8.

contact materials due to the use of harmful chemicals, such as bisphenols and PFAS (poly or per-fluorinated alkyl substances), as grease- and water-resistant barriers. These are not restricted despite health and environmental concerns.



As part of Fidra's work on PFAS, a variety of food packaging materials have been tested for the presence and levels of fluorine. We are asking retailers to opt for PFAS-Free Food packaging to avoid further pollution of human and environment health.

Packaging Preferences and Recommendations

Given Fidra's experience and knowledge regarding the complexities of packaging materials and coatings, a hierarchy of preferences has been developed as described below and illustrated in Figure 1. Whilst Fidra urges individuals, companies and legislators to rethink our reliance on single use items the organisation recognises that there will be a place for them in our society for some time.

1. Fidra recommends that packaging is only used where necessary. An example of this would be for supermarkets to sell fruit and vegetables loose rather than in plastic or compostable packaging, whenever possible.
2. Where packaging is needed Fidra recommends reusable containers that can be (re)filled in shops and takeaways to avoid the use of compostable, recyclable or disposable packaging.
3. Where single use packaging is unavoidable Fidra recommends the use of packaging that can be successfully recycled or composted, thus avoiding waste going to landfill or incineration. It is important that such products have no harmful chemical content so as not to further contaminate compost or products made from recycled content. Due to inconsistencies in composting and recycling infrastructure, where to use compostable or recyclable materials needs to be considered on a case by case basis.
4. Where option (3) is not possible, Fidra would recommend the use of compostable items with no intentionally added chemical contamination. Fidra believes compostables are preferable to non-recyclable plastics which can have greater negative environmental impacts due to their non-renewable source, and further negative impacts when incinerated or when sent to landfill.
5. Fidra's least favoured option is single-use disposable, non-compostable products, such as items made from or lined with fossil fuel-based plastics. These should be a last resort and every effort should be made to minimise their use.

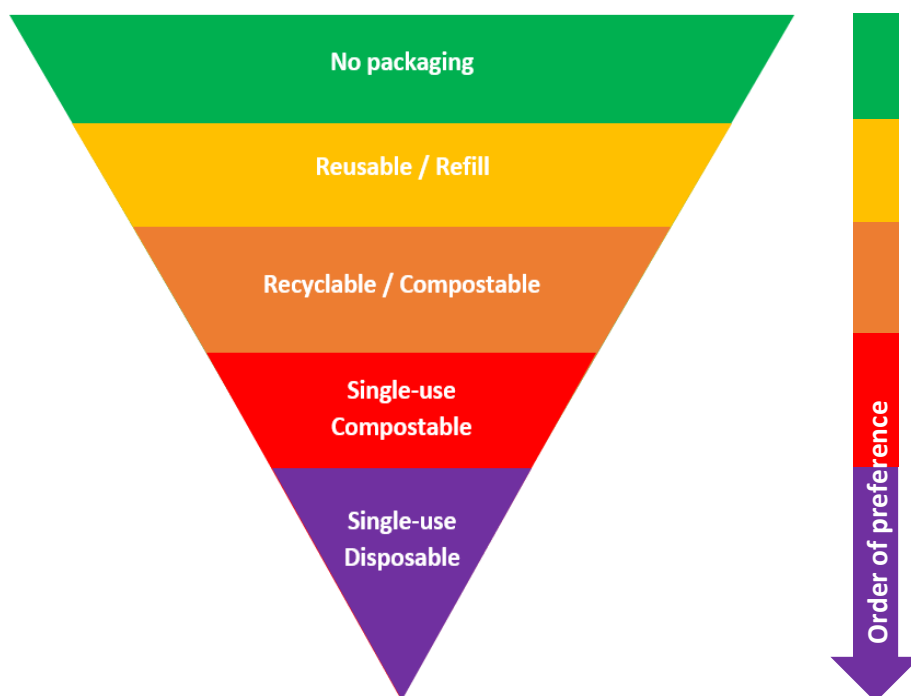


Figure 1. Fidra's packaging hierarchy