

A yellow tractor is shown in a large industrial facility, likely a recycling plant, moving a massive pile of discarded packaging waste. The waste consists of various types of paper, cardboard, and plastic. The tractor is positioned on the right side of the frame, with its large, treaded tires and yellow body clearly visible. The background shows the interior of a large building with a high ceiling and structural beams.

how to export packaging waste properly

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executive summary

Exporting waste materials for recycling has suffered much adverse publicity in recent years. This white paper explains the economic and environmental benefits of the practice. Using examples from our experience as illustrations, it then shows how export and recycling can be done properly to help control the risks and maximise the environmental benefits. It also looks at future issues that should be taken into consideration.

This document has been published by Valpak Limited, the leading provider of Producer Responsibility and recycling solutions for UK businesses. It draws upon the experience gained through operating its recycling services subsidiary, Valpak Recycling. Valpak Recycling specialises in the management and recycling of packaging waste, providing recycling services and advice to UK businesses. It also handles around 300,000 tonnes of secondary raw materials each year, which it supplies to large and specialist reprocessors within the UK and overseas. This experience has allowed Valpak Recycling to address the current issues surrounding the export of waste material, using actual data to explain the rationale in this document.



introduction

why is the export of waste materials necessary?

There is a growing concern among the British public about what happens to waste packaging from the UK, where it ends up, what is done to it and the environmental impact it has on its destination.

In reality, the export of waste materials for recycling overseas has been an important part of the process for many years and will only increase in importance in the future. This paper explains why this is the case and suggests how, with proper controls and processes, the export of waste can make a valuable contribution to the world economy, as well as providing significant environmental benefits.

Why is it necessary to export our waste packaging materials to other countries in the first place? There are three sound reasons:

supply and demand

The UK is increasingly a net importer of goods.

The demand for raw materials to make packaging comes from the countries from which we import our goods; exporting material for recycling is therefore an essential part of global supply and demand. Manufacturers abroad can either use resource-intensive virgin materials for their packaging, or they can use material that is recycled to meet their demand. Products manufactured abroad are shipped to the UK, where we do not always have the demand for reusing or recycling all the packaging material, due to reduced manufacturing in this country. If the excess material stays in the UK, there is a high probability that it will end up in our own landfill sites. Instead, the UK exports packaging materials back to the country of origin, where it can be recycled to create more packaging for the next consignment of imports.



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This global supply and demand loop is an essential part of world trade and drives the export of waste materials.

Nearly 60% of the glass collected for recycling in the UK is green, from wine and beer bottles. The rest of the glass thrown away is clear and brown glass. Less than 20% of the bottles produced in the UK are green. The UK produces whisky, gin, milk and water, all of which are packaged in clear bottles. The net effect is an excess of waste green glass and a requirement for clear glass. The solution is to find non-colour specific recycling opportunities within the UK, as well as exporting excess supply to where it is needed. The UK exports green glass to wine-producing countries such as Spain and Portugal.

cost of export

The second reason for exporting waste material concerns the financial cost. The industry has recently come under criticism over the apparent expense of transporting material half way across the world to be recycled. In reality, because the UK buys so many products from the Far East and other countries, a huge number of containers reach our shores every year. These containers return to the country from which they came, in order to bring the next consignment of goods to the UK. Since the UK does not export such large quantities of goods back to these countries, many of these containers would be returned empty; the return journey has to be made and the fuel will be used anyway, regardless of the contents of a container.

The cost of returning a full container is not much more than returning an empty one. This means that waste material can typically be shipped from London to China more cheaply than scheduled haulage from London to Scotland. The environmental and economic impact of sending waste packaging material back to its country of origin is therefore very low.

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environmental benefit

The environmental benefits of exporting waste packaging material are a consequence of supply and demand and the cost implications discussed above. Global supply and demand produces opportunities to make use of transport that is being used to return otherwise empty containers to manufacturing countries. The environmental benefit is that more recycling can happen without the need for any additional transport. By trading used materials internationally, excess waste materials, for which there is not a use in the UK, can be offered on the world markets to replace virgin materials, with consequent benefits for both resource and energy saving.

China manufactures a vast proportion of all the toys in the world. These toys are packaged in cardboard to be shipped to the mainly western countries in which they are sold, including the UK. This cardboard can be recycled in the UK to make new cardboard boxes, but there is only a limited capacity here to do so. It makes more sense to ship excess waste cardboard back to China, where it is needed. One container can only carry approximately 1–2 tonnes of cardboard boxes, compared to 25 tonnes of baled, used cardboard for recycling.

Cardboard boxes are used as packaging for products. Because they are relatively bulky even when flat, their production needs to be close to the manufacturer of products that use them to minimise transport and environmental costs. UK factories making cardboard boxes have the capacity to use approximately 1.6MT of recycled materials per annum. The UK currently collects two and half million tonnes each year, resulting in an excess supply of around one million tonnes to be recycled elsewhere.



how do you export properly?

The export of waste for disposal is strictly illegal. Although the export of secondary materials for recycling is an important area of international trade, it is strictly controlled. This means that whilst the industry is young and still developing, many aspects rely on rules that are not clarified or quantified. The responsible, effective and efficient export of packaging materials from the UK should be governed by a combination of existing legislation and best practice. These issues can be divided into three main areas, which are discussed in turn.

regulatory requirements

The main piece of legislation controlling the export of waste packaging is the Trans-Frontier Shipment of Waste (TFS) Regulations, which regulate what can be exported outside Organisation for Economic Co-operation and Development (OECD) countries. They cover all types of waste including those which can be recycled. They are run on a red, amber and green light system. Green means go ahead and red means that permission is required from the relevant environmental authority in both the exporting and destination country before export can occur. Each 'light' covers a list of materials which varies between countries, based on decisions made by each destination

country. Within the recycling industry, red-list materials are generally not exported because the process is too complex. At the other end of the scale, most waste packaging is green-list material, unless it contains two green-list materials mixed together. This will be considered household waste that has not been sorted and therefore becomes red-list material.

Any company wishing to export waste packaging material has to first establish whether or not the destination country will accept the specific material. It then has the responsibility to ensure that the green-list materials it wishes to export are not mixed with red or other green-list materials.



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Once the material is ready to leave the UK, the Environment Agency (or SEPA in Scotland and EHS in Northern Ireland) has the right to open any container at a port and check what is inside. The Agency may be notified by individuals or Customs of suspicion regarding a particular container. However, it is difficult to check the entire contents of every container, to ensure they contain only properly sorted waste packaging. The solution requires tight controls and use of best practice, which includes ensuring all relevant permits are held for export from the country of origin and import into the destination country. It also includes ensuring compliance with the TFS Regulations.

Figures released by DEFRA show that in 2005 whilst over 53% of total UK packaging was recycled, almost one third of that was exported, with only two thirds being recycled in the UK. India will accept PET waste – plastic drink bottles – but will not accept polythene films. Malaysia will accept paper but will not accept any plastics. A Packaging Export Recovery Note (PERN) is a document that ensures that packaging waste is properly exported for recycling. There are rules governing the issuing of PERNs to make sure that the proper checks are made.

current practice and issues

Many people believe that ‘waste’ material is exported from the UK for disposal. In reality this material is a valuable secondary resource for reprocessing, not waste. The key to ensuring export is done properly is making sure that the material is prepared, graded and sorted to the correct standard before it leaves the UK. The better it is prepared, the greater its value and therefore the lower the chances of it going to low value or undesirable uses or processes overseas.

Collection schemes are trying to meet higher targets – be they packaging, or local authority targets – so different materials are often collected together, to save money. It still needs to be sorted before it can be exported properly.

Can a mix of steel and aluminium be legally exported? On the basis that they are both metals, they can, but there is no clear guidance. Mixed plastic bottles can be exported, even though they are made from different polymers, unless the material is being shipped to particular countries, which only accept certain polymers.



No sorting process is perfect and small amounts of contamination will inevitably occur. For example, plastic bottles can retain traces of paper labels; green glass may be mixed with metal caps and corks. If a consignment contains even a small element of more than one material, it could be considered to break export laws. However, since most recycling factories have a tolerance for a small percentage of contamination this is fully consistent with the intention of the law, which is to prevent the shipping of unsorted waste material.

The solution would be more quantitative guidance from the industry regulator as to what level of contamination is acceptable. This will allow the establishment of standards to which more firms can operate. Best practice also suggests regular site visits to customers, handling of defined quality grades, taking a minimum of three photographs for deep sea shipments and signing off those photographs by an experienced member of staff prior to export to confirm quality.

Paper is collected from households. When it is sorted, all the materials other than paper are pulled out and the paper comes out of the end of the sorting plant. This can be a mix of different types and grades, such as newspapers and packaging. Some operations produce higher levels of contamination than others and this may be due to rising targets. Local authorities are being pushed to collect more and more waste for recycling. Without suitable sorting plants, the material cannot be dealt with effectively.

tracking systems can be put in place to take more control of the situation and increase the standards to which exporters operate

achieving best practice

Once material has been cleared to leave the UK and has been sent to a country that will accept it and recycle it, there is still the question of whether or not the material is recycled appropriately. The challenge is to make sure that the material has been recycled in the first place and that the facility it is being recycled in is of a suitable standard. From a legal point of view the exporter is responsible if they write PERNs on a consignment. New legislation has been brought in this year that says reprocessing factories must operate to a 'broadly equivalent' standard to European operations.

The solution is for waste packaging material to be tracked from the start of its journey to the end. This involves tracking where it comes from, its haulage, its shipping and its delivery to the customer at an approved factory. In the absence of legal requirements, best practice should be followed, to include:

- gathering material source information to include grade, quantity and loading photographs for containers
- issuing a statement of collection information to confirm a PERN will be raised and that the material is UK-sourced packaging waste

- production of transport information (Bill Of Lading for deep sea) showing grade of material and relevant Customs codes
- collection of details of reprocessors, including details of the recycling process, recycling efficiencies and any relevant licences and permits
- obtaining written confirmation of the end market recycling and reprocessing that has taken place

The development of a European-wide grading system for plastic (similar to the CEPI system for paper) and quantitative guidance and contamination limits on recyclate being exported, linked to TFS, will help the industry to develop.

The cost of running plastic reprocessing factories in the Far East is much lower than the cost of running such facilities in the UK. This is because reprocessing of plastics requires a lot of manual sorting to remove unwanted polymers and paper labels and labour costs are lower in the Far East.



summary

how should the future look?

The amount of packaging waste in the UK is unlikely to decrease significantly and is more likely to grow with the economy and increased affluence. It is therefore essential that those in the industry try to operate to best practice and the best standards. These standards will become increasingly important and stringent as new legislation is introduced regarding the recycling of goods manufactured in and imported into the UK. For example, the Waste Electrical and Electronic Equipment (WEEE) regulations will govern the recycling of electrical and electronic goods, including computers and flat screen TVs, many of which are made in the Far East. When imported to the UK, it becomes the responsibility of the importers to recycle not only the goods, but the packaging as well.

Current regulations are not completely clear as to who is fully responsible for monitoring the export of packaging waste for recycling and what standards should be met. Rather than wait to be told, manufacturers should take responsibility for setting and meeting their own high standards of best practice. It is not feasible for every exporter to accompany every container of waste

packaging that they send abroad, to ensure it reaches its destination and is processed properly. However, tracking systems can be put in place to take more control of the situation and increase the standards to which exporters operate. Only when this is done – when evidence is gathered to show what exactly happens to materials exported from the UK – will members of the public trust those in the industry and change their perception of the situation.

Export of packaging waste is subject to both economic and legislative drivers. These need to operate constructively in parallel to ensure that opportunities for recycling are increased whilst maximising the environmental benefits. Generalisations should not be made about the export of packaging material, because each case is unique. Different materials are handled in different ways in different countries. Exporters have the duty to explain the individual situations to the general public to help educate them.

contact

Telephone **08450 682 572**

Email **info@valpak.co.uk**



Valpak Ltd, Stratford Business Park, Banbury Road,
Stratford-upon-Avon CV37 7GW
tel 08450 682 572 fax 08450 682 532 email info@valpak.co.uk

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