



WINDLESGROUP

# CUT THE CR\*P



Real Facts  
Real Reduction  
Real Sustainability


**It is very easy to talk about being 'green' or being 'environmentally friendly'.**

Windles act on our word. We always believe it is better to develop sustainable solutions on a continual review method. Yes, we have some great innovations already in place, but it is the much bigger picture that we're focused on, ensuring our future actions do not have a detrimental or negative effect on the world we live and treasure.

The content outlined in this presentation explains a little more about what we do here at Windles. You'll find useful information, design tips for our processes and handy industry knowledge.

If you would like a pack of CUT THE CR\*P cards to keep on your desk, let us know and we'll send one out.





All of our products, processes and techniques are underpinned with 35 years of expertise. Projects are evaluated for their sustainability, recyclability, life-cycle and function to ensure they are fit-for-purpose and that appropriate materials and finishes are selected.

Neon Digital Print

Emboss / Deboss

Creative Varnish

Texture Varnish

Greeting Cards

Paper-Banding™

Notebooks

Kard Klasp™

Packaging

Gift Wrap

Die Cut

Hot Foil

Colourise

RetroPress

Light Touch

Enviro Flitter

Digital Printing

In-line Cold Foil

In-House Gluing

UV Litho Printing

# Setting Standards

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Windles Group take the sustainable and ethical practices of our business very seriously. We're regularly audited and reviewed for all of our certifications and standards. We are committed to the Ethical Trading Initiative and implement the UN Guiding Principles on Business and Human rights. As a family owned company, we hold core values such as integrity and honesty paramount to everyone connected within the business.

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For more information, visit the following federations and organisations:

- FSC® - Forest Stewardship Council  
*[www.fsc.org](http://www.fsc.org)*
  - PEFC - Programme for the Endorsement of Forest Certification  
*[www.pefc.org](http://www.pefc.org)*
  - ISO14001 - Effective Environmental Management System  
*[www.iso.org](http://www.iso.org)*
  - ISO9001 - Quality Management System  
*[www.iso.org](http://www.iso.org)*
  - SEDEX (Supplier Ethical Data Exchange) member  
*[www.sedex.com](http://www.sedex.com)*
  - Workplace Conditions Assessment (WCA)  
*[www.intertek.com/assurance/wca/](http://www.intertek.com/assurance/wca/)*
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# Loop-it Scheme

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LOOP-IT is a self-driven initiative developed at the Windles Group, to encapsulate all the great work that is undertaken to reduce both ours, and our client's impact on the environment. It is the combination of advanced building construction, a shift in the way we think about bi-products, and a colour panel coding system, that have established Windles Group as one of the leading ethical companies in the UK.

Every element of our business is reviewed, evaluated and then a LOOP-IT *Action, Recycle or Knowledge* panel is applied. This ensures we are continually producing products in a responsible way. LOOP-IT is available to all our clients as we believe that saving energy and working more efficiently should not stop with us. We would like to help our clients also reach the same high standards by sharing our knowledge.

- Encompassing all of our environmental developments
- Windles Group initiative
- Raising awareness of our impact on the environment
- Knowledge sharing with our clients
- LOOP-IT panel system of Action, Knowledge and Recycle
- Converting machine power consumption into kettles
- Dedicated LOOP-IT brochure available

# Waste Management

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Windles Group is very conscious about the raw materials we buy. Making considered choices at the front end of purchasing can have a big impact on how any waste or bi-product from these can be handled. There is no point sourcing a particular material that can not then be managed once it has traveled through our production; it simply passes the problem down the line to another department or external company.

Our target is to form a recognisable and audited trail of every item that enters and leaves the Windles site, culminating in no items or bi-products ending their life in landfill.

- Total waste segregation policy to ensure responsible disposal
- Year-on-year reduction of waste direct to landfill
- Our aim is to create a Zero Landfill system
- Recycling end-of-use cardboard cartons into packing material
- Pallets-to-Pellets energy recovery & heating scheme
- Food and organic waste turned into compost for our plants & trees

# Biomass & Energy Recovery

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Windles was paying to have old and unusable wooden pallets collected from our site, loaded on to lorries and taken to be disposed of. With some careful and clever thinking, we turned this negative aspect of waste management into a hugely positive and pivotal part of our LOOP-IT scheme and the sustainability of our company.

By incorporating a bio-mass boiler compliant with the Clean Air Act, a wood chipper and an industrial magnet, we can now form bio-mass fuel pellets that heat our factory in the colder months. Warm air is filtered and vented in from the outdoor burner in through custom-built ducting and airways. This has dramatically reduced our heating bill, our need to transport old pallets across country and makes use of what would have been deemed as waste.

- Pallets-to-Pellets scheme created by Windles Group
- Paper and board delivered to Windles on kiln-dried wood pallets
- Pallets cannot be reused due to non-standard dimensions
- Timber from pallets is chipped and nails extracted
- Wood chips then compressed into pellets
- Pellets can then be burnt in our furnace to heat the factory
- Pallets no longer require road-travel to be recycled elsewhere

# Ink, Varnishes & Coatings

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One of the main strengths of Windles is developing and applying a great variety of print finishes. In this category are inks, varnish and coatings. Through a combination of these processes we are able to create some amazing and eye-catching products.

The processes that we apply at the print stage still keep the paper & board substrates recyclable and compostable. We work closely with board merchants and mills to ensure we have a comprehensive understanding of the environmental credentials of substrates we work with. We also have access to INGEDE (International Association of the Deinking Industry), allowing us to conduct independent and verified tests, to determine the paper/board recyclability rating of our print finishes.

- LED cured inks
- UV reactive inks dry instantaneously
- Ultra-smooth high gloss appearance
- INGEDE independent de-inking tests
- UV inks are virtually 100% solvent and VOC (volatile organic compound) free
- Inks & coatings do not prevent material being composted or recycled
- Zero MOSH & MOAH ink content



# Wrapping of Product (or not)

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At Windles we recognise that the terminology used to describe plastics can be confusing. Because of this we have pulled together key facts to increase awareness and understanding.

Aside from the features of each wrapping material and how they behave, we need to have knowledge of suitability for recycling and disposal routes of each material in order to make valid decisions around how we pack products. If you require your product to be wrapped, then we will put forward the most environmentally responsible solution.

However...

To support and move away from single-use plastic, we pioneered the very successful Kard-Klas<sup>®</sup> solution. (see separate card for more detail). This eliminates all single-use plastic.

- Our objective is to reduce wrapping wherever possible
- Convert wrapped product into Kard-Klas<sup>®</sup> products
- We want to give our clients the correct facts and information
- It is important to provide informed choice
- Product development to remove the need for wrapping
- Understanding supply chain and retailer flexibility
- Apply wording to wrap to advise on recycling/composting

# Paper & Board Sourcing

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Windles Group have chosen to partner with the Iggesund Paper Mill based in Workington, Cumbria. Incada Silk is made at this mill using pulp from local forests in surrounding areas and Scotland. The mill runs self sufficiently using a Biomass plant fueled by willow, which as well as helping control ground water making the area less susceptible to flooding, it provides local farmers with additional income.

This has many benefits to Windles and our clients. It gives us a manageable UK-based source of high-quality paper and board. By travelling only 290 miles, the impact on the environment for our deliveries from the mill is massively reduced, in comparison to other globally-based mills in India, Canada and Scandinavia.

- All raw materials are responsibly sourced
- 100% of paper and boards purchased are FSC and PEFC
- 90% of our publishers switched to UK made coated boards
- Significant reduction in carbon emissions
- Annual carbon reduction of 117,660kg\*
- From 1 tonne of Incada Silk B1 board we can make 62,400 cards

\*equivalent to energy to run 257 UK homes per month

# Site & Building Efficiencies

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Windles Group moved into our current home in 2016. Prior to any site development beginning, work was carried out to protect and relocate any wildlife that was found on the land. We then moved to the second phase of construction in which multiple initiatives and building methods were implemented. Specific attention was paid to the natural light sources throughout the roof and outer walls, solar-panel lighting in outside spaces and the installation of the bio-mass heating system that was so successful at our previous site - *Pallet-to-Pellets*.

All of these efficiencies and systems enabled us to secure a BREEAM rating of *very good*, but work still continues to further improve our home, getting closer to a fully sustainable work place.


- Purpose built factory with a very good BREEAM rating
- Heat via bio-mass eco-fuel using our pallets-to-pellets scheme
- 35% natural lighting with LED lighting activated by LUX sensors
- Low emissivity glass keeps heat out in summer/warm air in during winter
- *Rapid roll* doors on goods-in & out, maintaining heat
- Power factor correction, reduced electricity consumption
- Outside solar lighting
- Latest insulation techniques
- Water usage monitors

# Biodegradable Plastics

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Biodegradable plastics are becoming more available as research and development gathers pace. It is *very* important to recognise the benefits of conventional recyclable plastics versus plastics that can be broken down under natural conditions.

Biodegradable plastics do have drawbacks, so tread carefully. For example, they do not decompose unless they are disposed of correctly, meaning that biodegradable plastics must be treated similarly to compost. The natural breakdown of the plastic *will not* occur if it is simply thrown in a landfill with other rubbish. This simply adds confusion and ultimately more waste, but without any awareness.

- Biodegradable means plastic is broken down by micro-organisms
- The rate of bio-degradation is subject to the type of soil
- The starch used is sourced from maize, potatoes or cassava
- Biodegradable plastics cannot be recycled as non-biodegradable
- PLA - Polylactic acid, a biodegradable polyester
- PHA - Polyhydroxyalkanoate, natural biodegradable polyesters
- PBS - Polybutylene Succinate, a starch blended plastic
- Genuine products may carry this symbol 

# Local Sourcing

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In 2018 we took the long-term decision to source our paper & board closer to home. Our aim - To DRAMATICALLY reduce our carbon emissions and take a huge step toward becoming a carbon-neutral and sustainable production company. Clearly outlined below are the hard facts about how much CO2 we have directly saved by making this choice.



Shipping Container  
211kg CO2 per  
tonne

+



Road Transport  
3.1kg CO2 per tonne

**TOTAL**  
**214.1kg CO2 per tonne**



Road Transport  
18kilos CO2 per tonne

**TOTAL**  
**18kg CO2 per tonne**



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Company

Product

Process

Knowledge

# Packaging Logos

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This label is applied to packaging that is collected by 75% or more of local authorities across the UK, for example plastic bottles.



Depending on the packaging, it can be good to remove the outer sleeve. For example, a paper sleeve that is wrapped around a large yogurt pot can be removed and recycled with paper.



This label is applied to packaging that is collected by 20-75% of local authorities across the UK, for example some types of plastic packaging.



The Green Dot does not necessarily mean that the packaging is recyclable, will be recycled or has been recycled. It is used on packaging in some European countries and signifies that the producer has made a financial contribution towards the recovery and recycling of packaging in Europe.



This indicates that an object is capable of being recycled, not that the object has been recycled or will be accepted in all recycling collection systems.



This symbol from *Keep Britain Tidy* asks you not to litter. It doesn't relate to recycling but is a reminder to be a good citizen, disposing of the item in the most appropriate manner.



You should not place this electrical item in the general waste. Electrical items can be recycled through a number of channels.

# Recycling Plastics

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PETE

## **Polyethylene Terephthalate**

Soft drink bottles, fruit juice containers



HDPE

## **High-density Polyethylene**

Milk, shampoo, bleach agents bottles



PVC

## **Polyvinyl Chloride**

Trays for sweets, fruit and food foils to wrap food



LDPE

## **Low-density Polyethylene**

Bottles, shopping bags, packaging sleeves



PP

## **Polypropylene**

Toys, packaging components and sleeves



PS

## **Polystyrene**

Toys, CD cases, packaging fillers



OTHER

## **Other**

Including acrylic, polycarbonate, polylactic fibres

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# Hot Foil

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*Design* - The hotfoil process is based on a die being stamped through a foil film and on to the paper/board sheet. To help reduce the amount of metal used in the die, it is worth considering the furthest points on each of your products that are being foiled. It is these points that determine how big the die is, and not the coverage within these points.

*Recycling* - The Foil Stamping And Embossing Association (FS&EA) conducted a study into the recycling process of Hot Foiled materials. The study concluded that all paper and board products are recyclable when using the Hot Foil process at Windles. The recycling process involves mixing the paper or card products with water to turn it into a pulp. It is then pressed, dried and rolled into new sheets of large thin paper.

Hot Foiling **does not** prevent paper from being re-pulped, recycled, or de-inked. The application of hot foil is performed on our Bobst machines using highly accurate dies. Once transferred, Hot Foil is so incredibly thin (less than  $2.5\mu\text{m}$  {microns} thick), that it completely dissipates within the re-pulping process along with other inks and printed materials.

# Cold Foil

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*Design* - A beautifully unique & creative metallic colour process, applying a thin layer of foil to selected areas before being overprinted. The creative stages are not hindered in anyway by using Cold Foil as all the versatility of colour is through the conventional litho print process using CMYK inks. This process reduces machine time and wastage in comparison to using multiple hotfoil colours.

*Production* - Foil rolls can be cut to varying widths prior to loading on to the printing press. This ensures that we are not pulling foil through the machine that is completely unused.

*Recycling* - Cold Foiling **does not** prevent paper from being recycled (as approved by ENGEDE). The application of cold foil is performed on press in-line with printing. Once transferred, Cold Foil is so incredibly thin (less than 2.5µm {microns} thick), that it completely dissipates within the re-pulping process along with other inks and printed materials.

Any remainder foil that has not been used during production is collected and bundled. We then wait until we have enough bundles to request a recycle collection. These bundles are then used in the manufacturing of cement as they have a huge calorific burn rate. This helps another industry reduce their carbon usage.

# Colourise

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With the demand for eye-catching print finishes ever increasing, Windles Group once again bring you a fantastic unique innovation. Colourise elevates your design both visually and physically, creating superbly detailed raised print areas.

Colourise is a secondary process that we apply to your design after the main printing has been completed. Being an off-line process means we can handle individual products that have already been cut and removed from the main print sheet. It maybe that you have one product that requires Colourise, and therefore it is highly efficient due to a smaller machine size, smaller print plate, less set up time and less wastage.

Colourise **does not** hinder the recyclability of your card-based product. The very small percentage of Colourise used in the process, simply gets removed at the pulping stage (like Hot and Cold Foil are), leaving the paper/board fibres clean, ready to be pulped and made back in to the new sheet material.

# Emboss & Deboss

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A classic way to enhance or embellish your product is to sculpt and mould the surface. Like everything at Windles, we have taken embossing and debossing to a new level (no pun intended). Working with skilled die-makers and machine operators has allowed us to explore the very boundaries of crisp, deep and precise embossing.

Embossing & Debossing adds no additional material, ink, varnish or film to your product. This means that your product not only looks great, but remains just as recyclable as it was when we start with the virgin material.

One thing to consider is the size of the area you wish to embellish. As with hot foil dies, the amount of metal used in the die is governed by the furthest points on the product that are being embossed/debossed. At the end of their working life, all of our dies are collected, melted down and turned back in to new dies.

# Die Cut

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The die-cutting process is a popular manufacturing technique within the packaging and greetings card industry. It involves the use of a cutting die, or *forme* as it is often called, that is loaded into one of our dedicated machines. Using significant pressure, the die is stamped into the sheet to cut out all the shapes required on that design. The process is essentially a giant cookie cutter that is pressed into the material to form the desired shape of the product.

With considered design to the flat layout of your product or products, it is possible to be highly efficient with the sheet usage. Interlocking and tessellating designs reduces the amount of *skeleton* waste in between the die-cuts. All bi-products of the process are collected, bundled and recycled into new paper and board materials.

All of our cutting dies are made from sustainable timber sources, are FSC approved and are fully recycled/chipped once they have come to the end of their functional life.

# Litho & Digital Print

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At the heart of the Windles Group are our offset Lithographic printing presses. They can print between B3 and B1 sizes, work to ISO12647-2 Colour Management System. The presses can handle varying thicknesses and weights of material up to 800micron.

Our recent acquisition, a KBA 106x litho press has a very advanced plate-loading and make-ready system. This has dramatically reduced the quantity of sheets required to start flow and balance the inks prior to a production run.

All of our litho and digital inks are very carefully chosen for their chemical makeup. It is hugely important to not use products that add harmful or damaging substances in to the environment. On this basis, we can confirm that the Windles Group does not use any inks or varnishes that contain MOSH or MOAH based products. Advanced analytical development with regard to sensitivity and automation means that it is now possible to detect tiny amounts of these substances. We can supply certification and laboratory analysis results on request to support this important claim.

Any inks or varnishes we apply to your designs do not hinder or nullify the recyclability of the final product.

# Kard Klasp & Paper-Banding

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With the continued social and global momentum to remove single-use plastic from the production process, we set about to develop a solution that temporarily joins the greeting card to the envelope. This would deliver the product into stores effectively with minimal post-consumer waste, creating a fully recyclable product



Kard Klasp<sup>®</sup> is the revolutionary new way to present your greetings card ranges. No plastic, no film and no wrap, ensuring your product is 100% recyclable. Developed by the Windles Group, this mechanism keeps your card with the envelope securely, until the card is purchased, at which point the customer simply removes the easy-peel, recyclable seal.



The next step to plastic reduction, was to analyse the journey of the product to stores. We found a large amount of plastic was being used to 'bundle' product together, making it easier for stores to load shelves and merchandise stands. This plastic use was behind the scenes, but we created an automated paper version that allowed for complete recyclability of this transit item - *Paper Banding*.

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Company

Product

Process

Knowledge

Download a digital version



*[windlesgroup.co.uk/sustainability](http://windlesgroup.co.uk/sustainability)*

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Company

Product

Process

Knowledge

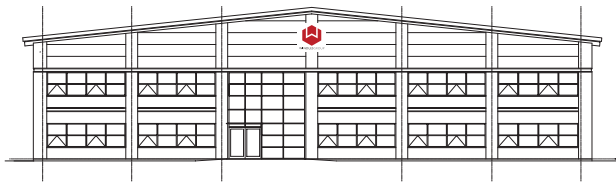


# Windles Group

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Based in the heart of Oxfordshire, our home is a purpose built production house from which our creative ideas grow. The building and site have been, and continue to be very carefully managed in terms of our impact on the environment as a whole, and the amazing countryside around us.

Taking control and being responsible for our actions is of paramount importance to the growth and development of the Windles Group. We make choices that underpin our production-house with long-term sustainability at our heart. These decisions have, and continue to be made in a completely holistic manner, considering quality of product, prices and costs environmental credentials and CO2 emissions.



# Wildlife Care & Conservation

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*Badgers* - We are very privileged to work in the Oxfordshire countryside. Before we even began to consider starting to build our new factory, we conducted wildlife analysis to ensure that any creatures living in and around where we were building, would be managed and re-homed close by. You can see overleaf Bruce, our MD, planning what went into the new badger set that we built for our furry neighbours.

*We've also got worms* - And don't forget our wormery, it's the place where all the food and organic waste from Windles ends up – they're probably the best-fed worms in the UK! The fertiliser they produce then gets used on our plants and trees to help them grow greener and stronger.



# THE Bat Hotel

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Yes, it is true...a bat hotel. As well as badgers, we have a purpose built home for our local bats to roost. As you can see, no expense spared for these night time critters, who clearly have the best bat home in all the land. We even thought about giving Kevin McCloud a call to feature on Grand Designs.



# Production Area & Layout

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The heart of the Windles Group is the fantastic production area. Over the years, this has been tailored and refined to bring a seamless service to our clients. The key to the success of our production is two things. Firstly, the people that operate these machines are exemplary in their attention to detail, and draw upon a lot of experience to ensure products are produced to the very best standard. And secondly, the machines installed are carefully chosen, so that we can create some unique effects and techniques, by combining processes.



More information





WINDLESGROUP



WINDLESGROUP.CO.UK