# GREEN APPLE AWARDS FOR ENVIRONMENTAL BEST PRACTICE SUBMISSION BY FLOORBRITE GROUP LTD

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## Section 1

Project Title – Waste Management innovation & increasing sustainability awareness at Duo UK

Submitted in the category for - Both

## <u>Section 2 – Sectors and Categories</u>

Commerce and Industry Sector – Service Industries

Green Practices Sector – Wastes Management

## Section 3

Has this project ever been nominated previously for a green apple award? YES

Floorbrite have worked with Duo UK to invest more in their recycling process and promote their achievements to their supply chain, inspiring their customers to carry out more recycling and introduced closed loop recycling options.

# Section 4 - Project Aim

Floorbrite Group Ltd have been providing cleaning services at Duo UK since 2009. Duo UK are a manufacturer and supplier of high-quality polythene packaging products. Our bespoke Waste & Environmental Management Service was introduced at the end of 2014. We contacted Duo UK to offer a tailored alternative to waste removal services.

In early 2015 our Waste & Environmental Consultant, Trudie Williams, who is an ISO 14,001 Lead Auditor and WAMITAB accredited, met with Duo and discussed our waste solutions. Our ideas fitted perfectly with the company objectives at Duo, following the launch of their new "Duo Green" range, a green PE alternative material made from sugar cane, for mailing bags, which is 100% recyclable, renewable and sustainable and CO2 negative.

In becoming a responsible supplier and manufacturer by producing a green alternative, Duo's focus switched to waste produced on site in Manchester. Trudie was able to help the management team outline their aims to reduce Duo UK's carbon footprint helping Duo's customers and supply chain to achieve their sustainability goals, reduce costs, increase recycling, and reduce landfill.

Floorbrite's aims were to reduce waste removal costs, encourage 100% recycling, achieve zero landfill, introduce full segregation of waste streams, recover energy from waste. Get buy in from management and staff to increase recycling, fully train staff, reduce overflowing containers and handle waste in the correct way. Finally, by working closely with Duo we created a powerful case study to target other manufacturers to reduce their waste to landfill. In 2018 we set up a closed loop recycling scheme, with Floorbrite installing Baling Equipment Duo UK customers sites. Up to April 2020 we have so far installed Bailing Equipment on four of Duo customer sites. QVC, XPO Logistics, Clipper Logistics and Air Ambulance. The sites in turn bail the returned plastic mail bags and the bailed waste is returned to Duo UK to be made back into raw material to reused within the production process.

# Section 5 - Project Achievement

Our achievements have certainly helped the environment by reducing Co2 and transport (road mileage) to and around Duo's Manchester site and neighbourhood in the form of waste vehicles. The reduction in waste pickups has in turn reduced Duo's costs. Movement of waste on site has reduced due to the reorganisation of waste disposal and recycling points and the reduction in the total amount of waste produced. We have introduced the separate removal of food waste, increased the amount of paper waste removed, increased the reuse of cardboard cores and reduced the number of cardboard cores going into the waste stream, also decreasing the amount of waste on Four customer sites and highlighting recycling opportunities. The sites are all large producers of used mailing bags this reuse option ensures that the plastic waste forms a large part in the reduction of waste disposal and completes the closed loop recycling options available.

By educating the management team and staff they have become passionate about recycling. There is a real "Feel good factor" proved by Trudie's reports and this has also inspired staff to take what they have learned and become greener individuals. There is a definite change in staff culture with all looking at ways to make other waste reductions. Internal recycling containers were installed, and this has increased the recycling carried out on site considerably.

With Floorbrite recommendations, Duo UK have invested more in their recycling process and promoted their achievements to their supply chain, inspiring their customers to carry out more recycling and introduced closed loop recycling options.

By breaking down the waste into individual waste streams, Trudie's waste data and environmental reports give a clearer picture of the waste data that is recorded. There is greater control over disposal costs and control of the waste on site.

Duo UK are very proud that the introduction of Floorbrite new systems with the cooperation of the whole of the Duo Manchester team have achieved zero to landfill.

## Section 6

# What did the project involve doing?

Site Audit/Installation and training on site visits
Visit to site 2 x per week during implementation process
Ongoing quartley visits with the Operations Manager
Order and installation of compactor
Order and installation of Four bailers, off site
Change of containers (External)
Decrease in collection frequencies
Provision and installation of signage
Provision of internal recycling containers
Managing the removal of existing containers
On Going Training and education
Negotiating new waste contractors and contracts

## Why did you do it

In becoming a responsible supplier and manufacturer by producing a green alternative, Duo wanted to also focus on their own waste production at their manufacturing site in Manchester.

## What did it cost and where did the money come from?

The money for the project came from the existing annual Budget for waste management, but by reducing waste disposal costs by 38% and also purchasing a compactor the cost became cost neutral. Equipment costs are eliminated due to increase of raw material.

<u>If quantifiable what did the project achieve in terms of sustainability, development, economy, environment and equity.</u>

All Duo UK's staff, management and customers have been educated about the benefits of recycling with a change in culture by seeing the achievements unfold. Duo UK are enthusiastic about promoting their success and their green products with the ability to become attractive to PLC Companies and their own KPIs.

The local community have benefitted from a reduction in traffic. Duo have benefited from cost saving and will benefit from further investment and savings.

Floorbrite have reduced skip collections per annum from 650 to 34 and reduced cardboard cores from 32% of their total waste to 2% and still reducing.

In achieving zero to landfill, since August 2015 to the 29<sup>th</sup> of April 2020, so far Duo have diverted 984 tonnes of waste from landfill, saved 16,728 trees from destruction and the equivalent to 1190.52 kg of Co<sub>2</sub>.

# Longer term benefits

As Duo UK are leading the way in the plastic packaging industry for green products and their own waste management achievements their credibility in this area will increase. As Duo's own customers become more aware of Duo's achievement and of their own responsibility to achieve sustainability goals, Duo's trusted track record will be able to encourage and inspire customers to follow suit.

The story does not stop with what Floorbrite have achieved so far. We have inspired Duo to look at additional recycling innovations and make further investment in machinery to increase recycling in other areas. E.g. Floorbrite are currently looking at further installations of bailers to support the closed loop recycling scheme and use a compactor to compress all the mixed recycling.

Duo also offers closed loop recycling to its customers and are in the forefront to increase this type of service into all their customer base.

## Was there anything innovative about the project?

Introduction of compactor to reduce collections on site
Introduction of a cardboard core cutter, reducing costs to purchase cores each year
Introduction of Bailer for returned plastic mailing bags offer a closed loop recycling
scheme.

# Can other organisations benefit from implementing your methods?

Yes

Manufacturing companies could benefit from this method. Packaging companies could benefit

Companies that have multiple skips or bin collections weekly would benefit from the introduction of a compactor on site.

Introduction of bailing equipment off site.

# What did you learn from the project and are you planning any further development?

Further development for the reduction of metal waste on site. Further development for the compaction of mixed recycling on site. Carry out regular review meetings to help achieve consistent reduction on site. Increase the closed loop recycling scheme into every customer site

## Enforcement action

NO

## Awards Gained

2015 Bronze Green Apple Award – for the built Environment for improving environmental awareness

2015 Golden Service Awards x 2 (manufacturing and Hospitality)

2015 Silver Green Apple Award – Estate Management

2016 RoSPA Gold

2016 Gold Green Apple Award – Service Industries

2016 Green World Ambassador Award

2017 Silver Green Apple Award – Waste Management

2017 Green World Ambassador Award - Dubai

2017 RoSPA Gold

2018 Golden Service Finalist Award (Environmental Awareness)

2018 Silver Green Apple Award – Waste Management

2018 Green World Ambassador Award – Turkey

2018 RoSPA Gold

2019 Green Apple Award – Best in field – Waste Management

2019 Green World Ambassador Award - Vietnam

2019 RoSPA Gold

2020 RoSPA Gold

2020 Finalist Award for Tomorrow's FM

2020 Finalist Award for Tomorrows Cleaning

# Case Study

Duo UK based in Manchester employs over 100 staff and turns over £25 Mil. Established in 1988, the company secured its position in the packaging market as a trusted manufacturer/ supplier of high quality packaging to the e-retail, retail and industrial brand markets and are proud to name JD Williams, Tesco, JD Sports and Keep Britain Tidy as longstanding clients. Duo UK has a substantial track record of investing in environmentally responsible technology and practices reducing its

reliance on unsustainable resources. Recent measures include major investment in closed loop recycling, educational outreach programmes and the development of odour-free 100% recycled packaging. Customer sites currently chosen to roll out closed loop recycling, Clipper Logistics, QVC, Air Ambulance, XPO Logistics. Duo UK was also selected to be the first UK manufacturer to produce mailing bags using Green PE, a polythene that uses sugarcane, rather than oil, as its base substance the product is 100% recyclable. Continuing its commitment to a greener future, in 2015 Duo UK launched Duo Green a platform to help companies create sustainable, environmentally low impact packaging solutions and shine the spotlight on new sustainable innovations.

Upon launching Duo Green, Duo UK made a commitment to achieve zero waste to landfill at their site in Manchester and review their manufacturing processes and supply chain to make further changes to minimise their impact on the environment. Floorbrite have implemented a number of measures to help Duo UK achieve its ambition of zero waste to landfill and continue to work in partnership to make further changes to minimise impact on the environment.

# Aiming for zero waste to landfill

Duo UK invested in a closed loop recycling system to recycle polythene scrap created during the manufacturing process and post-consumer waste. This system recycles polythene scrap and produces recycled polythene pellets for the re-use in the manufacture of new polythene packaging products. The company also encourages its clients to segregate its polythene waste and offers to pay a rebate for scrap and use their own scrap when manufacturing products. Duo UK also offers its clients free packaging audits to review a client's operation and recommend environmental and cost-effective solutions.

Floorbrite have introduced recycling facilities for the separate collection of confidential paper waste, paper, cardboard cores, card, metals, plastics and organic waste. The prevention, re-use and recycling measures introduced by Duo UK and Floorbrite have reduced the amount of residual waste it produces by 70%. With the introduction by Floorbrite of a Compactor, we have been able to reduce the collection of waste from three skips twice per week to One Skip Monthly. This helps reduce movement on site, cut down on road traffic in the surrounding housing estate and reduce road mileage.

## **Diverting Recycling and food waste.**

The introduction by Floorbrite of Internal Recycling Containers and Food Caddies in canteens and kitchen areas, has diverted all food waste into the external food bins.

# **Recovering other value**

Since September 2015, food waste has been collected weekly and sent to an anaerobic digestion plant to produce biogas and bio fertiliser. Since 2018 we have been encouraging customers to enter the closed loop recycling program to recover the plastic waste to be reused into product.

#### **Enabling re-use**

As part of Floorbrite objective to decrease the amount of waste produced on site, desk top recycling boxes have been introduced and has increased paper re-use, confidential paper waste is sent for off-site shredding and 100% recycled. All cardboard waste is now separated and sent for recycling. The Cardboard Cores are now re-used on site, which has reduced the amount of cardboard previously sent off site by 53%. By the introduction of segregation of all mixed recyclable waste Floorbrite have used the Compactor on site. This has reduced collection of the waste considerably. All this waste is removed and sent to a recycling facility which recovers 97% of the waste and the balance of 3% is used in waste to energy. This has achieved Zero Landfill for Duo UK and has also seen a reduction in waste by 29%.

# **Maximising opportunities for recycling**

Duo UK has set targets to increase the amount of waste it recycles. Cardboard is a major waste item and Duo UK aims to reduce the amount it needs to dispose of by encouraging suppliers to:

Optimise packaging to prevent excess; and

use re-usable containers. Any cardboard that cannot be re-used is recycled. Duo UK has been recycling polythene and cardboard since it was established and now has an on-site compactor. Using the compactor means fewer visits from recycling contractors to collect the waste and less space is taken up by waste awaiting collection (three days' worth of compacted waste has the same volume as one day's worth of un-compacted waste) also improving site health and safety. Offer closed loop recycling to all customer, to ensure plastic products is recovered and reused.

# **Continued opportunities**

Floorbrite are now looking into increasing the amount of customer that use the closed loop recycling scheme which will increase the raw material recovered.

# **Communicating with Staff and Management**

**Following** initial discussions with Floorbrite, Duo UK had aspirations' of achieving Zero Landfill. Floorbrite have been able to reduce waste disposal costs, which has inspired the Management and Staff into looking at how the saving can be reinvested in ways of recycling more within the business. Working together with staff at Duo UK, the Floorbrite team have visited site to carry out training with staff and fully audit the areas of concern to ensure initial targets are being met. Floorbrite trained Staff on the safe use of the compactor and placed signage to help staff understand where items go to be recycled. Train cleaning operatives on the movement of waste, type of waste, container and bags required. Waste Data reports are provided enabling the Management to see the improvement and the weight of each collection and share this with staff to motivate and keep the momentum. Only by measuring the waste can consistent improvement be made. Duo UK have been able to inspire their supply chain with the good news waste story so far challenging them to make changes.

Notes to enclose

Waste Data

Environmental Certificate
Training/Installation Notes
Photos/Installation
Recycling Poster
Pictures of Bailer Installation
Bailer Poster