

Five-fold Environmental Ambition: Progress Report 2010

# Building on Success



This report marks a key developmental stage in the life of FDF's Five-fold Environmental Ambition.

We have already made real, measured and verifiable progress against the targets established at our launch three years ago. So much so, that we have spent the last few months looking critically at the scope for delivering even more than we initially set out to do, reflecting also various policy developments such as the passage of the 2008 Climate Change Act and the transition from phase one to phase two of WRAP's Courtauld Commitment.

At the same time, in following wider debates about meeting the twin challenges of food security and climate change, we have decided that we need to explain more clearly what we as a sector can do to improve sustainability across the supply chain and to work with Government and others to develop a more coherent food strategy. In other words, how we take the Five-fold Environmental Ambition to the next level.

This, our third annual report, looks at what we have already achieved and updates on our progress over the past twelve months. In addition this

report explains how and why we have adjusted our existing targets, to ensure we remain at the leading edge of developments.

We also set out the direction of travel for future work, in the light of the review process which we initiated in May involving consultation with a wide range of supply chain partners, external experts and opinion formers.

As in earlier reports, we are also delighted to include a range of case studies illustrating environmental efficiency in practice.

These case studies show why this work makes business sense, as well as demonstrating that sustainable food production can be at the heart of a strong, internationally-competitive, low-carbon UK economy.

We look forward to a continuing dialogue with Government and other stakeholders in order to turn all our aspirations into a concrete programme for action.

“ I congratulate you on the good progress made to date and applaud the aspiration, captured in the new vision, to take the ambition to the next level ”



James Paice MP

I am very pleased to support this third annual report on the Food and Drink Federation's Five-fold Environmental Ambition, particularly as this marks a new phase in its development.

The report not only describes the significant progress already made by the industry in reducing its carbon emissions, water usage, waste etc. but also sets exciting new challenges for the future.

As the largest employer and contributing 6.7% of GDP, a vibrant and successful food and drink industry is essential to the health of the UK economy. But, as the Five-fold Ambition recognises, sustainable growth of the industry is dependent on a responsible approach to the environment and the use of natural resources across the supply chain.

This report clearly shows what industry can do when it embraces sustainability and takes the initiative - the case studies, in particular, provide powerful illustrations of the real-life benefits.

I congratulate you on the good progress made to date and applaud

the aspiration, captured in the new vision, to take the Ambition, and sustainable food production, to the next level. We share your ambitions for the Ambition! Your vision for the future is very much in line with the Government's objectives of enhancing the competitiveness and resilience of the whole food chain to help ensure a secure, environmentally sustainable and healthy supply of food.

I am very happy to take up your invitation to work with the industry, and others, to help turn the aspiration in your vision into a concrete programme of actions.

This will be challenging but I am confident that you will be able to show continuing significant progress in next year's report!

James Paice MP, Minister of State for Agriculture and Food

“ Back in the summer of 2010, I was delighted to accept FDF's invitation for Forum for the Future to convene a group of key FDF members, stakeholders and external experts to explore how the Five-fold Environmental Ambition could be evolved to reflect both progress to date, as well as the scale of the sustainability challenges we know need addressing. The vision published in this report sets out FDF's long-term ambition for ways in which its members can deliver a sustainable food and drink sector for the UK. The vision sets out the direction of travel for the sector, of critical importance will be the speed of travel. My hope is that progress is made quickly, with decisive action taken today by all players in the food value chain. The faster the speed of travel, the more likely it is that the sector is able to turn sustainability challenges into real opportunities. ”

Dr Sally Uren, Deputy Chief Executive, Forum for the Future

# Moving to the next level

In all the areas covered by the Five-fold Environmental Ambition, we are on track to meet or even exceed our original targets.

The ongoing work of our members confirms our belief that good environmental practice makes good business sense. The results we have been reporting since the inception of our Ambition in 2007 provide demonstrable evidence of the progress our members have made in improving the efficiency and productivity of their operations. That we have achieved so much is testimony to their efforts. Some of the highlights of the past year include:

- The latest data available from our Climate Change Agreement with Government shows that our members reduced their CO<sub>2</sub> emissions by 21% in 2009 compared to a 1990 baseline, both achieving – and exceeding – our 2010 target of 20%
- The 42 signatory companies to the Federation House Commitment on water efficiency reduced their water use by more than two million cubic metres of water in 2009 – a saving of 5.6% since 2007
- A survey conducted among member companies, with the support of Defra, shows that the amount of food and packaging waste sent to landfill from factories has nearly halved in three years and at just 9% is well on track to reduce to zero by 2015

It was against this backdrop of continuous achievement that FDF consulted with members and a wide range of external experts and stakeholders to see how our sector could deliver further progress. As we reported last year, we wanted to link our efforts under the Five-fold Environmental Ambition with the work being done elsewhere in the supply chain to improve resource efficiency and reduce adverse impacts.

As a result of this dialogue we have reviewed the targets contained within our Five-fold Environmental Ambition and have agreed with members to make the commitments more challenging, as follows:

- Raising our 2020 CO<sub>2</sub> reduction target from 30% to 35% (ahead of any other sector and in excess of Government's interim carbon budget)
- Accelerating progress to our 2015 zero landfill waste target and contributing for the first time to a supply chain waste prevention target
- Taking WRAP's Courtauld 2 Commitment as the basis of our packaging target with a new aim to engage with consumers
- Building on the success of the Federation House Commitment on water efficiency to develop guidance on water use and management in the supply chain
- Continuing to embed environmental standards through our 'fewer and friendlier' transport commitment and contributing for the first time to IGD's Sustainable Distribution initiative

Our review process also looked at how the Five-fold Environmental Ambition relates to the bigger sustainability picture.

Our sector needs to take account of a wide range of issues such as the responsible sourcing of raw materials, the use of water on farm and in the home, the impacts of agricultural production on biodiversity and levels of greenhouse gas emissions before and beyond the factory gate.

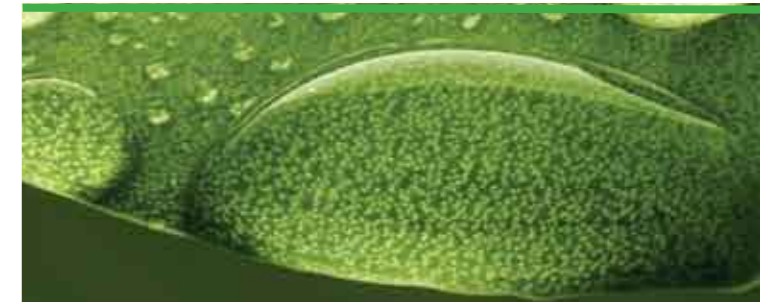
Many of these cannot be directly addressed in the manufacturing process itself – which is the primary focus of our efforts.

But we recognise our responsibilities as part of the whole value chain and want to build on the success we have already achieved in order to engage with and influence others.

Therefore, we have agreed the following new aims that recognise this wider context and will guide our ongoing efforts to reduce the food and drink manufacturing sector's impact on the environment:

- Our role as food and drink manufacturers is to supply consumers with safe, nutritious, appetising and affordable food and to help them make sustainable choices which will secure these benefits for the future
- We will lead by example, building on the success of FDF's Five-fold Environmental Ambition to extend our influence across the supply chain as part of a longer term food strategy
- We will work with our suppliers, customers, employees, policy makers and other stakeholders to develop the necessary information, skills and business environment to deliver continuous improvement in the use of energy, water and other natural resources to help address the pressing global issues of climate change and loss of biodiversity
- We will encourage the development of life-cycle thinking throughout the supply chain and try to remove systemic barriers to improving resource efficiency, from the sourcing of raw materials to the disposal of post-consumer waste
- We will promote innovation and technology to reduce waste and extract maximum value from the resources we use and to help consumers get the most from our products

# The new context



“ WWF welcomes FDF's proposal to take its environmental ambition to the next level. Global food security, underpinned by food sustainability and equitable distribution of global food resources, is likely to be one of the most important issues of the next decade. It is vital that those working in the food sector lead by example and ensure that the world's most pressing environmental issues are addressed – water quality and scarcity, the contribution of food production and consumption to global greenhouse gas emissions, and the rate of biodiversity loss need to be tackled urgently. If they are not, then we will further undermine the global biological systems on which our food chain depends. Food businesses will need rounded sustainability strategies to reduce their vulnerability to the ecological crunch and survive in a resource-constrained future. WWF continually seeks to work with progressive businesses and business associations, such as FDF, to drive a more sustainable, one planet, food system. ”

Mark Driscoll, One Planet Food Lead, WWF-UK

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Exceeding the commitment to reduce emissions by 20% by 2010 is an excellent achievement and we congratulate FDF and its members for showing leadership in accomplishing this. We also commend them for challenging the industry to really grasp the risks and green growth opportunities that tackling climate change presents by increasing the 2020 target to 35%. We will continue to work with the food and drink sector to help it hit this ambitious target and maximise the new economic benefits it will create. ”

Michael Rea, COO, Carbon Trust



Unilever is reducing CO<sub>2</sub> emissions at its UK sites

## ■ Our original commitment

To work collectively to tackle climate change by reducing CO<sub>2</sub> emissions by 20% by 2010 against a 1990 baseline and to send a clear message about the urgency of the problem, by aiming for a 30% reduction by 2020.

## ■ Progress made

Based on the latest data available from our sectoral Climate Change Agreement we are pleased to report that in 2009 our members had reduced their emissions by 21% compared to the 1990 baseline, both achieving – and exceeding – the 2010 target of 20%.

During 2009 FDF has also worked with the Carbon Trust to deliver two Industrial Energy Efficiency Accelerator programmes (on industrial bread baking and sugar confectionery). The findings from these are now being taken forward to exploit the carbon saving opportunities identified. In addition we are pleased to be instigating a third Industrial Energy Efficiency Accelerator programme targeted at the frozen and chilled foods sectors.

FDF has also engaged with the new Government on its review of climate change and energy policy, contributing to the debate on the future of Climate Change Agreements and the implementation of the EU Emissions Trading Scheme. We have supported members on the introduction of the new Carbon Reduction Commitment through a series of workshops and by developing a Carbon Reduction Commitment analysis support tool.

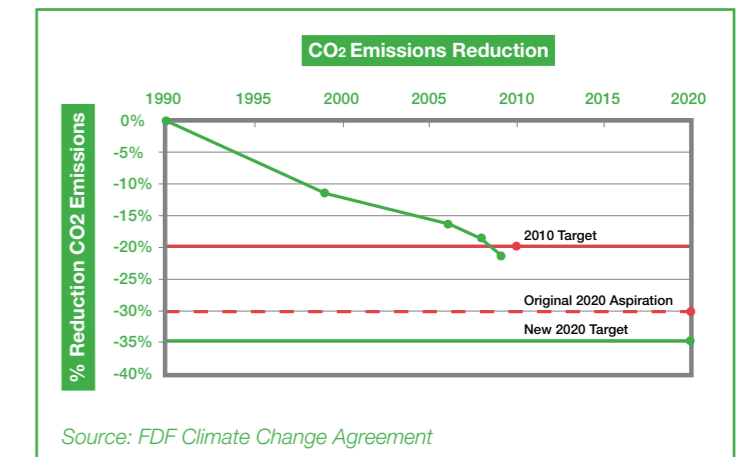
## ■ Taking the commitment forward

In recognition of the urgency of tackling climate change and the UK-wide target of an 80% reduction by 2050 we are pleased to announce that we have raised our 2020 target from 30% to 35% compared to 1990.

We will also be reviewing our reporting methodology in the light of changing Government policy and in order to align more closely with recognised publicly-available reporting standards. We will continue to articulate and report our ambition as a CO<sub>2</sub> target. But, in recognition of the need to address all greenhouse gas emissions from food and drink

manufacturing operations, we will in 2011, also investigate options to report on HFC refrigerant emissions.

At the same time we will continue to engage with Government, partners in the food chain and other stakeholders to tackle greenhouse gas emissions across the wider food chain through our work in WRAP's Product Research Forum and the European Food Sustainable Consumption and Production Roundtable.



# Zero waste to landfill



17 members are working with food charity FareShare

packaging – otherwise known as production ready packaging – in which a number of member companies are taking part. This project has a goal to deliver at least a 1,000 tonne reduction in goods-in packaging waste by May 2011. We have continued to encourage members to work with the food charity FareShare to redistribute surplus, fit-for-purpose food and drink products, which could otherwise enter the waste stream, to disadvantaged people in communities. To date, 17 members are working with FareShare.

## ■ Taking the commitment forward

We will continue to work with WRAP on a suite of measures in support of members' activities on waste reduction, including those being developed as part of a broader package to help Courtauld 2 signatories, along with the dissemination of best practice. This includes completion of the production ready packaging project and dissemination of the results.

In the light of Courtauld 2 we will align the scope of wastes covered by our landfill target with that used by WRAP in so far as solid waste is concerned. This means that the target will not only cover all product related food and packaging waste arisings at the manufacturing sites but also any such wastes arising at ancillary facilities such as warehouses owned and operated by the member company along with product returns received from retailers. We will also seek to achieve our landfill target at the latest by 2015.

We will add a prevention target to our waste ambition expressed in terms of FDF members making a significant contribution to WRAP's Courtauld Commitment 2 target to reduce product and packaging waste in the supply chain by 5% by end of 2012 against a 2009 baseline. This target also includes manufacturing waste sent to sewer or controlled water course. We will encourage those member companies who are not signed up to Courtauld to report separately on their achievements in reducing supply chain waste, taking into account parallel work by IGD.

## ■ Our original commitment

To send zero food and packaging waste to landfill from 2015.

## ■ Progress made

The second FDF waste survey, published in November 2010 in conjunction with Defra, showed that in 2009 of the 481,000 tonnes of food and packaging waste produced by FDF members, 435,000 tonnes (more than 90%) was recovered or recycled with only 43,000 tonnes (9%) sent to landfill – a significant improvement on data from previous years (16.5% was sent to landfill in 2006 and 12.5% in 2008).

In addition, in 2008 and 2009, manufacturers prevented more than 340,000 tonnes of food from entering the waste stream by diverting it into other uses, notably animal feed. There is also good evidence within the data to suggest that we have succeeded in decoupling waste generation from increases in production.

Following the results of the waste prevention reviews conducted in 2009 with selected member companies in conjunction with WRAP, we have launched a joint project to promote the optimisation of goods-in

# Reducing packaging

## ■ Our original commitment

To make a significant contribution to WRAP's work to achieve an absolute reduction in the level of packaging reaching households by 2010 compared to 2005 and provide more advice to consumers on how best to recycle or otherwise recover used packaging.

## ■ Progress made

In September 2010, WRAP announced that two of the three Courtauld Commitment 1 targets had been achieved – to design out packaging waste growth (zero growth achieved in 2008) and reduce food waste by 155,000 tonnes per year (exceeded with 270,000 tonnes per year less food waste arising in 2009/10 than in 2007/08).

A third target – to deliver an absolute reduction in the total amount of packaging over the same period – was not achieved. The main reason behind this was a 6.4% increase in grocery sales volumes since the agreement began in 2005 and participating retailers taking a greater proportion of the market for beer and wine.

As one means to increase the quantity and quality of household packaging collected for recycling, FDF has promoted the On-Pack Recycling Label scheme which 20 member companies have now signed up to use.

FDF and its members have continued to participate in the work of the multi-stakeholder Packaging Resources Action Group, including its

various working groups. Packaging Resources Action Group members work together to optimise the amount of packaging on products for net environmental gain as well as to increase the recovery and recycling of used packaging, particularly from households. In April 2010 it published a booklet aimed at ensuring that councils, manufacturers and retailers communicate key messages about packaging and recycling.

In March 2010, WRAP launched its Courtauld Commitment 2 which moves away from solely weight-based targets to also looking at carbon impact as well as taking a whole supply chain approach. To date 20 FDF members have signed up to Courtauld 2. Through a long series of negotiations FDF was successful in helping to ensure the final agreement was both relevant and flexible for members.

## ■ Taking the commitment forward

Now that Courtauld 1 has been replaced by Courtauld 2 we will express our packaging ambition in terms of making a significant contribution to reducing the carbon impact of packaging by 10% by 2012 against a 2009 baseline. For those companies that wish to reduce the impact of packaging outside of the agreement we will continue to report their achievements in the form of case studies.

During 2011 we aim to give consideration to developing a campaign of engagement with consumers to help them both better understand the role of packaging and reduce its impact.

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At WRAP we're delighted to be working more closely with FDF than ever before. Waste prevention reviews continue to play an important role in identifying best practice across the industry. The first phase of the Courtauld Commitment, which prevented 1.2 million tonnes of food and packaging waste from entering the household waste stream over the last five years, was well supported by FDF members. We're looking forward to those members supporting Courtauld Commitment Phase 2 as we tackle resource efficiency across the entire supply chain to deliver the greatest economic and environmental benefits. Our more recent collaboration through the management of the Federation House Commitment – with signatory companies reducing their water use by 5.6% since 2007 – is further evidence that great things happen when we work together. ”

Liz Goodwin, Chief Executive, WRAP

# Boosting water efficiency

## ■ Our original commitment

To use the Federation House Commitment to help our members achieve significant reductions in water use and contribute to an industry-wide target to reduce water use, outside that embedded in products themselves, by 20% by 2020 against a 2007 baseline.

The food and drink manufacturing sector is a significant water user and has an important role to help reduce stress on water supplies. The Federation House Commitment (FHC) was launched in 2008 and is a responsibility deal to improve water efficiency in the food and drink manufacturing sector. It provides a framework for our members to systematically measure, report and work towards reducing their use of water. FDF works in partnership with WRAP to deliver the Federation House Commitment. WRAP took over the management of the scheme in April 2010.

## ■ Progress made

The second annual report of the FHC was published in September 2010. It shows that, collectively, in 2009 the 42 signatory companies reduced their water use by over two million cubic metres of water – equivalent to 800 Olympic sized swimming pools. This is a saving of 5.6% since 2007 and was achieved despite a 4.2% increase in production by the signatory companies over the same period.

During the course of the year we also adopted a new FDF water policy covering both operational and supply chain uses of water. We will seek ways to promote this during the coming year particularly in terms of encouraging FDF members to develop their own water policies.

## ■ Taking the commitment forward

We will continue to work with WRAP to contribute to the delivery of the FHC water saving target of a 20% reduction in water use by 2020 compared to 2007. The main focus for 2011 will be to increase the participation and coverage of the FHC across our sector and to deliver the enhanced FHC benefits of direct support at site level and the setting up of technical working groups.

We will also make a start on addressing embedded water by developing over the course of 2011 guiding principles on water use and management in the supply chain, taking into account parallel work by IGD.

We acknowledge that water footprinting is a highly complex and evolving science, not least because there is currently no internationally recognised accounting methodology. In this regard FDF and its members are currently working with the British Standards Institution to help develop an ISO standard for a water footprint.



*The second FHC report was published in September 2010*

# Fewer transport miles

## ■ Our original commitment

To embed environmental standards in our transport practices, including contracts with hauliers as they fall for renewal, to achieve fewer and friendlier food transport miles and contribute to an absolute target for the food chain to reduce its environmental and social impacts by 20% by 2012 compared to 2002.

## ■ Progress made

We have continued to promote our fewer and friendlier food miles approach over the year, via our 10-point checklist, to spread transport best practice across the sector. This is evident by the numerous references to transport in the case studies included in this report. However transport remains a more challenging issue, both because of its third party nature and issues relating to measurement. Moreover, Defra is no longer pursuing the Food Industry Sustainability Strategy, the basis of the original 20% target, and has published no data since 2006.

## ■ Taking the commitment forward

We will continue to embed environmental standards in our members' food transport practices to achieve 'fewer and friendlier' food transport miles.

In order to include a hard target into our transport ambition we plan to incorporate reference to members making a contribution to IGD's Efficient Consumer Response UK Sustainable Distribution Initiative. This Initiative involves companies in the grocery sector working towards saving 80 million HGV miles over the period 2010-12 through the adoption of best practice. It has already recorded savings of 124 million miles in the period 2007-09.

## FDF's 10-Point Checklist for Greener Food Transport

- ✓ Maximising vehicle loading
- ✓ High ratio of trailers to tractors
- ✓ Compliance with the latest EU emission standards
- ✓ Use of vehicle tracking technology
- ✓ Collaboration to reduce empty running
- ✓ Record and avoid difficult drop points
- ✓ Increase usage of rail and/or ship
- ✓ Encourage innovation and best practice
- ✓ Driver training
- ✓ Vehicle maintenance including retention of correct tyre pressures



*Four million road kilometres have been saved since 2007 across Mars in the UK*



## Case Studies

- AB World Foods
- apetito
- Bettys & Taylors of Harrogate
- Burton's Foods
- Cadbury (part of Kraft Foods)
- Coca-Cola Enterprises
- Danone Waters UK & Ireland
- General Mills
- Kellogg's
- Kraft Foods
- Macsween of Edinburgh
- Mars (Chocolate and Food)
- McCain Foods (GB)
- Müller Dairy
- Nestlé UK & Ireland
- Parripack Foods
- PepsiCo UK & Ireland
- Premier Foods
- Unilever UK & Ireland
- United Biscuits
- Warburtons

## Lighter glass packaging developed

### AB World Foods

- Ambitious plan for reducing packaging weight through its manufacturing sites
- Sustainability key performance indicators in place
- Packaging weight reduction built into new product development process
- Fully supporting retailers' plans for own label
- Maintaining product integrity despite making step changes in packaging reduction

"AB World Foods will continue to provide the same excellence in quality and product protection but will examine the amount of packaging we use in the day-to-day operation. Using the latest design and material optimisation AB World Foods will continue to make a step reduction in packaging consumption. This ethos has already been incorporated in our new product development process ensuring that the consideration of environmental impact is captured at the start of our development processes."

*Alan Hamer, Head of Technical*

AB World Foods is at the start of the sustainability journey. Key performance indicator measures have been integrated into business reporting ensuring that targets are set and regularly reported against. AB World Foods is fully committed to reducing its environmental impact during its continued operations.

Through the thorough review of packaging within AB World Foods, a significant opportunity on lightweighting glass packaging has been realised.

For one of its high volume lines, a new design was introduced which led to the achievement of a 12% reduction in glass weight per jar. Over a normal year the saving in glass alone is 500 tonnes less going to consumers than the year before.

Additional benefits are in the transport of the empty glass container. There are now some 20 fewer lorry journeys of glass per year going into the manufacturing site, lowering emissions from deliveries. Factory efficiencies were maintained, product integrity was safeguarded and the key dimensions of the containers were not significantly affected.

The project is a great success and demonstrates the results which can be achieved from this type of programme. AB World Foods will continue

to challenge the technical construction of packaging to achieve lower weights and lower subsequent carbon impact. There is a pipeline of projects with targets and business reporting in place, and the company looks forward to demonstrating further progress over the coming months and years.



AB World Foods has reduced glass weight per jar by 12%

# No food waste sent to landfill

## apetito

- 14% reduction in factory energy use in 2009 alone and 11% reduction in CO<sub>2</sub> per tonne of product
- All factory food waste diverted to anaerobic digestion, with zero to landfill
- System of returnable crates replacing cardboard implemented for healthcare and care home clients
- Water use reduced by 26% since 2007 – significant contribution to FHC 2020 target of 20%
- Transport diesel use / CO<sub>2</sub> emissions reduced by 13% per km in 2009

“Creating real social and environmental value through our food and food services is at the heart of what we do at apetito. Our progress to date on: waste, water, greenhouse gas emissions and packaging is central to this joined-up approach.”

*Graham Forrester, Manufacturing Director*

apetito has been working hard on achieving progress against all elements of the Five-fold Environmental Ambition very much as part of its wider sustainability strategy. apetito has shown that delivering against the targets is not only good for the environment but good for business and provides a great focus for achievement as a team.

Through setting targets, monitoring progress data and involving all in the project, apetito has found the formula to drive environmental progress. Registration of the whole business in 2009 to ISO14001 has certainly been part of defining that shape and delivery process.

In the last year the company has set up partnership with an anaerobic digestion facility to take all its factory food waste including animal by-products, vegetable and pastry material. The digestion process closes the loop on food waste as a resource – creating agricultural soil improver and grid electricity – and avoids hefty landfill costs. The small volumes of warehouse food ‘waste’ or surplus that arise are sent for anaerobic digestion or FareShare as appropriate.

CO<sub>2</sub> per tonne of product has been reduced by 11% over two years through effective energy management programmes. Factory energy use was reduced by 14% in 2009 alone by focusing on a programme of monitoring and step-by-step improvements. Transport diesel use per

100km has been driven down by 13% in 2009 by careful investment in vehicles, driver training, monitoring and support, and tight route planning.

Water use has been reduced by 26% since 2007 (representing a 40% nett reduction of water in product). This has again been achieved by monitoring and focus on step-by-step improvements. These have included: changing water ring main, use of low volume high pressure water jets, leak stopping and investment in water efficient appliances.

From life cycle analysis work done by the business it is clear that there are major environmental impacts through the whole supply chain. Next steps will be to focus innovation and resources on further carbon reduction approaches both within the operation of the business and by working closely with customer and supply partners.



Water use has been reduced by 26% since 2007

# Energy-saving technologies in action

## Bettys & Taylors of Harrogate

- Installed thermal solar panels to pre-heat hot water
- Works with food charity FareShare to divert surplus product from landfill
- Rain water harvesting saving 180,000 litres per annum
- Relocation of warehousing to reduce road miles by 100,000 per annum
- Returnable plastic trays used for bakery ingredients

“Playing our part in FDF’s Five-fold Environmental Ambition, for us is not only about implementing energy saving technologies, but also about making sure that we engage all of our staff throughout our family-owned business, so that sustainable living becomes part of ‘everyday life’.”

*Jamie Hutchinson, Group Health, Safety & Environment Manager*

Bettys & Taylors of Harrogate, based in Yorkshire, is an independent family business with six Café Tea Rooms, a craft bakery, a cookery school and a tea and coffee merchants, which blends and packs Taylors coffee and Yorkshire Tea.

The company has invested in a number of energy saving technologies over the past few years including fitting thermal solar panels to its bakery roof to pre-heat hot water. At Taylors, a heat recovery system on the cooling refrigerators also pre-heats water, saving 362,400 kWh per annum; and variable speed drives have been fitted to the factory equipment to use less energy.

A ‘grey water system’ collects water from the warehouse roof which is used for toilet flushing and to feed display water fountains. The system is estimated to save around 180,000 litres per annum. All the water for vehicle washing is cleaned and recycled through a van wash recycling installation.

Tea and coffee is now shipped via Teesport rather than the warehouses in the south east, reducing road miles by over 100,000 per year. The business has also started using new aerodynamic ‘teardrop’ trailers to deliver the tea and coffee from Teesport to its factory.

The business has found innovative ways to reduce its food and packaging waste to landfill and Taylors Bakery has worked with its supplier of dried fruit mix to optimise the use of packaging. The mix is now delivered in returnable, washable plastic trays which are sent back to the supplier for reuse. Film rolls for its coffee products have been reduced in weight by a third, saving over 20 tonnes of film per year.

Bettys works with FareShare to divert surplus bread and pastry products from landfill and has recently donated one of its redundant refrigerated bakery vans to help with the charity’s collections and deliveries.

Organic production waste such as coffee by-product (chaff) and extraordinary bakery waste is sent to animal feed and any reusable packaging that cannot be reduced or readily recycled is sent to the company’s community exchange swap shop, which works with over 100 local schools, craft groups and charities.

Bettys & Taylors is now exploring the option of sending any residual food waste to anaerobic digestion or in-vessel composting. Representatives of the company recently visited a newly-built AD plant in Driffild to learn more about the process. Food waste segregation is being phased into each area of the business in preparation.



Energy efficiency is a priority at Taylors



# Energy efficiency drives CO<sub>2</sub> reductions

## Burton's Foods

- 36% reduction in relative factory carbon emissions in 2009 (base year 2000), exceeding target of 30% by 2012
- On track to achieve zero food waste to landfill in 2010
- Reduced primary packaging by 13% (absolute) since 2007
- Water use reduced by 16% in two years (2009 v 2007)
- Increased miles per gallon on core fleet by 7% (2009 v 2006) saving 64,000 gallons of fuel – a 19% carbon reduction every year

“Burton's Foods believes it is in everybody's interests to protect the environment. We actively empower our employees, consumers and business partners to change habits and attitudes in the pursuit of a more sustainable environment. We do this through practical initiatives, as well as setting long-term targets to help us minimise any adverse effects of our actions on the planet's future.”

*Ben Clarke, CEO*

Being an early supporter of FDF's Five-fold Environmental Ambition has helped drive significant cultural changes with Burton's Foods. The company is proud of its achievements to date but recognises that there are still future challenges.

A number of key initiatives have enabled Burton's to achieve the 36% reduction in factory CO<sub>2</sub> emissions, including the replacement of inefficient machinery and boilers and the consolidation of manufacturing sites to become more energy efficient. The company hopes to achieve its second target of 40% well before the 2020 deadline.



Burton's has saved 64 thousand gallons of fuel

During 2010, Burton's focused attention on its zero food waste to landfill target. This will be achieved through waste reduction, diverting materials from landfill (animal feed), energy conversion and incineration where food products are not suitable for biomass conversion.

Burton's conducted an all-site, full-scale water investigation, which identified inefficient usage. Thanks to a site-specific action plan, more than 73,000 m<sup>3</sup> of water has been saved at one site alone, and an impressive 42% reduction of water used per tonne of product baked.

The company's transport success has been achieved by a number of changes including route optimisation, speed limiting, idle time cut off and aerodynamic trailers. 'Teardrop' eco stream double deck trailers are planned for 2011, which will reduce MPG by approximately 15%.

As part of its commitment to being a sustainable food company, Burton's has also implemented a sustainable sourcing policy, shown by its commitment to use 100% sustainable palm oil and derivatives since January 2010.

# Packaging optimisation delivers savings

## Cadbury (part of Kraft Foods)

- Expected savings of more than 1,000 tonnes per year of cardboard
- More than 40,000 road miles per year potentially eliminated under new project in progress
- Cut in road miles equates to a reduction of 75 tonnes CO<sub>2</sub> per year
- A switch to reusable rigid storage packaging

“This project is one many initiatives that combines great environmental performance across a number of aspects of the Five-fold Environmental Ambition along with improved supply chain efficiencies and commercial gains.”

*Steve Hills, Head of Manufacturing, Giving & Seasonal*

Cadbury's diverse environmental programme is delivering a wide range of benefits with a focus on sustainable business practices to reduce carbon emissions (through energy and transport efficiencies), as well as water, waste and optimising the packaging of its products.

This is being achieved through investment in efficient new equipment and new ways of working to drive reductions in emissions from its factories, distribution centres and vehicles.

A project at Cadbury's manufacturing site in Bournville to improve the handling of unfinished goods has the potential to deliver:

- Savings of more than 1,000 tonnes per year of cardboard, with associated savings in resources required to recycle corrugated wastes
- Transport reductions of more than 40,000 road miles per year
- Emissions reductions from road vehicles by 75 tonnes of CO<sub>2</sub> per year

In addition to the significant reductions in the consumer and customer packaging of a number of Cadbury's core ranges, the company is also reducing 'behind the scenes' transit packaging that it uses internally for handling work in progress.

Previously, assortments products were packed from the production line into corrugated boxes awaiting finishing in a number of product formats.



Reusable packaging is creating significant benefits

Space limitations required these to be transported by road to off site storage.

A switch to reusable rigid packaging, termed 'polypan', has allowed Cadbury to significantly reduce single use transit packaging. The associated storage efficiencies, combined with investment in automated handling allows it to better store unfinished goods on site, reducing the need to move product by road to off site storage.

The polypan has an operating life of between five to 10 years and their supplier will ensure that they are recycled at the end of their operating life.

# Focusing on energy, packaging and water

## Coca-Cola Enterprises

- Water use ratio of 1.4 litres for every litre of product made
- 99.9% of manufacturing waste recycled or recovered
- First company in the GB logistics industry to trial a bio-methane distribution vehicle
- A shared freight train service reduced carbon footprint compared to road by 195 tonnes in 2009
- Recycle Zone consumer recycling scheme collected 192 tonnes of recycle material to date

“CCE continues to embed CRS within our business. Whilst we are pleased with our progress we understand there is a long journey ahead and we remain focused on the key areas of our business that make a significant impact on the environment. We remain committed to building a sustainable business and a sustainable environment.”

*Simon Baldry, Managing Director*

Coca-Cola Enterprises (CCE) is working hard to grow its business and minimise the environmental impact of its operations.

The company focuses on three key areas; energy conservation; sustainable packaging and recycling; and water stewardship. Key strategies include energy efficiency in refrigeration, manufacturing and transportation as well as packaging lightweighting, recycled content and consumer recycling in addition to water reduction and reuse.

CCE continues to reduce its carbon footprint through the installation of energy management devices to its coolers and vendors, which reduce energy consumption by up to 35%. In addition CCE is retro-fitting doors onto open fronted coolers.

In May 2010 CCE began a nine-month trial of a bio-methane vehicle, the first of its type in the GB logistics industry. The 21 tonne vehicle runs on sustainable liquid biomethane fuel. It is also trialing bio-methane forklift trucks.

CCE continues to work with suppliers and customers to maximise the benefits of load and route optimisation. The freight train service with Tesco and Eddie Stobart reduced its carbon footprint by 195 tonnes in 2009, compared to transporting the same loads by road, equivalent to 294,073 lorry miles every year.

Packaging improvements have continued with further lightweighting of its

500ml plastic bottle, which now weighs 21.7g compared to 36g in 1994

Four of CCE's six manufacturing sites are zero waste to landfill, with 99.9% recycled or recovered.

CCE's Recycle Zone scheme – offering on-the-go recycling for consumers – has exceeded its target of 80 zones by March 2011. To date there are over 100 Recycle Zones including eight zones at music festivals which collected over 18 tonnes of recycle. CCE's new target is 120 zones by March 2011.

CCE will focus upon improving energy efficiency at its plants by targeting the most energy-intensive production lines and equipment. The company will also share learnings from its zero landfill factories with other consumer goods businesses and continue to work with closed loop recyclers to increase the amount of recycled plastic available for use in packaging.



*Industry first: CCE trials bio-methane distribution vehicle*

# Reducing the carbon footprint of our bottles

## Danone Waters UK & Ireland

- All Danone Waters' bottles are 100% recyclable
- Evian's carbon footprint has reduced by 22% since 2008; Volvic's has reduced by 17%
- Evian and Volvic bottles are being lightweighted to reduce their plastic content
- Evian bottles are made with 25% recycled plastic (rPET), increasing to 35% next year. Volvic bottles are 35% rPET, increasing to 50% next year
- 70% of Evian bottles are transported by train – saving 40,000 trucks annually

“The quality and purity of our water relies on us being environmentally responsible – sustainably managing our springs and protecting the land around them. Far beyond this, however, we've set ambitious targets to reduce the impact of our bottles and we're committed to cutting the global carbon emissions created by Evian and Volvic by 40% from 2008 to 2012.”

*Adam Grant, Managing Director*

Danone Waters has a long history of being environmentally responsible. The company's environmental strategy focuses on five areas within which it can make the biggest difference: climate change, packaging, preserving water, biodiversity and sustainable farming.

The carbon footprint reductions Danone Waters has achieved so far are the result of reducing the direct impact of its products, optimising the performance of factories and moving to cleaner transport.

Reducing the packaging weight of bottles has been one initiative to reduce the carbon footprint: Evian bottles are now 24% lighter than 15 years ago, and Volvic bottles 32% lighter compared to 1997. Danone Waters ensure these bottles are made from 25% recycled content and the company has just launched a new range of Volvic bottles with 20% renewable plant-based content.

Danone Waters has developed programmes under each of its brands to manage and protect the ecology and environment around its water sources. In its factories, water efficiency measures include cleaning factory conveyer belts with a recyclable liquid instead of water.

A commitment to cleaner transport has led to 70% of Evian bottles being transported by train – saving 40,000 trucks annually. The company is also on track to transport 65% of Volvic bottles by train by 2012.

Danone Waters is committed to reducing the carbon footprint of its bottles further. The company has set a number of new targets, including additional weight reductions and increased recycled content, alongside its other priority areas to achieve this.



*The Evian catchment area in the French alps*

# Water waste cut by 20%

## General Mills

- Installed a closed loop water cooling system that will reduce water waste by 80%
- Saving 300,000 Kwh per annum through more efficient temperature controls
- 90% of its ambient brands imported from Europe now come via sea saving more than two million road miles
- Shares third party logistics services

“As a responsible company, we believe all these activities are very much a step in the right direction, and we will continue to strive to make further improvements in the future.”

*David Howorth, Supply Chain Director*

General Mills UK & Ireland, a recent signatory to the Federation House Commitment to reduce water use in factories, has installed a cooling system at its Jus-Rol pastry plant that will reduce water waste by 80%.

General Mills has implemented its environmental plan at the plant in Berwick-upon-Tweed in other ways as well, by installing compressors that control temperature more efficiently and significantly decrease electrical usage.

It means that as products at the plant exit production, a phased shut-down of electrical systems in the spiral freezer saves about 300,000 Kwh per year – enough energy to sustain 62 families of four for a year.

Also, by installing a closed loop water cooling system at Berwick, General Mills is recycling water through a special vacuum cooler which means a total water saving of 11,000 cubic metres – equivalent to 80 per cent of the water that once went down the drain.

Both moves follow last year’s decision by General Mills to introduce a greener way to get the rest of its brands to retail customers and shoppers. About 90% of these foods heading to the UK from General Mills’ plants in northern Spain and the south of France are now coming by sea – compared with 70% previously – saving a total of 2,150,000 road miles.

In addition, the company now moves products from its European plants in pallets at 2m high to enable maximum height utilization of the containers. This eliminates 400 European vehicle movements a year prior to rehandling in the UK to meet customer requirements.

The company will continue to examine every aspect of its operations – from agriculture to global transportation – for opportunities to reduce its environmental impact.



*Efficient logistics yields environmental benefits*

# Employee engagement is critical to success

## Kellogg's

- 97% reduction in waste sent to landfill from the Manchester plant in the last three years
- Zero food and packaging waste to landfill to be achieved at Manchester plant by end 2010
- Reduction in total water use at Manchester plant by 45% following installation of a recirculating water system

“Kellogg Company is proud to report on our continuing efforts to further W.K. Kellogg’s legacy of building a stronger business while doing the right thing for the environment and society.”

*David Mackay, President and Chief Executive Officer*

Kellogg’s has set a number of global targets to meet by 2015, relating to energy use, greenhouse gas emissions, water use and waste sent to landfill. And the company is constantly checking its progress along the way to monitor how it is doing.

Its Manchester plant has achieved a reduction in landfill from 120 tonnes per month in 2007/2008 to three tonnes per month at present with a view to achieving zero landfill by the end of 2010.

The two main approaches which have been adopted to drive the Manchester plant towards zero waste to landfill have been to:

- Change the onsite waste management contractors from a waste disposal company to a waste recycling company. This has ensured that the opportunities for recycling are optimised with as much waste as possible being segregated and sent for reuse, recycling, composting and anaerobic digestion
- Appoint voluntary “green” champions within Kellogg’s and to implement communication and awareness programmes. This has assisted in winning the hearts and minds of employees, encouraging them to recycle

The installation of baling machines has reduced the transport of recycled waste from two to three loads per day down to a maximum of two per week. In addition, the Manchester plant has made significant savings in

water consumption by installing a re-circulating system with an air-cooled chiller unit. This has replaced the use of borehole water, which previously had been abstracted and used once for cooling purposes before discharge to the local canal. It is saving up to 400,000m<sup>3</sup> of water per year (a reduction of 45% of total water used).

Kellogg’s is in the process of rolling out an efficiency programme across the company and believes this will help deliver further water and energy saving as well as help it minimise waste.



*Kellogg’s aims to be sending zero waste to landfill from its Manchester plant*

# Waste minimisation a key priority

## Kraft Foods UK

- 480 tonnes of food waste prevented in the first three quarters of 2010
- Best practice waste minimisation programme in place across UK

“This project provides a good example of how we are integrating processes into our core business to contribute to our waste reduction efforts.”

*Neil Chapman, Customer Service and Logistics Director Northern Europe*

Kraft Foods UK’s sustainability programme has a major focus on waste and is using best practices to more effectively manage what waste goes to landfill. The project described shows how improvements in its core processes contribute to the delivery of the Five-fold Environmental Ambition.

This process is used as best practice in Kraft Foods UK to identify product at risk of falling below guaranteed shelf life for the trade as early as possible so that action plans can be put in place to minimise waste.

The latest stock is compared with forward forecast to identify products at risk of falling below guaranteed shelf-life for sale.

Products at risk of waste are listed in a report with information on the volume at risk; the number of weeks guarantee remaining and number of weeks shelf-life remaining.

The report is issued regularly to category teams to review action plans to avoid waste to landfill such as for promotional activity, clearance, staff-shop and charitable donations. The key drivers for waste and actions/resolutions are documented within the report.

Kraft Foods UK have found that waste viewed in monetary value is seen to be more impactful than only reporting the number of cases of waste arisings.

Regular reporting and updates provide early awareness of products at risk of waste and allow teams to work on solutions to avoid product write-off. This enables the team to see how their actions reduce waste to landfill. The report also allows category teams to see products that regularly come up on the report, so drivers to waste can be addressed on an individual product level.

Results in 2010 have been positive – in the first three quarters, 480 tonnes of food waste have been avoided through clearance, the staff shop and charitable donation.

This is a process that Kraft Foods UK continues to look at and evolve to ensure the right people are involved, at the right time and with the most relevant information.



*Kraft is focussing on waste prevention across its supply chain*

# Ten-year programme pays dividends

## Macswen of Edinburgh

- Publishes annual sustainability reports
- Only 10% of all waste is sent to landfill compared to 90% in 2005
- Energy reduction equipment used for all factory lighting and three phase power
- 10% reduction in water consumption since 2006
- Responsible sourcing policy introduced

“Macswen is proud of its Edinburgh heritage and equally proud of introducing new people to haggis from across the UK. As our business has grown and our product range developed, we have worked hard to maintain the highest standards of environmental management, supply chain ethics and community engagement. This effort will continue over the coming years.”

*James Macswen, Director*

Macswen’s ten-year programme of environmental improvement is now paying dividends in the form of reduced energy use, waste, water use and enhanced employee engagement. This in turn is reflected in reduced costs and better management systems; recognised through environmental awards from Scotland Food and Drink and VIBES.



*Only 10% of waste is sent to landfill at Macswen*

Macswen focuses on reductions in waste, energy and water use. It has also encouraged sustainable transport use and initiated a responsible sourcing policy. This activity is summarised in a public sustainability report, the third of which will be published in early 2011.

The company manages its energy consumption and associated carbon emissions through a range of reduction and efficiency measures including: employee training; heat recovery units on refrigeration equipment; timers on ventilation, lighting and heating units. It has also assessed the feasibility for micro-generation on site.

Macswen has reduced the total waste sent to landfill, year on year, for the past five years and now only 10% of all waste is sent to landfill compared to 90% in 2005. Recycling programmes include: collection of spent fat and oil, which is then sold for processing into bio-diesel; composting of organic waste by a third party; compacting and baling of plastic barrels and cardboard packaging; and reuse of cardboard, paper and plastic.

Macswen has reduced water consumption by 10% since 2006. This has been achieved through recycling of saline water (used in the storage of traditional haggis casings) and more efficient cleaning methods. The company has invested in a new filtration system that will significantly reduce levels of contaminants and suspended solids in waste water (and reduce water treatment costs).

The company will publish its third annual sustainability report in Spring 2011.

The programme of waste and energy reduction continues, including the washing and recycling of plastic waste from the production process, which should take Macswen to zero landfilling in 2011.

The company will also work with its supply base to implement its responsible sourcing policy.

# Five-point plan delivers results

## Mars (Chocolate and Food)

- Factory carbon emissions reduced by 22% since 2007
- On track to stop sending waste to landfill by end of 2011
- Mars Food packaging weight reduced by 3.5% and by 10% in Mars Chocolate since 2007
- Water use reduced by 10% per tonne of product in Mars Food
- Four million road kilometres saved since 2007

“Mars is proud to be part of the food industry’s ambition to make a real difference to the environment. Our own targets and achievements demonstrate our commitment towards the planet and the communities within which we operate.”

*Fiona Dawson, Managing Director, Mars Chocolate UK*

The company is focused on putting its principles into action, doing the right for its business, people and planet. In addition to FDF’s Five-fold Environmental Ambition, Mars is proud to have its own five point plan that shows its commitment to the environment – waste, water, energy, transport and packaging.

By monitoring each production line and simple communications advising how to switch off machinery for shutdowns, the work of Mars Chocolate’s Energy Action Team has resulted in significant energy savings.

Mars Chocolate is on track to stop sending waste to landfill by the end of 2010. Mars Food is working continuously towards its internal target to eliminate waste to landfill by 2011.

Mars Chocolate has continued its packaging reduction programme by changing its Christmas tubes from a cardboard tube with a plastic cap to square cartons, saving 30% of the product’s packaging. Mars has signed up for the second phase of the Courtauld Commitment.

Mars Food has installed retort weirs and started using rainwater for watering the gardens. This has helped to reduce the ‘maximum daily demand’ from its water supplier by 8% in 2009. Mars Chocolate is seeing the benefits of its 2009 investment in a state of the art cooling system and additional water metering.

Four million road kilometres have been saved since 2007 across Mars in the UK. This has been achieved by warehouse reorganisation enabling consolidated deliveries of Mars products; double decker lorries; and fewer inter-depot transfers.

The work is paying off: this year saw Mars Chocolate win the Slough Chamber of Commerce Green Award for its environmental achievements.

Mars has an ongoing programme of work that will ensure the company continues to create efficiencies and reduce the environmental impact of its operations in the UK. The company is now working on new, more ambitious targets to take it beyond the original Five-fold Environmental Ambition.



*Energy saving is a priority at Mars Chocolate*

# Renewables create significant CO<sub>2</sub> reductions

## McGain Foods GB

- On target to achieve over 4% reduction in CO<sub>2</sub> emissions vs last year
- Waste to landfill down to 6 grams / tonne of finished product
- New bag sealing technology to reduce packaging
- Total water usage reduced by 3% over the last fiscal year
- 800,000 fewer road miles per year since 2007

“At McCain our core objective is to ensure the long term sustainability of our business while continually reducing our environmental impacts. Investment in renewable technology and energy efficiency is integral to this goal, and we are committed to delivering further improvement across all areas of the Five-fold Environmental Ambition.”

*Nick Vermont, Regional CEO*

Over the last three years McCain Foods’ has made major changes across its manufacturing operations and supply chain which have delivered significant improvements in all areas of the Five-fold Environmental Ambition. The business remains committed to further sustainable reductions in its environmental impact and continues to invest in new technology to drive these.

Food and packaging waste sent to landfill has been drastically reduced through new prevention and recycling measures including the channelling of surplus food to FareShare. The company is on track to send zero food and packaging waste to landfill by 2015.

New pack sealing technology has recently been introduced to the company’s three main factories enabling average bag length to be reduced by over 4% and potentially saving a significant volume of packaging.

The company’s goal is ongoing reduction of water use across its operations year on year. McCain works with university research departments to identify and implement best irrigation practice and is investing in technology such as a new reverse osmosis plant at its Whittlesey site to minimise factory water usage.

By making continual changes to its logistics and distribution arrangements, McCain has achieved significant reductions to the journeys its products make at both raw material and finished stages. In the last few years non-essential miles travelled have been cut by over 20% and this downward trend is being successfully maintained.

The company’s focus is continuous reduction of its carbon footprint by maximising energy efficiency and by looking for viable alternatives to fossil fuels.

Good progress is also being made in other areas of its operations such as the ongoing reduction in nitrogen fertilisers applied to potato crops through best practice techniques and the development of varieties that require less nitrogen.



*Renewables account for 13% of electricity at McCain*

Since the installation of wind turbines and an anaerobic digester at its largest factory in 2007 the company now generates 13% of its total electricity usage from renewable sources, resulting in significant CO<sub>2</sub> reductions over the last three years.

# Focus on waste delivers 53% reduction to landfill

## Müller Dairy

- Reduced waste to landfill by 53% (1,600t) reduction vs. 2007
- On course to achieve 66% (2,000t) by 2011 and zero to landfill by 2015
- Focused on prevention as well as diversion
- Improved forecast accuracy
- Working with FareShare since January 2009

“Now that we have greatly improved our short term forecasting accuracy our next challenge is how to make our forecast more robust in terms of the bigger picture and more long term. We are definitely not resting on our laurels.”

*Kevin Williams, Supply Chain Director*

Four years ago Müller Dairy started out on an important journey to understand and improve how it interacts with the environment and its communities.

Müller Dairy has collaborated closely with key partners, including FDF through its Five-fold Environmental Ambition, and last year the company committed to some ambitious targets.

One of these is to reduce the amount sent to landfill. The target is to cut this by 66% by 2011 based on the tonnage sent to landfill in 2007, and the aim is to achieve zero waste to landfill by 2015. It's a tall order but it makes both environmental and business sense.

In order to prevent waste, Müller Dairy has improved its forecast methodology and accuracy. A new upgraded forecasting system has been introduced which enables the company to produce more detailed daily forecasts at individual product level.

To complement this, a new customer facing supply chain structure has been introduced which includes a dedicated resource for key customers: the Customer Service Leaders team works with the sales division and directly with customers, jointly building both baseline forecasts and agreeing promotional uplifts, then monitoring actual performance on a daily basis to gain learnings for future activity.

Despite the current retail environment becoming more volatile, Müller Dairy has improved its customer service levels and reduced the incidence of low code products and, thus, the amount sent to landfill. Ultimately,

the new processes which have been implemented are also helping drive improved availability for shoppers in store.

While Müller Dairy is working hard to reduce as much food waste as possible, there are occasions when, for a variety of reasons, surplus stock that is still within its 'best before' date does not reach retailer's shelves.

Instead of these products being thrown away, the company now contacts national charity FareShare. The charity takes perfectly edible food that would otherwise be destined for landfill and distributes it to a network of 600 community organisations around the UK working with people who struggle to get a regular meal.

Supporting FareShare means that the food can go to good use. While Müller Dairy is seeking to cut the amount of packaging going into landfill, it recognises that it is also paramount to reduce the amount of food sent to landfill, as this is a major cause of greenhouse gases. Along with the company's other environmental initiatives, Müller Dairy sees participating in FareShare as an important move which brings with it a social benefit.



*Müller supports the food charity FareShare*

# Zero waste mindset

## Nestlé UK & Ireland

- Reduced total water consumption by 27% vs 2006
- Reduced energy usage by 7% and carbon usage by 11%
- Girvan and Dalston factories sending zero waste to landfill
- Won Motor Transport Partnership Award for transport collaboration in 2009
- Reduced packaging by 12.6%

“At Nestlé we believe that to enhance and protect our business, we must safeguard the wellbeing and future of our employees, suppliers and consumers and protect the planet's resources for future generations. Whether it's reusing coffee grounds in Nescafé factories as fuel, reducing packaging or eliminating waste - we take our responsibilities very seriously.”

*Paul Grimwood, Chairman and CEO*

Nestlé has halved the weight of packaging used for small and medium Easter eggs since 2006 and made a 27% reduction in water use, contributing to the Federation House Commitment target. Two factories have achieved zero waste to landfill and the company has won awards for transport efficiencies and collaborations. This year all of Nestlé's factories in the UK have been certified to ISO 14001 for environmental management.

The company's 27% reduction in water use in 2009 was achieved using innovative technologies.

Nestlé reduced energy use by 7% and carbon usage by 11% in 2009 through investment in new technologies and energy saving measures. At the Hayes and Tutbury factories spent coffee grounds supply nearly 20% of the sites' energy needs.

Nestlé works with charity FareShare to redistribute any surplus food produced to disadvantaged people.

Nestlé has committed to send zero total waste from factories to landfill by 2015 and reduced waste sent to landfill by 57% vs. 2008. Nestlé's Girvan and Dalston factories have achieved zero waste to landfill by introducing waste segregation systems. Waste that cannot be recycled is sent to an energy-from-waste recovery plant and used as a heat source.

In 2009 Nestlé reduced the environmental cost of logistics (carbon emissions and noise) by 12% by reducing distances travelled, fuel consumption and increasing deliveries from the source of production.

Nestlé is a signatory to WRAP's Courtauld Commitment Phase 2 and almost 90% of Nestlé's packaging in the UK is already recyclable. Plastic inserts have been removed from 90% of all Easter eggs and from all Christmas selection boxes. The weight of packaging of medium and large selection boxes has been reduced by 40%.

Nestlé UK has recently published an updated set of 2015 and 2020 sustainability targets focused on the key areas of nutrition, health and wellness, energy and emissions, water, waste, transport and distribution, packaging and sourcing.



*Nestlé's Girvan employees celebrate achieving Zero Waste certification*

# Water action plan cuts usage by 20%

## Parripak Foods (part of William Jackson Food Group)

- Water usage per tonne of product has decreased 20% in last two years
- Reduced incoming water pressure by 18%
- Launched a water awareness initiative with employees
- Focus on hygiene as well as production
- Further projects underway

“We are delighted to have played a role in the development of this project. As a high volume water consumer, we work hard to ensure that our business is sustainable in terms of the resources it consumes and this will inevitably remain a focus into the future.”

*Nick Gale, Managing Director*

Parripak Foods, part of the William Jackson Food Group, processes vegetables for use by manufacturers of ready meals and other convenience foods.

A large proportion of Parripak Foods’ products are from root crops which are delivered to the site largely as harvested and require cleaning prior to processing. Water is a fundamental part of the process not just for washing but also for transporting and cooling product and for factory hygiene.

Water used in the factory is abstracted from a borehole with fixed consent and effluent is cleansed before discharge at the on-site treatment plant. Improvement in the usage and treatment of water is a key objective for the site.

Over the past two years water usage per tonne of product produced has been reduced by 20% as a result of a number of actions. These have included reduction of incoming water pressure by 18%, simplifying effluent streams and installation of more efficient pumps.

Employee engagement has been a key part of Parripak Foods’ water use improvement plan and a water awareness initiative was launched to engage employees and improve their understanding of water use. Furthermore, upgrading of the effluent treatment process has allowed a significant reduction in effluent water storage.

Parripak Foods has sponsored a PhD student from the Open University to assist in realising its ‘Greener Vegetables’ corporate environmental strategy. This linkage with academia aims to challenge the business with new ideas for environmental sustainability and build upon the success achieved so far.



Parripak has reduced water usage by 20%

# Progressing along its ‘Path to Zero’

## PepsiCo UK & Ireland

- 71% less waste sent to landfill in 2009 compared to 2008
- 17% reduction in primary and secondary fleet emissions of nitrous oxides in 2009 compared to 2008
- 15% reduction in total water consumption in 2009
- 4% reduction in energy consumption from across the business
- 17% electricity from renewable sources

“PepsiCo has committed to becoming a different kind of company – one whose future profit and growth comes from healthier products, which we will achieve while travelling on a ‘path to zero carbon’. I believe companies like PepsiCo have a responsibility to lead change.”

*Richard Evans, President*

PepsiCo UK & Ireland has made good initial progress on its “Path to Zero” environmental impact and FDF’s Five-fold Environmental Ambition. The company is working with its suppliers, other businesses and a wide range of stakeholders to achieve stretching short-term targets and to make the transformational change needed to become a truly low-carbon business.

Through collaboration with retail customers and suppliers, investment in new fuel technology and continuing efforts to maximise efficiency, PepsiCo has achieved some significant reductions in emissions from its distribution fleet – removing nearly 1.5 million miles from UK roads in 2009.



PepsiCo is committed to reducing impacts in the farming of its raw materials

In 2010 all Tropicana cartons were converted to new lightweight board. In addition to using less material to manufacture Tropicana’s packaging, the cardboard for the new cartons is now also sourced from FSC certified forests. This ensures that the company only sources from sustainably managed forests.

Over the course of 2009, seven of its manufacturing sites and two of its regional distribution centres have achieved zero landfill waste – recycling or re-using every single piece of waste generated. PepsiCo’s aim is to unplug its largest factories from the water mains by 2018. The company’s strategy for achieving this is two-fold – reducing how much water it uses to make its products and where its water is sourced from. In 2009 it reduced consumption by 14.6% – towards the company’s three-year target of a 45% reduction by the end of 2011.

PepsiCo is committed to reducing the carbon and water impacts of the farming of its raw materials, such as the potatoes, apples and oats that make its products. The company is already working with its farmers by using wind turbines, anaerobic digesters and solar panels to create on-site renewable energy, trialling new low-carbon fertilisers and capturing rainwater to be re-used for irrigation.

Over the next decade PepsiCo will embed sustainability into its core business strategy – breaking the link between business growth and increased carbon emissions by making operations free of fossil fuels, unplugging its largest factories from the water grid; sending nothing to landfill across its supply chain; and making its packaging renewable, recyclable or biodegradable.



Premier Foods has implemented a 'Five Star Environmental Award' scheme across its sites

## Investing in anaerobic digestion

### Premier Foods

- 5.2% reduction in energy consumption since 2008
- 7.7% reduction in direct carbon emissions since 2008
- 80% reduction in waste sent to landfill since 2008
- 3% reduction in packaging since 2008
- 6.1% reduction in operational water use since 2008

“Premier Foods places a high value on the natural resources used in the manufacture of our products and truly believes that waste, of any kind, is unacceptable in our business. We also believe that practising good environmental stewardship and running an efficient and profitable business are not mutually exclusive.”

*Ian Bowles, Head of Corporate Social Responsibility*

Premier Foods has implemented its 'Five Star Environmental Award Scheme' across all manufacturing sites. The scheme provides a structured approach to environmental management and has established a framework for all sites to reduce environmental impacts, achieve cost savings and deliver continuous performance improvement.

In 2008, Premier Foods was sending 38,000 tonnes of waste to landfill. By mid 2010, through the introduction of innovative and sustainable waste management solutions it has reduced this amount to 7,379 tonnes, an 80% reduction. The company is well on target to achieve its goal of sending 'zero waste' to landfill by 2015.

In early 2010, Premier Foods began the construction of a £5m anaerobic digestion plant at its RF Brookes' ready meals factory in Rogerstone, Newport. The plant will be fully operational in early 2011 and will convert waste material into biogas producing around 10% of the factory's power needs whilst also reducing the site's carbon emissions by 8,500 tonnes a year.

Last year, the water recycling plant installed at its Long Sutton factory saved over 175 million litres of water, equivalent to 19% of water supplied to the site during 2009.

Across 2009/10, the company completed a glass container rationalisation and re-specification project which delivered a weight saving of 3,352 tonnes based on its annual usage volume of 80,000 tonnes, the equivalent of a 4.19% weight saving.

In 2009, the Hovis bread business brought in 187 new vehicles which meet the latest 'Euro 5' emissions standards and replace dated Euro 3 technology. On comparison with the outgoing vehicles the following tail pipe emission reductions have been achieved;

- Particulates reduced by 80%
- NOx reduced by 60%
- Hydrocarbons reduced by 30%

Premier Foods recognises that although it has made good progress towards the delivery of its commitments under FDF's Five-fold Environmental Ambition, there remains more to be done. The company will continue to drive improvements in energy efficiency, waste reduction, use of packaging and water as well as identifying ways to travel "fewer and friendlier" delivery miles.



Work begins on the £5m anaerobic digestion plant at the RF Brookes' ready meals factory



# Growth plans commit to reducing environmental impact

## Unilever UK & Ireland

- 7% reduction in CO<sub>2</sub> from energy across UK sites between 2008 and 2009
- 47% reduction in waste across UK sites between 2008 and 2009
- 4% reduction in water across UK sites between 2008 and 2009
- 5% reduction in secondary transport over the past two years, saving 1,200 tonnes of CO<sub>2</sub>.

“Our vision is to double the size of the company while reducing our overall impact on the environment. We have significantly improved the eco-efficiency of our operations in recent years, with plans in place to improve further, and we are fully committed to achieving, and where possible exceeding, the Five-fold Environmental Ambition targets.”

*Amanda Sourry, UK & Ireland Chairman*

Unilever’s growth plans commit to reducing the company’s total environmental impact in priority areas across the value chain including greenhouse gas emissions, water and waste.

Having worked for more than a decade to improve the eco-efficiency of its manufacturing sites, and setting ambitious targets, the company continues to make good progress against the Five-fold Environmental Ambition.

Through capital investment and good manufacturing practice, Unilever has continued to reduce CO<sub>2</sub> from energy from its operations.

The company’s Gloucester ice cream factory has installed a Combined Heat and Power plant which will reduce CO<sub>2</sub> from energy by over 3,000

tonnes a year. Its Burton Marmite factory uses an anaerobic digester, which produces biogas from the waste by-product of the manufacturing process – this has also reduced water use at the site and the chemical oxygen demand burden on water sent to the municipal sewer.

Waste reduction has included a drive to recycle waste that would have previously gone to landfill, with the biggest reduction at the company’s Burton factory.

Reduction in CO<sub>2</sub> emissions from Unilever’s distribution activities has been achieved through a variety of ways including:

- Use of fuel efficient double decker trailers
- Maximising front haul and back haul opportunities so there are fewer empty trucks
- Collaboration with competitors to increase truck loadfill and maximising use of rail transport versus road

Unilever will commission two further Combined Heat and Power plants in 2011 to further reduce CO<sub>2</sub> emissions and, over the next five years, aims to deliver a 25% cut in greenhouse gas from its warehouses and transport activities.

The company is on track to meet its target of zero waste to landfill across its manufacturing sites by the end of 2010.

Unilever is measuring its packaging footprint on an annual basis and setting improvement goals for carbon, water, waste and the sustainable sourcing of materials.



Unilever is reducing CO<sub>2</sub> emissions at its UK sites

# Ambitious targets delivered early

## United Biscuits

- 3.8% reduction in factory carbon emissions in 2009 alone
- Zero food waste to landfill achieved
- Packaging reduced by 13% since 2003
- Water use reduced by 28% since 2007 – significant contribution to FHC 2020 target
- Transport CO<sub>2</sub> emissions reduced by 29% since 2005

“UB is a proud contributor to FDF’s Environmental Ambition. Environmental sustainability is a vital part of our business and this year we’ve raised the bar on our environmental targets as we achieved some early. One example is our water target, which has been accomplished with ten years to spare”.

*David Fish, Executive Chairman*

United Biscuits has continued its great progress with the Five-fold Environmental Ambition throughout 2009 and 2010. The biscuits, snacks and cakes manufacturer has already made a major water reduction contribution of 28% to the Federation House Commitment (FHC) water target – ten years before the FHC goal of a 20% reduction – and has achieved its own internal logistics target three years early.

Through the introduction of improved energy management systems, measures were identified which helped the company reduce carbon emissions by 3.8% compared to 2008. Per tonne of product this meant that emissions were reduced by more than 6%.

The company is now sending zero food waste to landfill and has reduced non-food waste to landfill by 44% in 2009 – more than doubling the waste reduction seen in 2008 – by a mixture of prevention and recycling methods.

Packaging improvements have continued through reducing the thickness of snacks films by 17% (saving 200 tonnes of packaging) and by reducing the volume of bags of mini biscuits by 30% (saving an additional 22 tonnes).

United Biscuits has taken great strides to reduce water use in its factories



UB: transport CO<sub>2</sub> emissions reduced by 29%

without compromising its high food safety standards.

This is a result of employee engagement, small investments in spray nozzles for taps and trigger valves for hoses, and a major investment in a water recycling plant.

Success in reducing United Biscuits’ transport emissions has been partly due to converting its waste vegetable oil into biodiesel; improving lorry load efficiency; transport collaboration with retailers, suppliers, and even competitors such as Nestlé; and additional training for its drivers.

Taking this strong environmental record forward United Biscuits is setting new targets in areas where it has already achieved the Five-fold Environmental Ambition, such as its new water target of a 45% reduction by 2020 compared to 2007. In addition the company is now setting targets on sustainable sourcing, having already been one of the first manufacturers in Europe to source certified sustainable palm oil for all of its biscuits.

# Energy efficiency targets

## Warburtons

- Trialling increased oven insulation and re-use of heat technologies
- Diverting spoiled dough and bread from landfill to animal feed
- More than 97% of all the plastic bread bags used are made from recyclable materials
- Testing a 100% compressed natural gas-powered tractor
- Exploring rainwater harvesting

“All of our 14 bakeries have really embraced our environmental programme, setting up teams to drive energy efficiencies, reduce our waste and engage everyone to make changes to their behaviours. I have been delighted by the enthusiasm shown by our Warburtons people and the sharing of good practices across the country. It is this that will make the real difference.”

*Sarah Miskell, Corporate Responsibility Director*

Warburtons has recently reviewed its environmental impacts to help guide the bakery company in setting challenging new targets in the areas it can make the most difference.

In addition to an overall company target for reducing CO<sub>2</sub> emissions, each of Warburtons' bakeries have individual energy efficiency targets to meet. To help achieve these targets the bakeries are trialling increasing oven insulation, using gas burners that shut down automatically when there are gaps in production, and re-using oven heat to keep baked goods at the right temperature in despatch areas.

To avoid sending waste to landfill the company diverts the majority of its spoiled dough and bread to animal feed.

As a signatory to both the original Courtauld Commitment, and its successor phase 2, Warburtons has been working hard to reduce waste by creating new packaging solutions. More than 97% of all the plastic bread bags used are made from recyclable materials. All the plain card and 95% of the printed card is recyclable and all the paper used is sourced from responsibly managed forests.

Transport is a significant part of Warburtons' overall carbon footprint and it is exploring a number of different ways to reduce its environmental impact. Approaches include: increasing the use of double-deck trailers which nearly double capacity, reducing miles and fuel use; trialling a 100% compressed natural gas-powered tractor unit; training all drivers

in Safe and Fuel-Efficient Driving; and using a vehicle routing and scheduling software package to increase efficiencies.

Following the five steps under the Federation House Commitment to reduce water use Warburtons now measures and monitors all significant water use at each of its sites every week. Currently, Warburtons is exploring the practicalities of collecting rainwater from factory roof space for non-food related uses, such as cleaning vehicles, bread baskets and feeding boilers.

As part of its new environmental targets Warburtons is committing to measure the total water footprint used in producing its products, to calculate the carbon intensity of its packaging, and to increase the percentage of packaging that is either recyclable or biodegradable.



Each Warburtons' bakery has an energy efficiency target to meet

# About FDF

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The Food and Drink Federation is the voice of the UK food and drink industry, the largest manufacturing sector in the country.

FDF's membership comprises manufacturers of all sizes as well as trade associations dealing with specific sectors of the industry.

Our role is to help our members operate in an appropriately regulated marketplace to maximise their competitiveness. We communicate our industry's values and concerns to Government, regulators, consumers and the media. We also work in partnership with key players in the food chain to ensure our food is safe and that consumers can have trust in it.

In representing the interests of our members, we are focusing on four core priorities:

- Food Safety and Science
- Health and Wellbeing
- Sustainability
- Competitiveness



**Making a real difference**

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