

Environmental Statement

OSI Food Solutions UK Ltd 2013





**Effective
environmental
management
underpins the
OSI Europe
sustainability
initiative.**



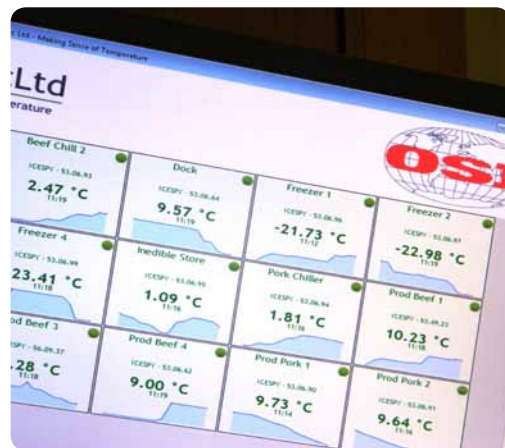
Phil Marsden

Managing Director – Europe

Effective environmental management is becoming an increasingly important topic at all stages of the supply chain. Producers, primary processors and further processors all need to take responsibility for the reduction of their environmental impact and to work together to enhance the overall image of the industry. GHG emissions particularly from beef production have become much debated and OSI must work to reduce the environmental impact of its supply chain to support the sustainability of the industry.

OSI has many metrics in place to manage the impact of its own operations and is now in a position to set clear improvement targets. Long term strategic targets have been set and investment decisions need to consider these key business objectives. Much has been achieved in recent years from gaining zero landfill status in a number of European plants to a significant investment in new freezing technology to reduce CO₂ footprint.

OSI will continue to drive improved environmental management in its European operations and will also harness ideas from its global business to be at the leading edge in this area.



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OSI will continue to drive improved environmental management.
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Gary Drane

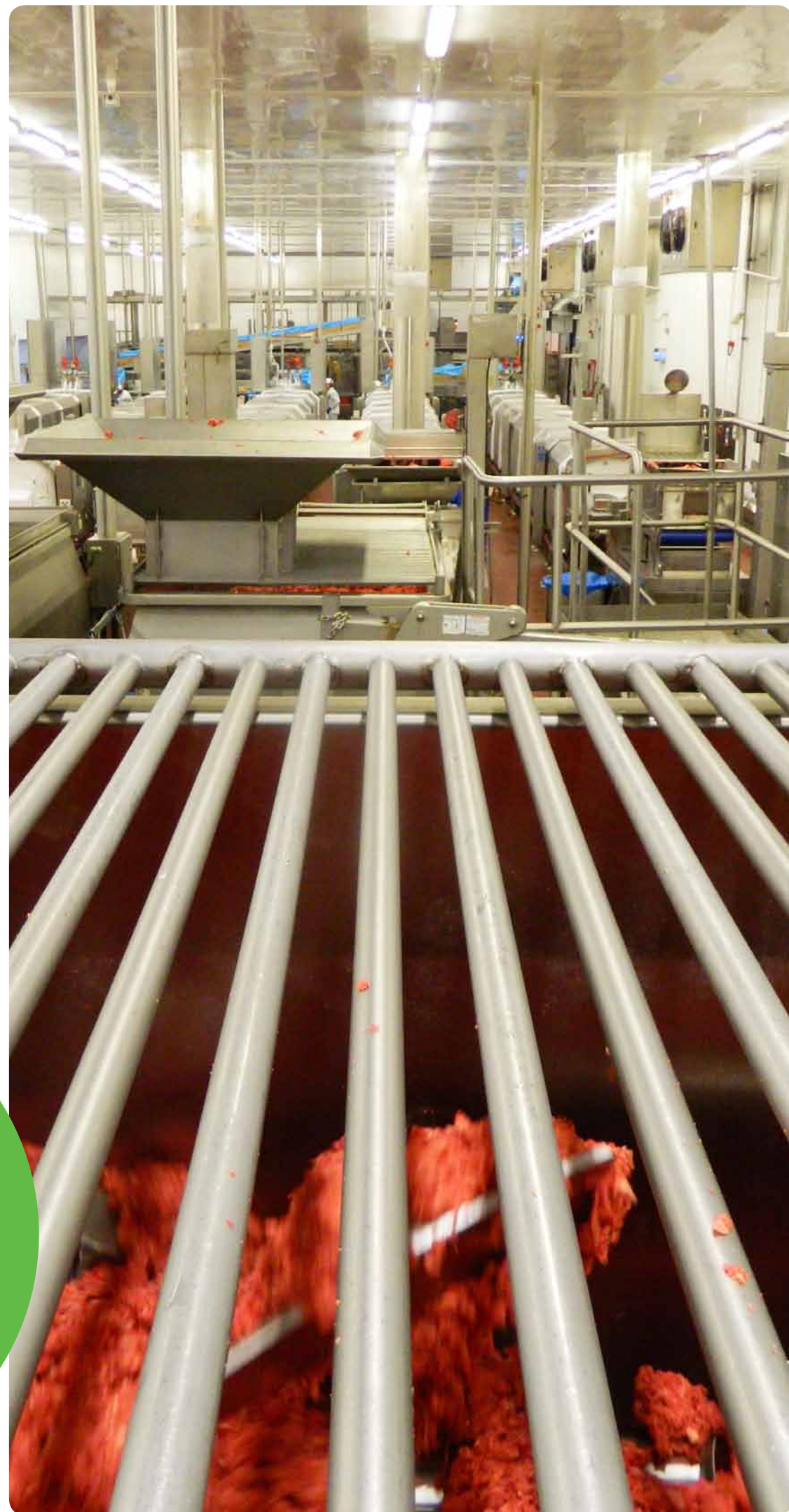
General Manager

The future challenge of operating a large manufacturing facility encompassing energy demanding equipment whilst maintaining environmental performance has to be efficiency. OSI are working hard to continue to target, develop and improve our energy, carbon and sustainability strategies.

As energy prices soar and demand continues to grow, understanding your plants power requirements has never been so important, monitoring energy performance against output and key performance indicators ensures that our maintenance regimes are effective and meet the need of the operation, ultimately optimising power demand and cost.

OSI are committed to continuous improvement, energy efficient initiatives and projects that will deliver both tangible and sustainable results for the future.

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Company Profile

OSI Food Solutions UK (formerly Esca Food Solutions) was formed in 1978 to be the exclusive supplier of red meat products to McDonald's Restaurants in the UK. Founded as a joint venture company between McDonald's and Keystone Foods, the ownership changed over the intervening years but in 2000, Esca Food Solutions became 100% owned by OSI, the largest global supplier to the McDonald's system.

In 2007, the UK manufacturing operation was consolidated into one site at Scunthorpe. The primary objectives for this move were increased operational efficiency, economies of scale and expertise combined under one roof.

The site supplies beef and pork patties to over 1,200 McDonald's restaurants in the UK, and pork patties to 81 McDonald's restaurants in the Republic of Ireland.

Further developments of the site and plant concluded in August 2013 with a £6m investment in building extension and new plant equipment. The technology employed in the new extension is spiral freezing, which significantly reduces our reliance on Liquid N² for freezing of our products and as a result will ultimately moth ball three existing manufacturing lines for use in contingency situations. The environmental benefit is a reduction and positive impact on the sites carbon footprint.

The building, manufacturing and storage areas now occupy 5,731m² with the entire site boundary and gardens occupying 22,924m².

OSI UK produces over 40,000 tonnes of beef and pork product each year with an approximate headcount of 180 employees.



Product Range in UK

The current OSI UK product range consists of both core menu and promotional patties:

Core Menu

- 100% Beef Hamburger patties
- 100% Beef Quarter Pounder Beef patties
- Pork Patties to support the breakfast menu

Promotional

- 100% Beef Oval patties
- 100% Beef Big Tasty patties
- 100% Beef 1955 Patties

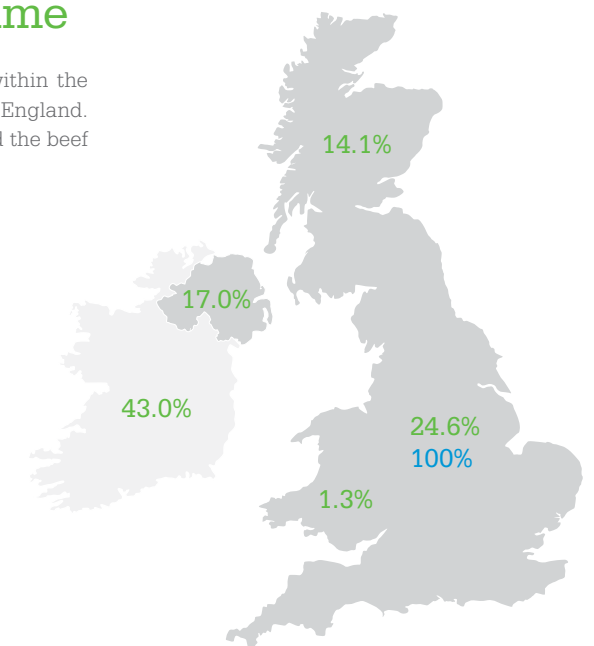
In addition to the above, development work is continuous and challenging. In partnership with other McDonald's suppliers the OSI NPD team strive to discover new products and product builds, that will both enhance and improve the current offering, in regards to taste, texture and nutritional benefits.



2013 Regional Volume

OSI UK currently has 27 beef suppliers within the British Isles and 6 pork suppliers within England. The pork supply is 100% from England and the beef supply national breakdown is as follows:

- Beef origin
- Pork origin



Management Systems

OSI UK has management systems in place to provide a framework for our processes. These systems document the procedures used to ensure that we can fulfil all tasks required to achieve our objectives.

The key components are:

- + A Quality Management System with BRC Global Standards in Food Safety accreditation
- + An Environmental Management System with ISO 14001:2004, EMAS (Eco-Management & Audit Scheme) and BSC 5* accreditation
- + An Occupational Health & Safety System with BSC 5* & BS OHSAS 18001:2007 accreditation
- + A Social Accountability System independently audited and approved against the McDonald's Social Accountability Standard

Regular reporting ensures the sharing of information throughout the system. In particular, goals, projects and measures are discussed.

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The company continually invests in technology; plant and fabric in order to meet the standards expected whilst remaining competitive.
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Environmental Organisation

| | | | | | |
|---------------------|----------------------------------|-------------|--------------------------|-----------------------------|---------------------------------|
| Senior Management | Senior Management Team | | | | |
| Site Management | Plant Management Representatives | | | | |
| Committees | Health & Safety | HACCP | Environmental | Quality | Employee Consultative Forum |
| Communication Tools | All Employee Communication | Team Briefs | Site Management Meetings | Annual Environmental Review | Environmental Committee Meeting |
| All Employees | | | | | |

Secure Supply Chain

The company has spent many years building a secure beef supply chain and has achieved this by working closely with a limited number of supplying abattoirs. All of these plants are subject to technical, traceability and environmental third party audits.

Working in a close and practical way it is possible to achieve a very effective supply chain reducing quality issues and more importantly giving us the confidence of a secure and sustainable supply chain. This security and confidence in the raw material, its origin and its processing follows all the way through to point of delivery in the plant, the manufacturing process and ultimately the customer.

Our highly trained quality control and production staff ensure only the highest quality at every stage

of the manufacturing process; this ensures flawless product consistency and food safety to the consumer.

The company continually invests in technology; plant and fabric in order to meet the standards expected whilst remaining competitive.

Our business goals are aligned with our environmental and economic aspirations.



Environmental Guidelines

Environmental Policy

As a business we are aware of the effect our operations have on the environment and we recognise that environmental management is an integral part of our business. These operations are carried out using sustainable management systems and we are committed to continually improving our environmental performance.

Resources

We optimise the use of materials used within our organisation through continuous review to try and identify suitable environmentally friendly alternatives. Through this process of continuous improvement, we strive to minimise the risk of environmental pollution, such as waste, effluents and emissions.

Energy Use & Emissions

We are constantly reviewing and monitoring our energy usage for any potential savings whether it is through process improvements or by using the best available technology to ensure the most efficient usage. We are planning to install an Energy Management System to further improve our controls.

Any new equipment has a full review of the impact it will have on both ours and our neighbour's environment before a decision to purchase. We aim for all replacement and new purchases to comply with the best efficiency ratings available for the proposed use.

Environmental Impact

We evaluate all of our environmental aspects to ensure we understand the impacts our business has upon the environment. Through identifying our significant aspects we then implement control measures to minimise the risks to the environment.



Environmental Protection

Possible environmental risks resulting from the company products or processes are continually monitored, documented and evaluated. We ensure the relevant systems and controls are in place to maintain compliance with current legislation.

Legal Compliance

We regularly identify all applicable environmental legislative, regulatory and customer legal requirements, ensuring compliance by our site.

Training & Information

We promote environmental understanding throughout our business. Not just focusing on our employees but also our visitors, contractors and supply chain. We achieve this through training, information and supplier development.

Environmental Objectives

We review our environmental objectives on an annual basis as part of our Management Review. Any areas of improvement are discussed and used to determine the objectives for the coming year. In addition, we actively encourage all members of staff to make their own improvement suggestions.

For a full copy of our Environmental Policy and Energy Policy, please refer to Appendices A and B at the back of this statement.



Environmental Aspects

We consider direct environment aspects to be the impact of those industrial activities which we execute and which we can therefore control. This would include areas such as:

- + Waste management systems
- + Waste Water Emissions
- + Resource consumption
- + Energy use
- + Air Emissions

For continuous improvement of these industrial environmental aspects, we set annual objectives and targets, monitor and control them actively with the aid of our key performance measurement system and calculate our Carbon Footprint on an annual basis.

In addition, we are also active in environmental aspects that we can only influence to a certain level. These "indirect environmental aspects" can result from an interaction with a third-party such as fulfilling customer requirements for existing or new products, for the environmental scorecard and behaviour of (sub) contractors and suppliers, or in the case of administrative and legislative requirements.

We tie in our main suppliers and service providers through a binding, written agreement promising clean, environmentally-friendly and safe conduct, which enables us to maintain our standards. OSI's Environmental Management Projects form facilitates the implementation of projects and includes environmentally relevant decision-making processes.

For a detailed summary of our Aspects, please refer to Appendix C at the back of this statement.

Environmental Legislative Requirements

OSI Food Solutions has a Register of Environmental Regulations in place, which captures all legislation that the company must comply with. This register also includes details of other requirements the Company must meet, such as customer specifications and voluntary agreements. A six monthly legislation review is carried out to capture any new / amended legislation. In addition, a full annual audit is conducted against the legal register and its requirements to ensure the site continues to be legally compliant.

The site has well established working relationships with the regulators such as the Environment Agency, Anglian Water, Severn Trent and North Lincolnshire Council.

In February and August 2011 OSI Food Solutions Ltd were issued with separate cautions from Severn Trent relating to our trade effluent discharge. The cautions related specifically to debris located in the external sewer manhole located outside of the OSI site boundary, this manhole is not part of our site discharge consent.

Whilst OSI is mindful of such concerns, the effluent analysis conducted by Severn Trent demonstrates that OSI has continued to be within our site consent limits (full details provided within Appendix A). Whenever there is an unusual test reading, the resample taken is always within limits. In addition to meeting our consent requirements we empty and clean the site interceptors on a monthly basis, which is more than the required limit specified within our Site Protection and Monitoring Programme (as per our PPC Permit BX3848IA). We also conduct a 3-yearly CCTV drainage survey to ensure the integrity of our site drainage is maintained. The last site survey was completed in February 2011 and any defects identified were immediately repaired, although none of these would have had an impact on the external drainage system.

Further to these cautions, legal proceedings were taken by Severn Trent which resulted in a trial that was held in November 2013. We are pleased to confirm that as a result of this trial OSI were fully acquitted.

For a more detailed description of our legislative requirements, please refer to Appendices D and E at the back of this statement.

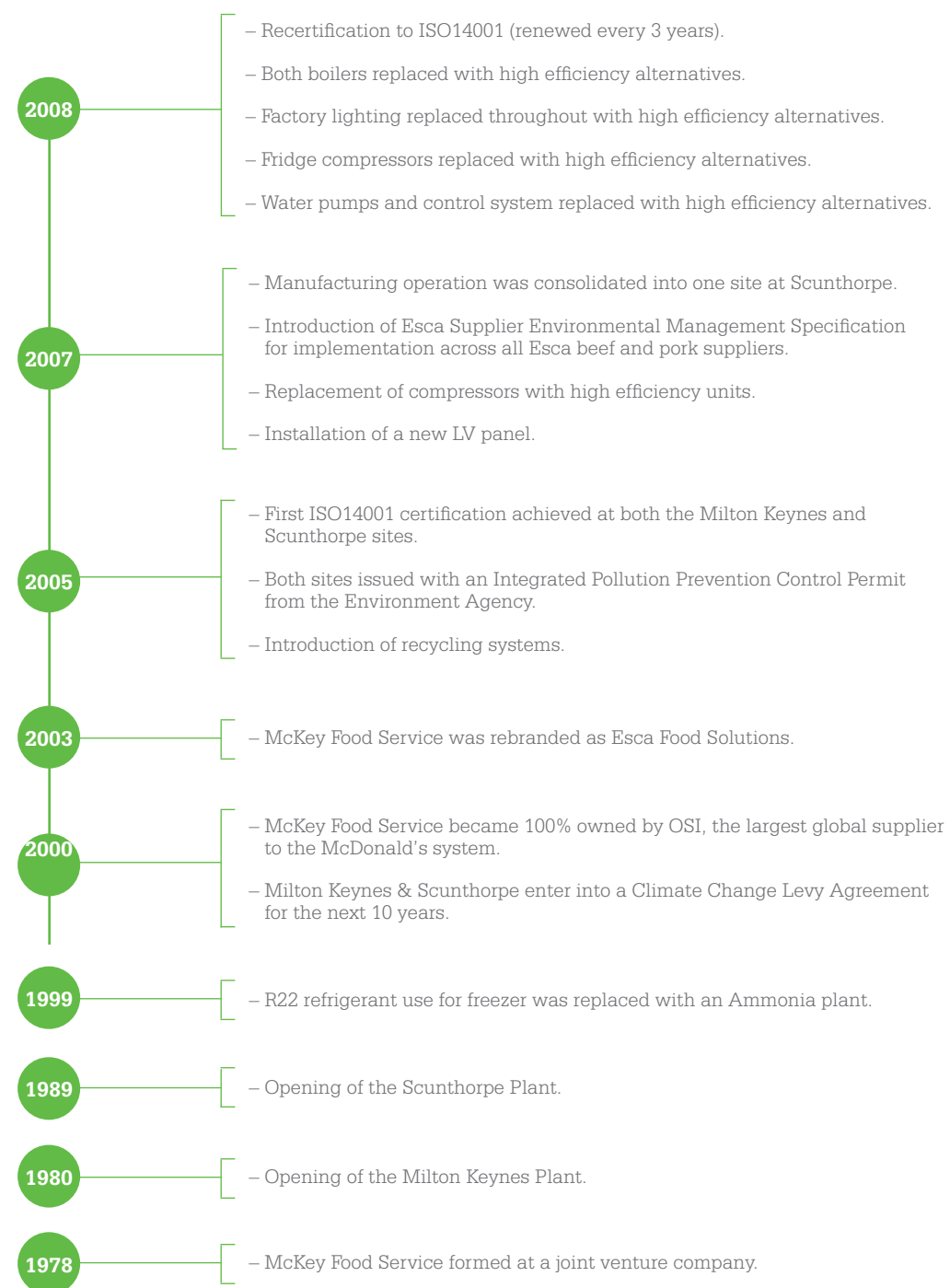
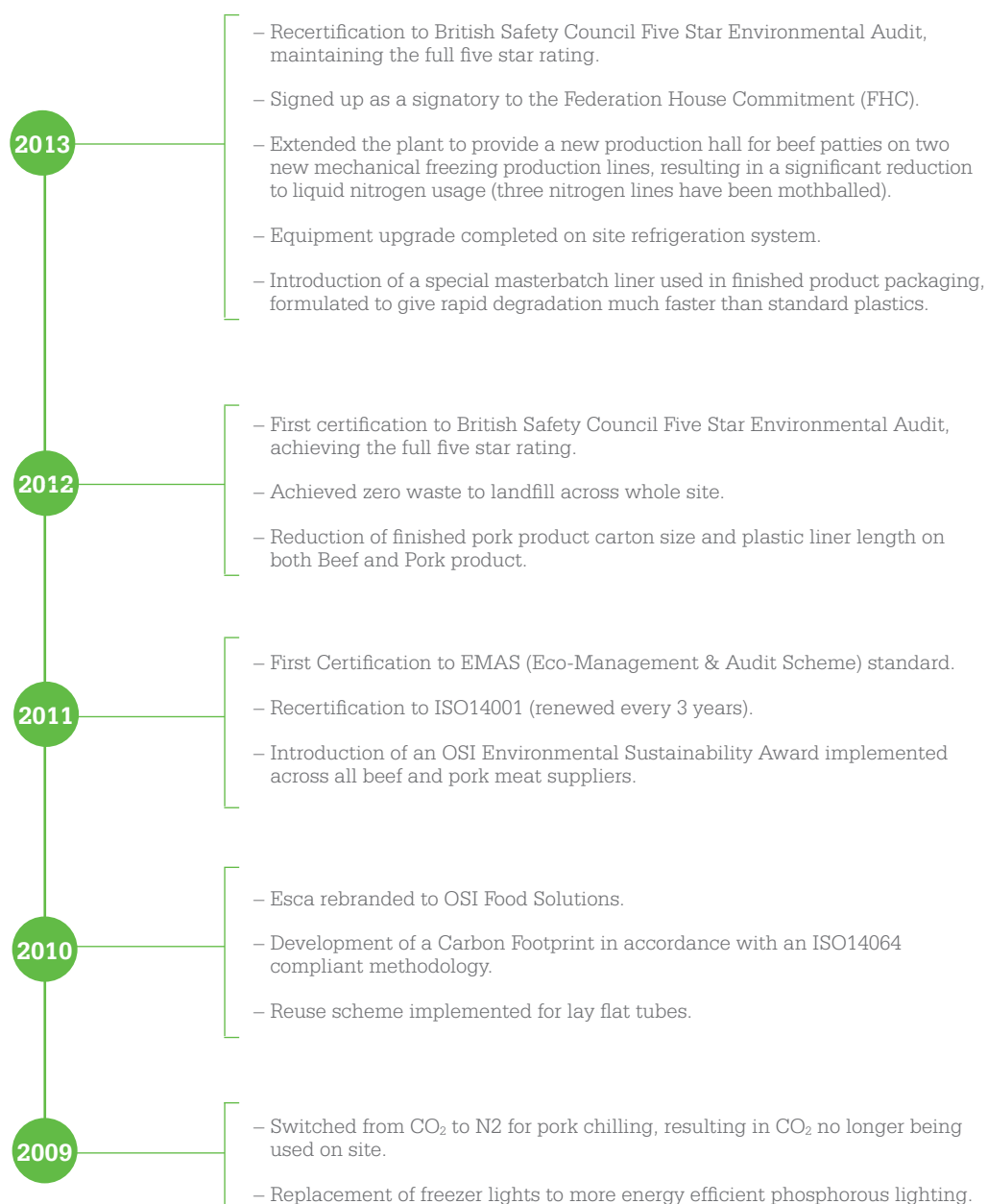
Complaints

The site received one noise complaint in 2007, which was immediately addressed with the support of the Environment Agency by implementing a noise management plan. No further complaints of this nature have been received.

In January 2012 a fog complaint was received resulting from the nitrogen emissions. The Environment Agency investigated this and confirmed we were not directly responsible on this occasion.

Further fog complaints were received in December 12 and September 13, both of which were again investigated by the Environment Agency. They confirmed that we are doing everything possible to minimise the fog risk and no further action was to be taken in either instance. There has been no further fog complaints received. With the introduction of the spiral freezer, and the reduction this will have on our nitrogen usage, we anticipate this to significantly reduce the risk of future fog issues.

Environmental Achievements & Milestones



Environmental Performance Measurement System

Continual improvement in our environmental performance and compliance with the environmental policy is demonstrated by measuring and monitoring our environmental performance on a regular basis. One of the areas we use to measure this is through the use of environmental key performance indicators (KPI's). These are produced monthly and improvement is demonstrated by comparing the results to improvement targets we have set at the beginning of each year.

Our KPI results are detailed in full further on in this statement.

Objectives & Targets

Status of 2013 Objectives

In 2013 we set ourselves the following environmental objectives and targets, the status of these objectives is detailed below:

| Objective Area | Targets | Target Date |
|----------------|---|--|
| Purchasing | Introduce the OSI Europe Green Purchasing System within OSI UK <i>This system has been developed and is currently being launched within each plant, with full implementation expected by mid 2014.</i> | Dec-13 <i>Amended target Jun-14</i> |
| Purchasing | Hold a UK Meat Supplier Environmental Workshop <i>A Sustainability Workshop was held in Mar-13 with all beef and pork suppliers. This included details about OSI's Sustainability programme, a presentation from our Environmental Sustainability Award winner, Foyle Food Group and the E-CO2 carbon footprint project.</i> | Mar-13 <i>Completed</i> |
| Energy | Implement a site Energy Management System <i>This was put on hold until the completion of the plant extension and implementation of the spiral freezing process, which was operational from September-13. This system is now due for implementation in 2014.</i> | Dec-13 <i>Amended target Aug-14</i> |
| Waste | Trial a plastic packaging alternative for the product carton liners <i>A special masterbatch liner formulated to give rapid degradation was trialled during 2013. Due to its success, we are now moving into the next phase to implement the use of this liner within our finished product packaging.</i> | Dec-13 <i>Completed</i> |
| Waste | Reduce total solid waste by 15% (with 2012 as the baseline) <i>In 2013, actual total solid waste reduced by 3.2%. This is a result of an increase to site interceptor collections due to the implementation of the spiral freezer, which has increased cleaning requirements.</i> | Dec-14 |

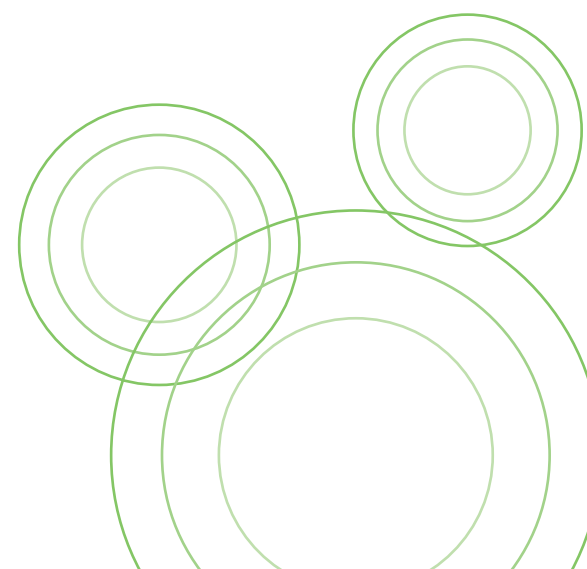
2014 Objectives & Targets

The following objectives have been set for 2014; the status of these will be reported in our annual EMAS update in February 2015.

| Objective Area | Targets | Target Date |
|--|---|-------------|
| Introduce Greener Purchasing | Introduce the OSI Europe Green Purchasing System within OSI UK <i>Introduce environmental requirements into procurement processes</i> | Jun-14 |
| Reduce Energy Consumption | Implement a site Energy Management System <i>Increase the level of energy monitoring across the plant, with a view to identifying future energy reduction projects</i> | Aug-14 |
| Reduce CO ₂ Emissions | Reduce site CO ₂ energy emissions by 20% (with 2013 as the baseline) <i>Reduce Nitrogen usage against production by 40%</i> | Dec-14 |
| Reduce environmental impact of packaging | Implement the new masterbatch liner (Greener Polyethelene) within our finished product packaging <i>Obtain approval from customer & conduct small scale production trial. If successful, phase in to full production process</i> | Dec-14 |
| Reduce Waste Arisings | Reduce total solid waste by 15% (with 2012 as the baseline) <i>Reduce RDF waste by 3%</i> <i>Reduce Inedible meat waste by 3%</i> | Dec-14 |

| Objective Area | Targets | Target Date |
|-----------------------|--|-------------|
| Energy | Reduce energy intensity by 10% | 2020 |
| Water | Reduce water intensity by 10% | 2020 |
| Waste | Zero waste to landfill. | 2020 |
| Social Accountability | 100% SWA (Supplier Workplace Accountability) Green Facility Status | 2020 |

These 2020 targets are based on the total production volumes for all worldwide OSI plants. At OSI UK we are working towards contributing to these 2020 goals, through the setting of localised short term environmental objectives and targets, progress of which is reviewed on annual basis.



Waste Management



Interview with Michael Hughes, Purchasing Administration Manager

Q.1. Tell us a about Project Ambiente:

"Project Ambiente is an initiative the team have been driving for the last 12 months. OSI recognises the importance of protecting and improving the environment through good management and best practice and the question was **'How can we become greener and also help our customer improve their sustainability impact on the environment?'** The proposal is to successfully introduce an environmentally-friendly degradable carton liner suitable for direct food contact applications."

Q.2. What was your inspiration for the project?

"The inspiration for the project was born in late 2012. I had items stored at my home in a cupboard for a prolonged length of time in a disposable bag supplied by a well-known supermarket retailer. Upon clearing out my cupboard one day I took the bag and it began breaking down in my hands. I made contact with the supermarket retailer who advised me that the bags in my possession did contain an additive which made the material capable of undergoing degradation in a composting environment but would also naturally degrade over time. To me this was exciting that the material was an environmentally-friendly solution for such a simple item such as a disposable plastic bag and I thought 'Why can't we use that technology?'"

Q.3. So you have got your idea, how did you put it into practice?

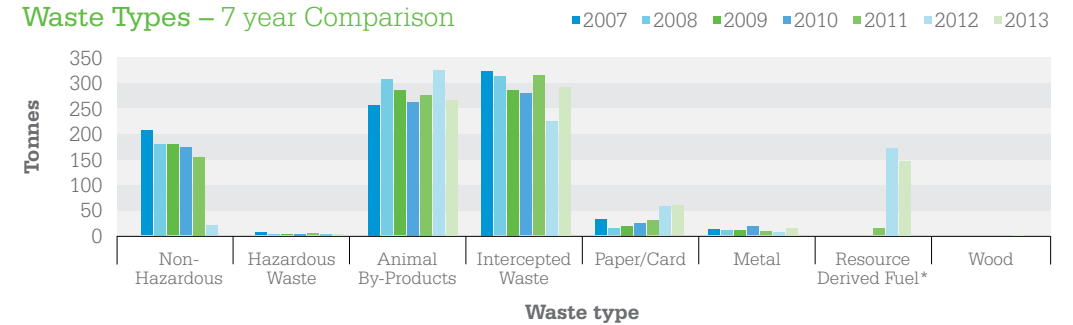
"I put together an initial proposal to utilise a degradable carton liner titled 'Greener polyethylene' in October 2012 which was really the introduction and stepping stone for 'Project Ambiente' which began in January 2013. We put together a team with OSI and along the way have recruited experts from the fields of specialist distribution and manufacturing, polyethylene extrusion and advanced research and development. We have conducted various trials internally and externally and as the project is growing so is our experience."

Q.4. What are the environmental benefits of this project?

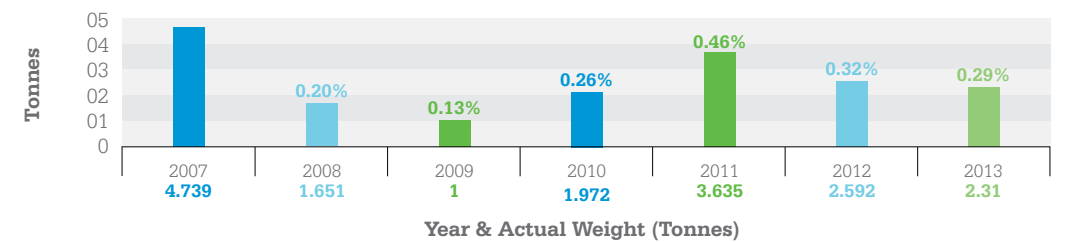
"This initiative would introduce a special masterbatch liner formulated to give rapid degradation and complies with the European Food Directive. Plastics have a negative carbon footprint and are considered a non-renewable resource that doesn't easily degrade, whereas the material we are looking to introduce would degrade much, much quicker than standard plastics. This initiative would benefit the restaurants and their waste streams and ultimately I believe will make us an environmentally stronger company and better partner."



Waste Types – 7 year Comparison



Hazardous Waste – 7 year Comparison



As demonstrated within the waste graphs shown below, in July 2012 the plant achieved zero landfill status with all site waste streams now being diverted. We work closely with our waste contractors and conduct a biennial waste review to ensure we continue to use the most suitable solutions.

The percentages shown in the graphs detail the reductions achieved compared to the previous year.

Since 2007 we have reduced our total solid waste by 6.45%. Less than 0.3% of our waste is hazardous with the remaining 99.7% being recycled. In 2013, the recycling waste increased by 9.05% when measured against the sites annual production, mainly due to the new site extension to introduce mechanical freezing. As a result, the interceptor waste has increased due to additional cleaning associated with this new process.

From September 2013 the line became fully operational.

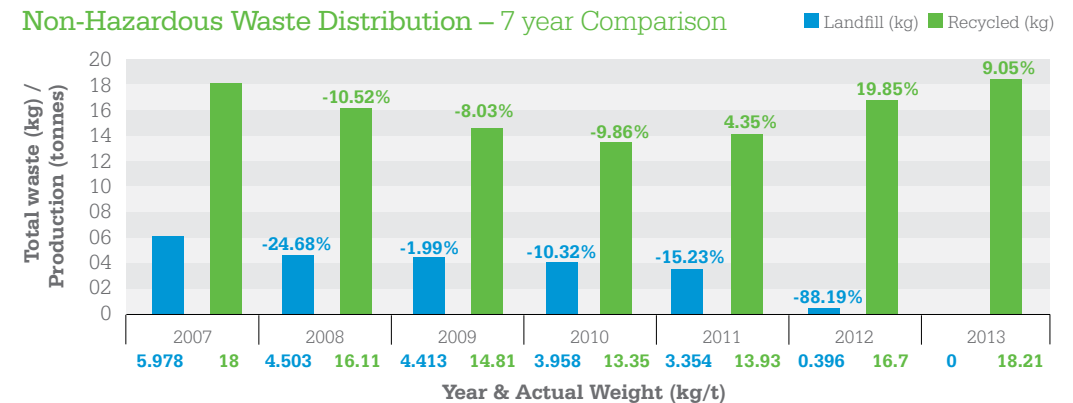
Overall the site achieved a total solid waste reduction of 3.15% when compared to 2012, based on the actual waste volumes.

All of the percentages detailed above are based on the actual weights measured against the sites annual production.

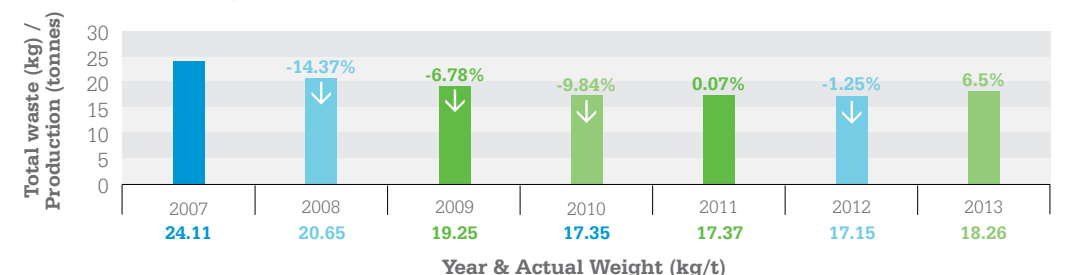
These figures have been taken from waste transfer notes or invoices.

NB: Percentage reductions are not included on the above graphs. This is due to the variation in collection timings within the years, for example a previous year's waste being collected at the beginning of the next year. This therefore results in fluctuation within the results.

Non-Hazardous Waste Distribution – 7 year Comparison



Total Waste – 7 year Comparison



Energy Management



Interview with
Ian Hughes, Factory Manager:

Q1. What techniques/equipment have you considered to improve efficiency?

“OSI are always looking for ways to improve our production efficiencies, costs and environmental impact, obviously if we could change our process and at the same time achieve all three of the above then it has to be a winner.”

“In 2010, OSI in Germany installed a new concept production line in Gunzburg that consisted of two formers connected to a mechanical twin belt Spiral Freezer. This system was monitored to ensure its capability in terms of production efficiency and overall energy reduction. After making some refinements, whilst retaining the original design, the concept was then transferred to the UK”

Q2. What did you have to do in order to install the new line?

“The main aim of the project was to install the new production lines and spiral freezer with little or no disruption to the existing production. After various proposals the decision was taken to build a new production hall and plant room adjoining the existing production area, install all the equipment and then commission before we broke through to the existing production area.”

“The work started in mid 2012 and involved a new drainage system, piling work, electrical supply and water mains before any building work commenced. The building was completed in early 2013 with equipment installation completed by June; the first product went through the system in July. The dividing wall was removed in July with trial production ongoing through August, McDonald’s approval was given on the 5th of September and we started full production on the 15th of September.”

Q3. What are the benefits?

“The benefits of implementing this system included the removal of Nitrogen by mechanical freezing, which gives a significantly lower carbon footprint and overall cost reduction. We implemented a heat recovery system for cleaning of the spiral freezer, electrical distribution system with improved power factor control, low energy lighting and overall we have replaced three of our existing production lines with two high efficiency lines to give the same production volume.”

Electricity Key Performance Indicators

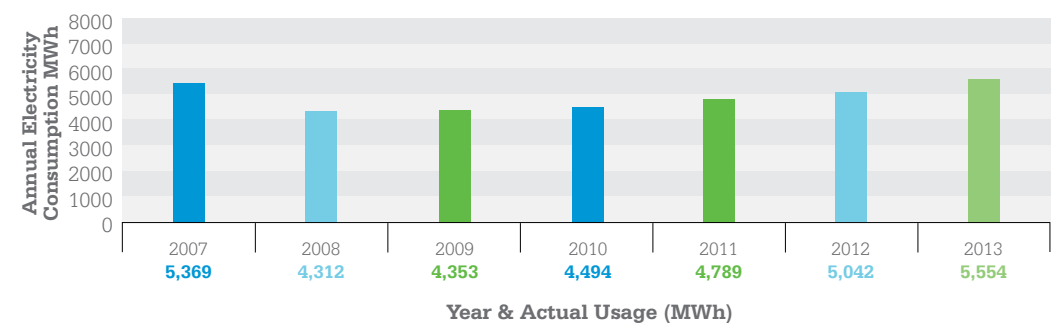
The electricity usage began to increase from 2011 and in 2013 this reached 21.12% when compared to 2012. The percentages are based on the actual usage measured against the sites annual production.

The increases in 2011 and 2012 were primarily due to unforeseen downtime and increased demand for promotional items, therefore additional weekend working and overtime was required to meet production requirements. As a result the same amount of electricity usage is required to run the additional shifts, but with a reduced production volume than when compared to a normal full working day.

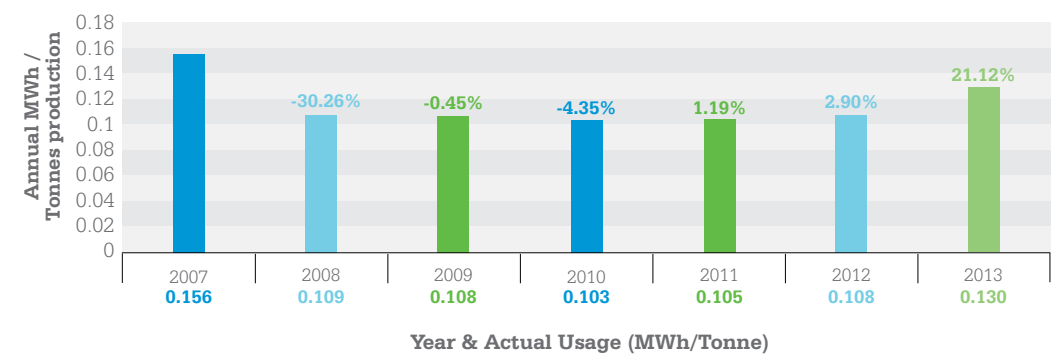
In 2013 the site was extended to provide a new production hall for beef patties on two new mechanical freezing production lines. This has obviously resulted in major increases to our electricity usage, but a significant reduction to liquid nitrogen usage due to three nitrogen lines being mothballed. Whilst electricity consumption will continue to increase in 2014, once we have a full year’s worth of data with the new production process, we will then be able to set an accurate benchmark and set our targets accordingly.

All electricity figures have been taken from supplier invoices based on actual readings.

Electricity Annual Usage – 7 year Comparison



Electricity Use against Production – 7 year Comparison



NB: There is no on site generation of renewable energy.

Gas Key Performance Indicators

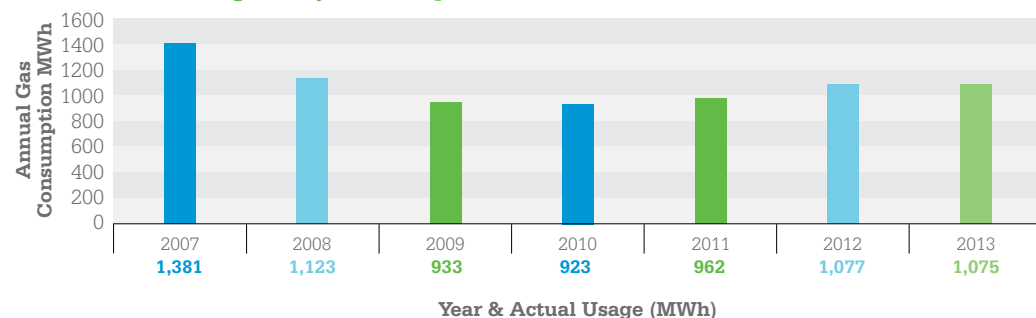
The gas usage began to increase in 2012 and in 2013 reached 9.77% when compared to 2012. The percentages are based on the actual usage measured against the sites annual production.

The site gas use is required to heat the water for the cleaning process. Therefore, this increase is primarily due to additional demand for the plant cleaning that is attributed to the overtime and weekend working, as explained in more detail within the electricity consumption section above.

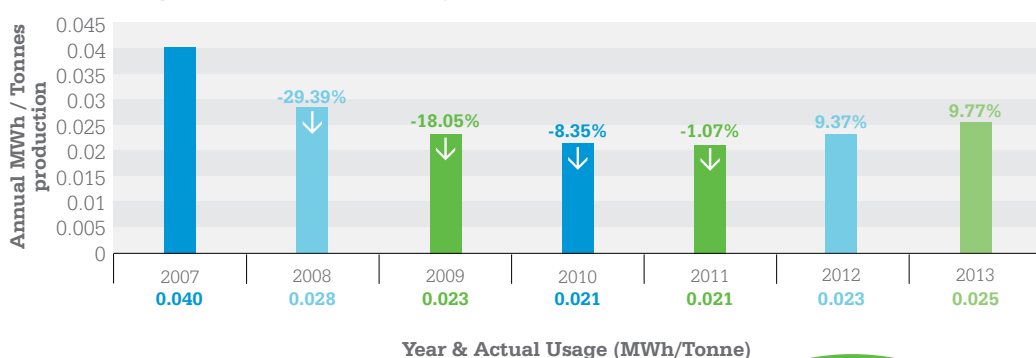
In 2013 the site was extended to provide a new production hall for beef patties on two new mechanical freezing production lines. Once the extension was completed a number of trials needed to be conducted to ensure the process was working effectively and to gain the necessary approvals from our customer. This required the area to be cleaned to the same regime as the rest of our plant but with no production output attributed to it, therefore this has impacted on our gas usage.

All gas figures have been taken from supplier invoices based on actual readings.

Gas Annual Usage – 7 year Comparison



Gas Use Against Production – 7 year Comparison



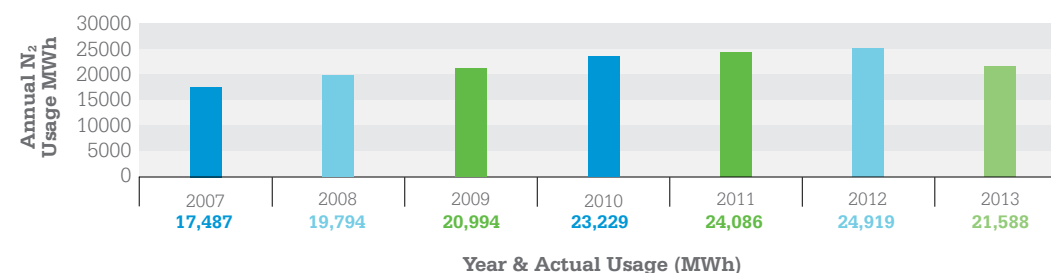
Nitrogen Key Performance Indicators

Liquid nitrogen is used during the pork blending process in order to chill the mix prior to final mincing and also for freezing both pork and beef patties prior to packing.

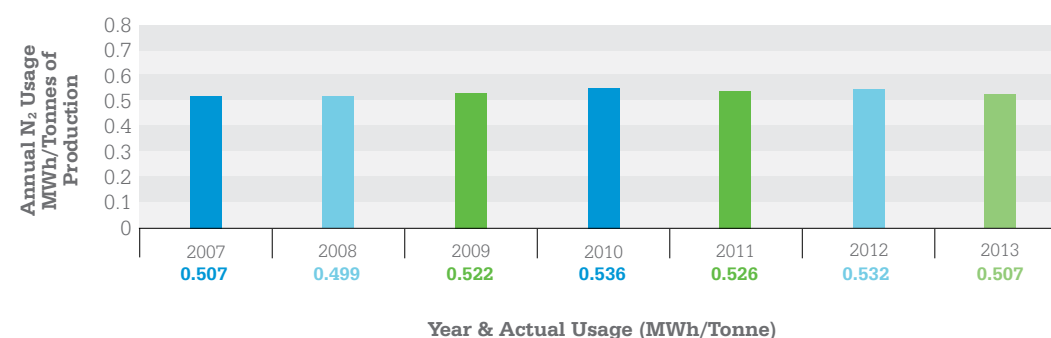
In 2011 and 2012 there was a slight increase when compared to previous years and this was mostly due to the additional weekend shifts, as explained within the electricity and gas sections of this report.

Whilst the move to mechanical freezing in 2013 has resulted in an increase to the electricity usage, the site expects to see a reduction to the current volume of liquid nitrogen used for beef production by approximately 60%. This would equate to an overall nitrogen reduction within the plant of 40%. We have already seen our nitrogen usage reduce by 4.74% since these changes were implemented in September 2013. Furthermore, this will also result in a reduction of nitrogen deliveries by up to 50%. Due to the GHG emissions attributed to the production of Nitrogen this will have a positive impact on our annual site Carbon Footprint results.

N₂ Annual Usage – 7 Year Comparison



N₂ Use against Production – 7 year Comparison (N₂ replaced CO₂ pork chilling in July 2009)



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We have already seen our nitrogen usage reduce by 4.74% since these changes were implemented.
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Energy CO₂ Emissions Key Performance Indicators

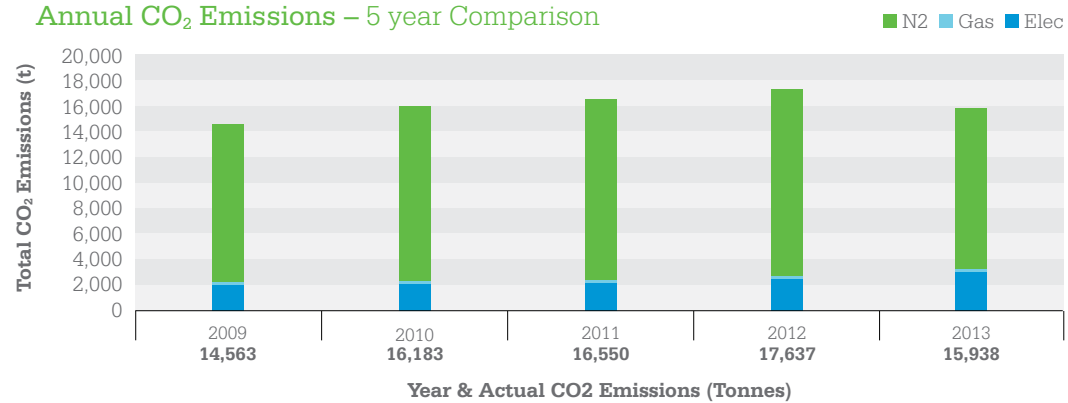
In 2011, OSI introduced a CO₂ emission KPI for our energy use (including Electricity, Gas and Nitrogen), which was backdated to include data for 2009 and 2010. This KPI calculates the total CO₂ emissions for the energy sources specified, the conversion factors used are detailed below.

The CO₂ emissions for energy when measured

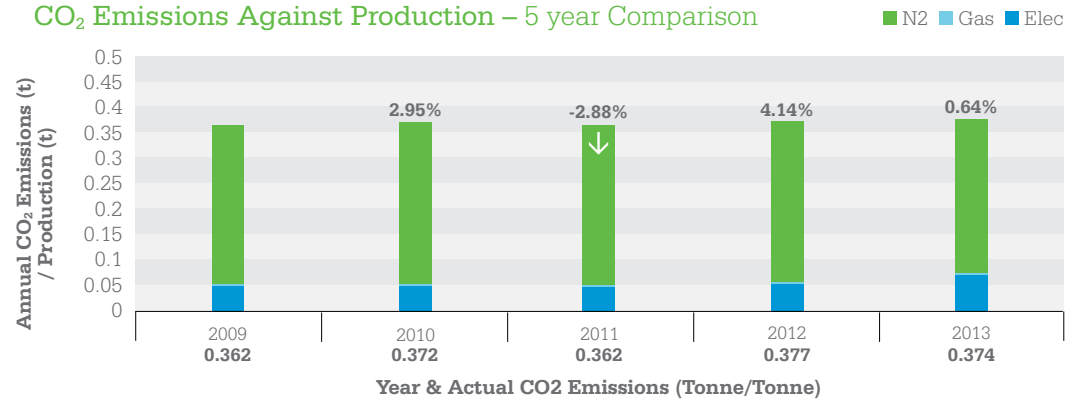
against the sites annual production have increased in 2013 by 0.64% when compared to 2012. The reason for this increase is explained within the energy sections detailed above.

At OSI Carbon and Refrigerant gases are the key reportable air emissions, other gases such as SO_x and NO_x are insignificant in our processes.

Annual CO₂ Emissions – 5 year Comparison



CO₂ Emissions Against Production – 5 year Comparison



For details of the conversion factors used for the calculation of this data, please refer to Appendix F



Water Management



Interview with Janet Urquhart, Laboratory Manager:

Q1. What is your job at OSI and what does it entail?

"As manager of the lab at OSI Scunthorpe I oversee the microbiological testing of raw materials, finished product, tap water and the production environment. The laboratory is accredited under the Campden Laboratory Accreditation Scheme (CLAS) which gives confidence that all tests carried out by the lab are done to recognised standards, and that results generated are accurate."

"The primary role of the laboratory team is to ensure that patties meet McDonald's microbiological specifications. This entails the testing of meat on intake, as well as the testing of the environment, production surfaces and finished product. In this way we can make sure that all suppliers are providing meat of high microbial quality and that the manufacturing environment is of a high standard of hygiene. This leads to the production of quality, food safe patties."

Q2. What do you do in terms of water quality and testing?

"I am responsible for managing tap water control systems in conjunction with the QC and Engineering departments, and an external contractor. The main aim is to make sure that water is stored and distributed in a way that minimises the growth of Legionella bacteria."

"Legionella is capable of causing Legionnaires' disease which is a serious, potentially fatal lung infection. It is contracted by inhaling water mist containing high numbers of Legionella bacteria. Legionella bacteria are common in the environment and their growth in hot water systems is controlled by making sure that cold water is kept cold (below 20C) and hot water is stored at above 60C, as well as ensuring that the distribution system is hygienic. To monitor the effectiveness of our Legionella control program we regularly check the levels of bacteria in water samples taken from around the site."

Q3. How will the heat recovery system benefit OSI?

"The new spiral freezer uses ammonia refrigerant as a coolant. This has zero environmental impact in terms of ozone depletion and global warming and in addition a large proportion of the heat is recovered for use in the integrated self cleaning system. This system reduces the need to heat water for cleaning via conventional gas fired boilers, in essence producing free hot water for cleaning. The heat recovery system is electronically controlled and is backed up by the existing gas fired system if and when required. The remainder of the heat is extracted from the coolant by means of a cooling tower. As the cooling tower produces a fine water mist, the water used in this process is monitored weekly to make sure that the levels of biocide are controlling bacterial growth."



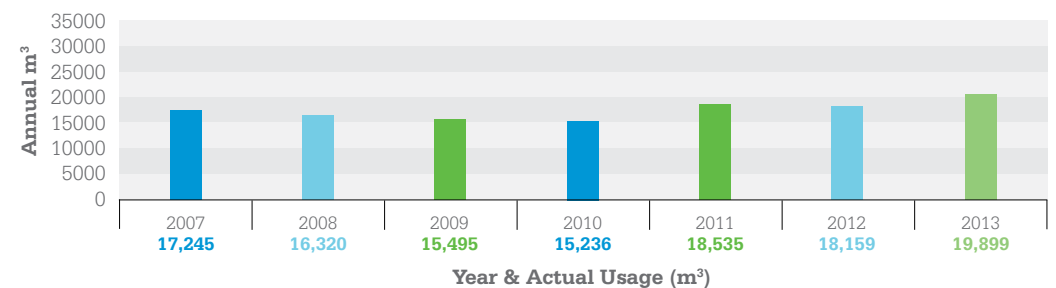
Water Key Performance Indicators

Whilst we did see an increase in our water usage in 2011 when compared to previous years, this began to reduce in 2012. However, in 2013 this increased by 20.49% when compared to 2012. The site water usage is attributed primarily to the cleaning process, which is why it has been measured against the sites production. The increase in the water usage during 2011 is because of additional weekend working and overtime to meet production requirements. This has resulted in extra cleaning days and an increase in the site water usage.

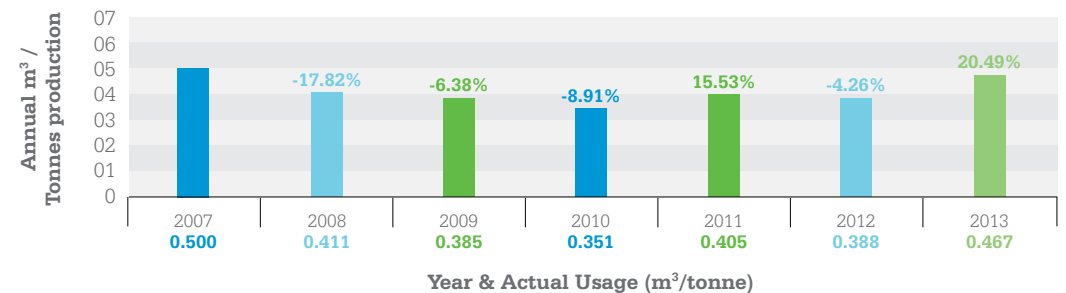
As detailed within the electricity and gas sections of this report, due to the extension a number of trials needed to be conducted, which required the area to be cleaned to the same regime as the rest of our plant but with no production output attributed to it, therefore this has also impacted on our water usage.

All water figures have been taken from site weekly meter readings. This is because until 2011, supplier invoices were not provided on a monthly basis. However, these readings are cross checked against the supplier invoices for reconciliation.

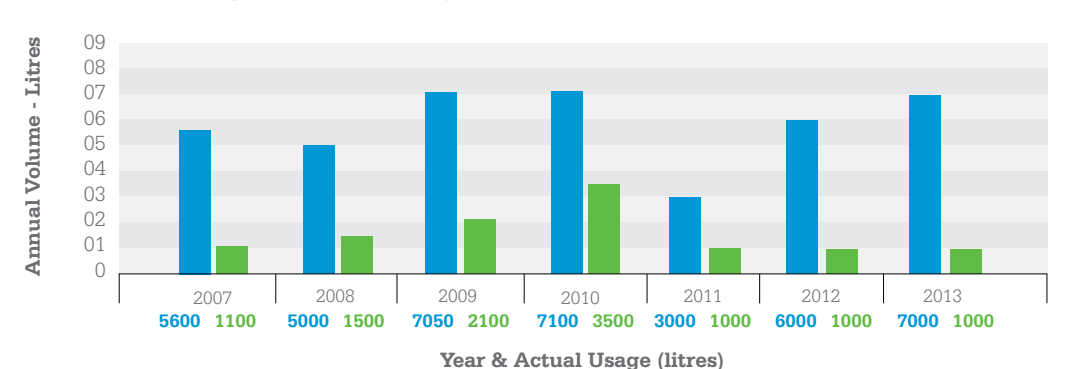
Annual Water Usage – 7 year Comparison



Water Use against Production – 7 year Comparison



Annual Cleaning Chemicals – 7 year Comparison



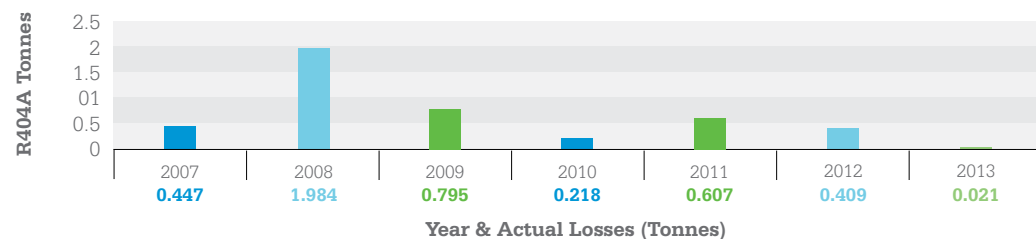
Air Emissions Key Performance Indicators

As shown in the graphs below there was a further decrease in air emissions related to refrigerant gas losses in 2013 when compared to 2012. These gases have a high global warming impact and this is why we monitor the emissions from leaks.

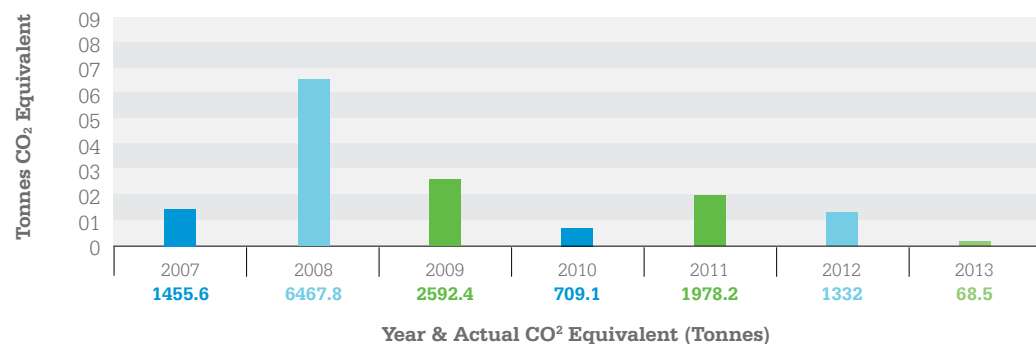
To further improve the refrigeration system and ensure it continues to be efficient an equipment upgrade was completed at the end of 2013.

At OSI Carbon and Refrigerant gases are the key reportable air emissions, other gases such as SOx and NOx are insignificant in our processes.

Total Annual Refrigerant Losses – 7 year Comparison



Total Annual Emission of Greenhouse Gases from Refrigerant R404A Losses – 7 year Comparison



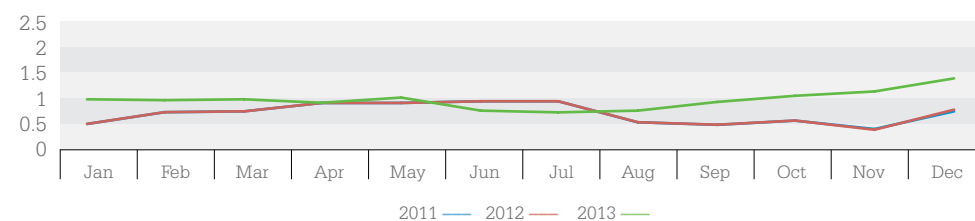
R404a CO₂ conversion factor: Total usage (tonnes) multiplied by 3260
Source: DEFRA 2013 Greenhouse Gas Emission Factors

Resource Efficiency Key Performance Indicators

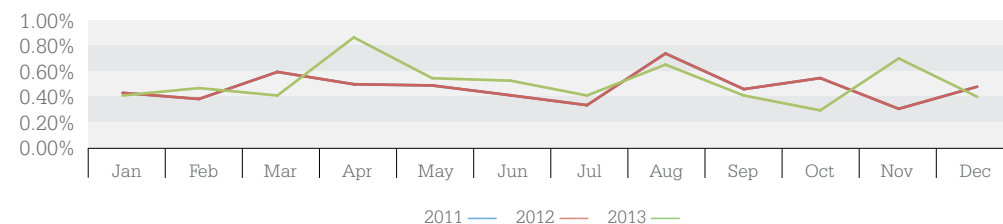
The graphs below show both shrink (unaccounted loss) and inedible (accounted loss). These figures represent the difference from the total meat delivered. As shown in the graphs we have a very high efficiency of incoming to processed meat.

The numbers shown in the axis are a % loss of total raw material used in production, identifying that very little is wasted or lost.

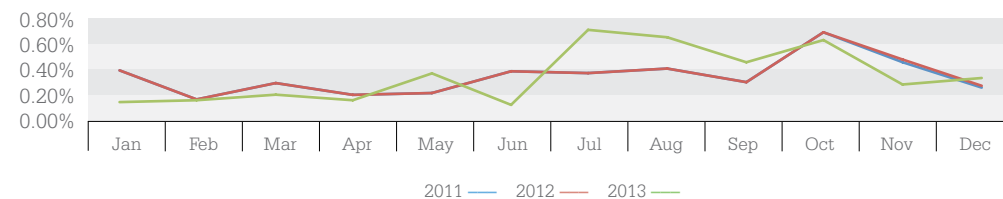
Shrink in % of kg Production BEEF & PORK (2011 – 2013)



Inedible in % of kg Production PORK (2011 – 2013)



Inedible in % of kg Production BEEF (2011 – 2013)



Environmental Management System



Interview with Kelly Grimwood, Environmental Manager Europe:

Q1. What made you decide to go for the British Safety Council Environmental Five Star?

"We have been part of the BSC Five Star Safety programme for a number of years and when they introduced an Environmental equivalent it was a perfect opportunity to further improve our environmental system, whilst demonstrating our ongoing commitment to maintaining our high standards."

Q2. What additional value did this provide beyond your ISO14001 and EMAS accreditation?

"Whilst all of our accreditations audit our environmental management system (including aspects), performance and legal compliance, the BSC programme looks at all areas of Environmental Sustainability. This included Social Responsibility, Supply Chain Management, Green Purchasing and Green Transport."

"The audit programme includes interviews with employees throughout the business, ensuring that our policies, procedures and objectives are understood throughout."

Q3. What have you changed since implementing this specification?

"One of the main areas was to improve the communication tools used with employees, by trying to engage with them more through campaigns, competitions and better visual aids. We also provided easier access to information by developing our existing company Intranet site. This now includes a range of key environmental information, including the environmental management system, a legislation library, performance reports, an employee suggestions forum and much more."

"To improve the integration of environment within the business, we conducted a training gap analysis to identify improvements. We have worked with an external training provider to design some bespoke environmental training courses for both general and operational awareness. This training will then enable our employees to have the relevant knowledge to take ownership of environmental topics."

Q4. How does this link to the Globe of Honour?

"Any site that achieves the five star rating is invited by BSC to enter for their annual Globe of Honour. This award represents a pinnacle of achievement in terms of environmental management. The application for this award is very detailed and focuses on environmental and sustainability management, it is judged using independent adjudicators."

"In 2012, OSI applied for this award and were delighted to be successful in our application. We were one of just a few companies to achieve this."



Kelly Grimwood & Gary Drane receiving the Globe of Honour

Supplier Environmental Management

OSI UK has continued to work extensively with our meat suppliers to ensure a good level of environmental management is maintained. Further to the introduction of the OSI Supplier Environmental Management Specification in 2007, we have continued to monitor all of our beef and pork suppliers against the requirements defined. This specification is based on the foundations of the ISO14001 standard and contains 9 key sections:

1. Environmental Policy
2. Environmental Responsibility
3. Compliance with Legislation
4. Improvement Programme
5. Environmental Management System
6. Company Business Objectives
7. Training & Awareness
8. Best Available Techniques
9. Environmental Risk Management

The sites are audited annually against this specification and an action plan is then implemented, for them to work towards achieving compliance. The results from the annual review are linked into our Supplier of the Year League Table, further encouraging each supplier to strive for improvement.

We have now begun broadening out the specification to capture both our packaging and spice suppliers.

Sustainability Award for Meat Suppliers

On an annual basis OSI UK holds a Supplier of the Year conference for all of its meat suppliers. This conference is a forum for providing a wide range of information in key topics of interest. In addition, it includes an awards ceremony to recognise our best performing suppliers.

In 2011, OSI UK introduced an Environmental Sustainability Award as part of this conference, to be included at each annual event. The Environmental Sustainability Award is then presented to the supplier who could clearly demonstrate their commitment to improving their environmental performance. A criterion was issued to all suppliers detailing the entry requirements, with submissions having to be based on initiatives / achievements made within the business during the current award year.

The winner of this award is then announced at the conference. For 2011 and 2012, the award has been won by Foyle Food Group. They had implemented a number of initiatives covering a broad range of focus areas including energy management, water mapping, waste management, renewable energy and sustainable transport.





Awareness at Work

World Environment Day Campaigns

On the 5th June the world celebrates World Environment Day every year. OSI Europe celebrated this day for the first time in 2012 and due to the success of the initiatives our plants undertook we wanted to turn this into an annual event for OSI.

OSI UK has participated in this campaign two years running and this has proven to be a fun and interesting way of raising awareness and encouraging employee involvement.

This year the 2013 theme for World Environment Day was **THINK.EAT.SAVE**. This is an anti-food waste and food campaign that encourages us to reduce our "foodprint". The aim is to raise awareness of the environmental impact of the food choices we make and empower us to make informed decisions on how to reduce food waste, save money and minimise the environmental impact of food production.

Many of the plants across OSI Europe held awareness campaigns on site including leaflets, site presentations, quizzes and information boards. At OSI UK we issued out information leaflets and held a competition to "Guess the Food Miles" based on items in a hamper. The person who guessed the closest then won the hamper. There was also some runner up prizes comprising of a shopping voucher and Fair Trade shopping bags. This campaign was thought up by our Environmental Committee Team and we tried to include some items in the hamper that were from the areas of the world where our employees came from.



OSI Environmental Committee



Michelle Taylor, Hamper Winner

Bike to Work Scheme

As part of OSI UK commitment to the Environment we saw in 2013 the introduction of the Government Initiative, 'Bike to Work Scheme'.

Within the Government's Green Transport Plan, there's a tax exemption which allows employers to provide cycles and safety equipment to employees as a tax-free benefit.

- + Salary sacrifice scheme
- + Employer saving typically 13.8%
- + transfers ownership to the employee upon payment of 'a fair market value'
- + Bike used for cycling to work

We had two election windows and 10 employees took part in the scheme. The scheme has benefits for both employees and employer:

- + Improve OSI's reward and recognition program
- + Make savings from Employer's NI contributions
- + Contribute to our Environmental & Green Transport Policy
- + Release valuable car parking space
- + Encourage a fitter, healthier lifestyle
- + Typically cost neutral
- + Minimum administration
- + Free of charge employee communication
- + Support on an on-going basis
- + Cooperative employees benefits free-phone helpdesk



Reduce, Reuse,

External Community Relations

School Environmental Art Competition

In October 2012, we offered the opportunity to Frederick Gough School to participate in an art competition to design an image for inclusion in our EMAS brochure. The purpose of this competition was to enable us (at OSI) to understand how the younger generation perceive the environment.

The competition was open to Years 7 to 10 (11 years to 15 years) and the heading for the competition was "This is your world, how can we protect it". We asked the children to think about the environmental topics they had learnt about or seen and translate this into a picture, describing how they think we can preserve and protect our planet, either now or for the future.

A total of 67 entries were received and the competition was judged by a panel of OSI employees along with a non OSI representative, Claire Huby from our canteen services.

Prizes were awarded and our finalists were Alice Fletcher in 1st place, Yuensuet Wong in 2nd and Brook Charlesworth in 3rd place. Due to the strength of the competition entries, we awarded runner up prizes to Jack McGrory, Danielle Boldry and Addison Potter.

A donation was also made directly to the school, the finalists will work with the school on how to spend this money on environmental improvements. We look forward to hearing about what they did.



OSI Art Competition - Winners



OSI Art Competition - Runners Up

Recycle

The Refinery 2013:

Where Transformation Takes Place

The Refinery is an external platform that enables Profiled People to leverage the wide skill base of the group to drive business and personal development. The group seek opinions and advice from a diverse business population who have a common desire to share best practice and learning.

OSI have been part of this group from the beginning (set up in January 2013) and have found it to be a valuable platform to work with other businesses in the area. The main benefits have been:

- + Sourcing advice / benchmarking around key issues that affects business performance.
- + Discussing practical / proven improvement techniques to resolve business problems, and where applicable create good practice and share learning.
- + Considering how environmental & health and Safety legislation impacts on business's within the area.

OSI believes this to be an important group and continues to be a participant.

Local School Challenge Day

Over the past few years the HR Manager and Site General Manager have attended Frederick Gough Secondary School to give assistance and support with their annual "Challenge Day", where we carry out mock interviews with year 9 students. The process commences with three job descriptions being issued to the students and each of them are required to apply for one of the roles. They complete a full application form and then a number of local businesses, including OSI, will have representatives who will interview the students. They will use the application form and job descriptions as the basis for real life interviewing questioning techniques. All the students are then given feedback and advice on how they performed throughout their "interviews" and how they can improve and develop their interviewing skills.

Frederick Gough Secondary school recognises the impact that the challenge day has on the students and annually request OSI to assist them in this programme.





Animal Welfare

One key aspect of our work involves placing strong emphasis on the welfare of the animals in our company's supply chain. Our internal standards exceed the statutory requirements and are constantly reviewed and developed in accordance with the most current European legislation. To ensure compliance with these standards, at least once a year OSI performs an audit verification based on the specific recommendations of Temple Grandin, the globally renowned animal welfare expert. Additionally each abattoir performs a separate monthly animal welfare audit, to monitor and review compliance within certain defined parameters. These results ascertain whether the abattoir is effective in delivering desirable animal welfare standards. All OSI suppliers adhere to the five freedoms which are set out in National assurance schemes.

Five freedoms are a well established set of propositions which provide a core framework encompassing animal's basic needs:

1. Freedom from hunger and thirst
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal behaviour
5. Freedom of fear and distress

Early in 2013 OSI facilitated the introduction of Freedom Food pork into the McDonald's breakfast sausage. Pigs reared to the Freedom Food standard are produced to the highest welfare standards in the UK, endorsed and monitored by the RSPCA. Because of the high volume requirement of British pork processed by OSI, the transition to Freedom Food pork took place over many months but since April 2013 all pork processed for McDonald's UK has been from Freedom Food accredited pigs.

McDonald's Agricultural Assurance Programme (MAAP)

OSI UK works closely with McDonald's in supporting the cattle and pig MAAP Standards.

The programme is built around six key areas:

- + Environment
- + Good Agricultural Practices
- + Animal Welfare
- + Animal Health
- + Transparency
- + Genetics

We have direct contact with the national farm assurance bodies such as Bord Bia in Ireland and the Red Tractor scheme in England. All the beef purchased by OSI UK is derived from farm assured animals. We meet regularly with the farm assurance bodies to complete a gap analysis against MAAP Standards and discuss ways of developing Standards to increase alignment with MAAP.

OSI UK has a seat on the Technical Advisory Committee of the Red Tractor Scheme.



Carbon Footprint

Since 2009, OSI has produced on an annual basis a Carbon Footprint for its scope 1, 2 and 3 emissions in accordance with the ISO14064 methodology. This data is prepared for each of our plants in Europe, including OSI UK.

This is conducted using a carbon footprint tool, which provides a comprehensive assessment of the site inputs and outputs. A report is then

generated calculating details of the sites carbon emissions. The results from these calculations are evaluated annually.

We have also worked extensively with an external specialist to develop a specific carbon footprint tool for slaughterhouses. This is currently being piloted with one of our UK meat suppliers.

Sustainability at OSI

Sustainability is a subject that has been close to our hearts for many years. We may not have always used the word but the very nature of our business means we have always needed to consider the future. This is not a new idea for us - and we have always worked hard to ensure we are a responsible company, one that cares for its people, its customers, its community, society at large.

Our sustainability plan is an integrated approach that targets three focus areas:

- 1 Sustainable supply chain
- 2 Social responsibility
- 3 Environment

We have chosen these three areas because they reflect the nature of our business and our activities. These are the places where the issue of sustainability is most relevant to our operations.

To demonstrate this commitment, we have drawn together all the work we have been doing right across our European operations, into a unified sustainability report. If you are interested in receiving a copy, please contact sustainability@osi-foodsolutions.de

Sustainable Agriculture Initiative (SAI)

OSI Food Solutions is a member of the Sustainable Agriculture Initiative (SAI) Platform. SAI Platform is the global initiative helping food and drink companies to achieve sustainable production and sourcing of agricultural raw materials. OSI Food Solutions is one of over 50 global members who share, at a precompetitive level, knowledge and initiatives to support the implementation of sustainable agriculture practices. Members are organized in six Working Groups: Arable and Vegetable Crops, Beef, Coffee, Dairy, Fruit and Water with opportunities for expansion to other areas. Progress includes the development of Principles and Practices for sustainable agriculture in these areas and an industry aligned Farmer Self Assessment to help farmers assess and improve their sustainable agriculture practices. For more information about SAI Platform visit www.saiplatform.org.



Occupational Health & Safety of Employees

OSI recently carried out a benchmark exercise of its health, safety, welfare and environmental performance, policy and compliance. The review was requested and actioned as best practice by our European Management team and completed via an external consultant. The review was across the estate of 10 manufacturing sites in 8 countries. The benchmark for this review was the UK site due to its level of accreditation, compliance and standards.

In addition, the site is also a registered and active member of the BMPA (British Meat Processors Association). The BMPA has developed a system for reporting and calculating accident statistics for the meat processing and meat manufacturing sectors, graphing facilities allow members to view aggregate data from all of the businesses currently submitting data to this system. Contributors to the system can access it directly to view the data with additional options and to compare their benchmarks against those of the BMPA as a whole.



OSI Team receiving our BSC International Safety Award

Our only customer – McDonalds care as much about the people who supply them as they do their customers. This commitment is evidenced via the supplier social workplace accountability programme (SWA) which is a unified set of global standards that ensures all suppliers employees are treated fairly and provided with a safe and healthy work environment.

The programme is the result of a comprehensive process that included benchmarking with a number of organisations that lead in this space, consultation with the foremost experts and ongoing dialogue and engagement with suppliers and stakeholders in every area of the world, this translates into a minimum required standard being achieved and benchmarked across the entire supply chain.



Ian Hurley (L) receiving our Sword of Honour

Social Responsibility

OSI continually monitor their ethical behaviour as a corporate business which understands and operates to the McDonald's Code of Conduct for Suppliers. We continually practice and introduce social compliant behaviours to remain an employer of choice.

Ethical practises within OSI form a pre-requisite within our business as we acknowledge that our

people are our most valuable asset. In 2011 a project was launched to design a set of core values against our Mission Statement and has been implemented throughout all our European plants including UK.

In November 2013 we undertook a further assessment via the Investors in People Standard and achieved a Silver status.

Appendices

Appendix A Environmental Policy

OSI Europe manufactures fresh and frozen food products from the processing of beef, pork, chicken and vegetable raw materials. The Company is aware of the effect of its operations on the environment and recognises that environmental management is an integral part of the business.

These operations are carried out using sustainable management systems and the Company is committed to continually improving its environmental performance.

To help fulfil this goal, the Company has an environmental policy that consists of several environmental management aims. These are as follows:

- 1. Comply with all applicable legislative, regulatory and customer requirements.** We regularly identify all applicable environmental legislative, regulatory and customer legal requirements, ensuring compliance by our sites.
- 2. Minimise the risk of environmental pollution through the use of environmental risk management.** Possible environmental risks resulting from the company products or processes are continually monitored, documented and evaluated.
- 3. Conservation of Resources.** Our goal is to optimise the use of materials used within our organisation through continuous review to try and identify suitable environmentally friendly alternatives. Through this process of continuous improvement, we strive to minimise the risk of environmental pollution, such as waste, effluents and emissions.
- 4. Improve Energy Efficiency.** Wherever possible, use the best possible technology that will enable is to minimise any harmful effects on the environment and to improve our energy efficiency.

5. Continual Improvement of our Environmental Management System. Regularly assessing and reviewing the performance of the environmental management system.

6. Training and Environmental Awareness. We promote understanding and acceptance of the environmental relationships in our company through targeted training and information for our employees and visitors.

7. Work in partnership with our employees, customers and suppliers to support our aims. Work with our customers and suppliers to optimise our products and manufacturing processes in line with our environmental commitments. OSI strongly encourages its service providers and suppliers to share our values and set high standards for their own Environmental performance.

8. Environmental Communication. We communicate the environmental policy and any relevant environmental information to employees, customers, suppliers and any member of the public.



Phil Marsden
Managing Director – OSI Europe

(Dec 2013)

Appendix B Energy Policy

The Company is aware of the effect of energy consumption on the environment and recognises that energy management is an integral part of the business.

Operational activities are performed using sustainable management systems and the Company is committed to continually reducing the volume of carbon dioxide emissions arising from the consumption of energy.

To help fulfil this goal, the Company have an energy policy in place consisting of several energy management aims. These aims are as follows:

- Increase energy efficiency by improvements in operational activities and investment in energy efficient technologies.
- Meet or exceed regulatory, company and customer targets through the development of energy management performance standards.
- Ensure that all manufacturing facilities and equipment are maintained to a high standard.
- Work in partnership with our employees, customer and suppliers to support our aims.
- Comply with all applicable legislative, regulatory and customer requirements.

The aims of the Company energy policy are to be achieved by:

- Ensuring that energy efficiency is given due regard in the selection and configuration of operational facilities and equipment.
- Communicating the energy policy and any relevant energy management performance information to employees, customer, suppliers and any member of the public.
- Ensuring that the energy policy is implemented in full by making appropriate resources, training and support available.
- Regularly assessing and reviewing the performance of energy management systems.



Phil Marsden
Managing Director – OSI Europe

(Dec 2013)

Appendix C

Environmental Aspects

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|---------------|--|----------------------|---|
| 1 | Ammonia Plant | Refrigeration of raw materials and burger products | Air Emissions | <p>Direct: Major ammonia leak - ammonia is an extremely toxic gas. When it is released into the air it can cause unconsciousness and lead to death.</p> <p>Indirect: Ammonia can also react with air to form nitrogen oxides. These contribute to global warming and photochemical smog's.</p> <p>Regular leak testing & maintenance is carried out on the ammonia plant using competent contractors.</p> |
| 2 | Engineering | Maintenance of equipment, machinery & operational facilities | Production of waste | <p>Direct: Disposal of hazardous waste chemicals and oils.</p> <p>Indirect: Hazardous waste sent to landfill has the potential risk of groundwater contamination resulting from hazardous materials seeping into the ground. Many hazardous wastes can be recycled into new products. Such treatments reduce the level of threat of harmful chemicals, while also recycling the safe product.</p> <p>Any site hazardous waste is recycled / treated wherever possible in accordance with the waste hierarchy, using licensed contractors.</p> |
| 3 | Engineering | Maintenance of equipment, machinery & operational facilities | Water Discharges | <p>Direct: Potential oil/chemical spill if incorrectly stored or failure of bunds, resulting in a possible risk to land or water contamination.</p> <p>Indirect: Risk of water pollution to water bodies (e.g. lakes, rivers, oceans, aquifers and groundwater). This would occur as a result of pollutants being discharged without adequate treatment to remove harmful compounds. The effect is damaging not only to individual species and populations, but also to ecosystems.</p> <p>All chemicals and oils are stored in locked, bunded areas which are accessible by authorised personnel only.</p> |
| 4 | Engineering | Maintenance of equipment, machinery & operational facilities | Land Contamination | <p>Direct: In the event of a chemical spillage land contamination could be caused if the oil/ chemicals leach and diffuse into the soil. This can build up in the soil until the concentration becomes toxic to wildlife.</p> <p>Indirect: Chemicals also leach to nearby watercourses and diffuse into groundwater areas. The effect is damaging not only to individual species and populations, but also to ecosystems.</p> <p>All chemicals and oils are stored in locked, bunded areas which are accessible by authorised personnel only.</p> |
| 5 | Engineering | Maintenance of equipment, machinery & operational facilities | Air Emissions | <p>Direct: Various different chemicals and solvents are used in the engineering area. Some of which can release fumes / particulates that can be irritating to the eyes and could effect breathing. Some also have mutagenic, carcinogenic and teratogenic effects.</p> <p>Indirect: The key environmental issue in relation to solvents and degreasants is the potential to release VOCs. Organic solvents are also implicated in high-level ozone depletion and global warming.</p> |
| 6 | Laboratory | Chemical & microbiological testing of food samples | Production of waste | <p>Direct: Various different chemicals and solvents are used in the engineering area. Some of which can release fumes / particulates that can be irritating to the eyes and could effect breathing. Some also have mutagenic, carcinogenic and teratogenic effects.</p> <p>Indirect: The key environmental issue in relation to solvents and degreasants is the potential to release VOCs. Organic solvents are also implicated in high-level ozone depletion and global warming.</p> |
| 7 | Laboratory | Chemical & microbiological testing of food samples | Air Emissions | <p>Direct: Various different chemicals and solvents are used in the engineering area. Some of which can release fumes / particulates that can be irritating to the eyes and could effect breathing. Some also have mutagenic, carcinogenic and teratogenic effects.</p> <p>Indirect: The key environmental issue in relation to solvents and degreasants is the potential to release VOCs. Organic solvents are also implicated in high-level ozone depletion and global warming.</p> |

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|----------------|--|--------------------------|--|
| 8 | Manufac-turing | Inedible meat waste from the manufacture of beef & pork burger products | Production of waste | <p>Direct: Production of inedible meat waste, requiring disposal.</p> <p>Indirect: SRM category 1 and 2 material is pressure cooked to remove any pathogens. Oil is extracted and reused by industry, remaining waste is disposed of to landfill. Landfill sites are becoming scarce A large number of adverse impacts may occur from landfill operations. Damage occurrence can include infrastructure; pollution of the local environment (such as contamination of groundwater) and residual soil contamination during landfill usage. As well as after landfill closure; off gassing of methane generated by decaying organic wastes; harboring of disease vectors such as rats and flies, injuries to wildlife; and simple nuisance problems.</p> |
| 9 | Manufac-turing | Effluent interceptor waste from the manufacture of beef & pork burger products | Production of waste | <p>Direct: Discharge of fats/greases into the sewer. Potential issues relating to build up of fat in the drainage system causing blockages, increase in discharge consent limits resulting in breaches. If discharges exceed limits may impact on the sewage treatment plant. Possible pollution issues if overflow into controlled waters.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> <p>Fat/grease sludge from the interceptors is taken on a regular basis by a tanker. The interceptors and drains are cleaned regularly to ensure no blockages occur. The waste is taken by a licensed contractor.</p> |
| 10 | Manufac-turing | Ammonia & R404a Refrigerant decanting | Production of waste | <p>Direct: The charging / decanting of refrigerants for the site refrigeration system. Potential for leakage of refrigerant gases into the atmosphere.</p> <p>Indirect: impact due to the energy consumption of refrigeration and air conditioning systems leading to CO₂ emissions. This can lead to ozone depletion and global warming via the greenhouse effect.</p> <p>Risk assessments have been completed in relation to this activity. Process is conducted by a competent contractor. Any waste refrigerant is disposed of through a licensed waste contractor and documented on a waste consignment note.</p> |
| 11 | Manufac-turing | Usage of liquid nitrogen to freeze beef & pork burger products | Use of natural resources | <p>Direct: Use of Liquid nitrogen. The atmosphere is abundant in nitrogen (70% of air is nitrogen) therefore the volume of nitrogen extracted will have a minimal effect on atmospheric composition. Waste gas is released directly back into the atmosphere.</p> <p>Indirect: The technology used to extract liquid nitrogen is very energy intensive and will have associated environmental impacts to this energy use. This includes CO₂ from power stations and depletion of natural fuel reserves (see Energy Usage Aspect 27).</p> |
| 12 | Manufac-turing | Usage of liquid nitrogen to freeze beef & pork burger products | Air Emissions | <p>Direct: Liquid nitrogen reacts with oxygen in air. This causes there to be less oxygen in the air to breathe. If areas are not properly ventilated, this depletion of oxygen can lead to unconsciousness.</p> <p>Indirect: The technology used to extract liquid nitrogen is very energy intensive and will have associated environmental impacts to this energy use. This includes CO₂ from power stations and depletion of natural fuel reserves (see Energy Usage).</p> |
| 13 | Manufac-turing | Cleaning of production facilities & machinery | Water Usage | <p>Direct: The cleaning process on site results in a high volume of water usage, impacting on the depletion of fresh water resources.</p> <p>Indirect: Fresh water is a renewable resource, yet the the supply of clean, fresh water is steadily decreasing. Water demand already exceeds supply and as population continues to rise, so too does the water demand.</p> |

Appendix C

Environmental Aspects

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|---------------|--|--------------------------|--|
| 14 | Manufacturing | Cleaning of production facilities & machinery | Land Contamination | <p>Direct: Cleaning chemicals are used as part of the site sanitisation process. In the event of a chemical spillage land contamination could be caused if the chemicals leach and diffuse into the soil. These chemicals can build up in the soil until the concentration becomes toxic to wildlife.</p> <p>Indirect: Chemicals also leach to nearby watercourses and diffuse into groundwater areas. The effect is damaging not only to individual species and populations, but also to ecosystems.</p> <p>These chemicals are stored in bunded tanks located in the yard area, which are regularly inspected.</p> |
| 15 | Manufacturing | Mechanical freezing | Use of natural resources | <p>Direct: Mechanical freezing is very electricity intensive. Sourcing energy from suppliers, resulting in a depletion of natural resources.</p> <p>Indirect: It is the source of the energy (e.g. fossil fuels and nuclear providing a high proportion of electricity to the national grid) that is the main concern relating to energy usage, opposed to the actual use. Such fuels are major contributors to resource depletion, global climate change, acid rain, smog and radioactive contamination.</p> <p>The site is increasing electricity usage as part of this mechanical freezing process, however it will result in a nitrogen reduction of approx. 50%. When this nitrogen usage is calculated into kWh this reduction is significant and outweighs the electricity increase attributed to the mechanical process.</p> |
| 16 | Office | Office Administration | Production of waste | <p>Direct: Disposal of any waste electrical equipment (WEEE).</p> <p>Indirect: Space at landfill sites is becoming scarce. It is not appropriate to dispose of WEEE waste in landfill sites because of the harmful substances that this waste is known to contain. If items of WEEE contain a high percentage of plastic, they are very suitable for the incineration process. However, much of this waste also contains heavy metals and halogenated substances, which, if not managed properly, result in concentration of heavy metals in the slag and potential emission of mercury, dioxins and furans. These consequences would have adverse effects on the environment.</p> <p>Disposal of any electrical items are disposed of in accordance with WEEE regulations and using a licensed contractor.</p> |
| 17 | Office | Office Administration | Air Emissions | <p>Direct: The use of VDU's, photocopiers and various other items of office equipment, which have the potential to release low levels of ozone. In unventilated areas ozone can irritate eyes, cause headaches and respiratory problems.</p> <p>Indirect: Office equipment has been found to be a source of ozone, particles, volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). There are possible climate change consequences of VOC emissions to the atmosphere.</p> |
| 18 | Packoff | Packing / filling of raw materials and burger products | Production of waste | <p>Direct: Disposal of contaminated blood / meat waste packaging.</p> <p>Indirect: The impacts of landfill include increased need for land, land contamination, release of methane contributing to global warming, leaching of chemicals into groundwater and emissions from waste transportation.</p> <p>Site operates zero landfill policy. Any packaging that has been contaminated with blood / meat is disposed of as general waste and sent for processing by an RDF facility. Raw materials are packaged in TNT bins and dolavs, which are cleaned and reused.</p> |
| 19 | Packoff | Packing / filling of raw materials and burger products | Use of natural resources | <p>Direct: Use of natural resources for the production of paper / cardboard products used for finished product packaging.</p> <p>Indirect: Paper / Cardboard are timber products and there is concern about unmanaged wood deforestation.</p> <p>Influence is placed upon suppliers to reduce packaging, through specifications. FSC approved cardboard used for finished product cartons.</p> |

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|------|--|--|--|
| 20 | Dock | Lead Acid Batteries for Fork Lift Trucks | Land Contamination / Production of Waste | <p>Direct: Use of Lead-acid batteries within fork lift trucks. These batteries contain sulphuric acid and large amounts of lead. The acid is extremely corrosive. Lead is a highly toxic metal that produces a range of adverse health effects. Potential acid spills resulting in surface water and soil contamination; groundwater contamination. When intact lead-acid batteries are recycled, but the batteries are still subject to limited hazardous waste regulations.</p> <p>Indirect: Lead-acid batteries can create disposal problems. Landfilling presents the risk of groundwater contamination. With incineration, the risk is toxic air emissions. Recycling is the only safe solution. Recycling these batteries not only conserves natural resources and energy, it reduces risks to human health and the environment.</p> <p>The batteries are contained within double skinned sealed units. These are stored within the factory. An acid spill kit is located directly next to the storage area.</p> |
| 21 | Site | General waste resulting from site activities | Production of waste | <p>Direct: Generation of general waste comprising of production, canteen & office waste. Landfill should be the last option for waste.</p> <p>Indirect: The impacts of landfill include increased need for land, land contamination, release of methane contributing to global warming, leaching of chemicals into groundwater and emissions from waste transportation.</p> <p>Zero landfill policy on site.</p> |
| 22 | Site | Effluent interceptor waste from the manufacture of beef & pork burger products | Water Discharges | <p>Direct: Major effluent spills can cause pollution to aquatic areas for a long period of time. If the spillage is from a food manufacturer, the high amount of organic matter and bacteria can use up the oxygen in the water, killing aquatic wildlife.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> |
| 23 | Site | General waste, inedible meat waste, effluent interceptor waste from the manufacture of beef & pork burger products | Odour | <p>Direct: Odour arising from the general waste compactor & fat/grease interceptors could potentially impact on the local community.</p> <p>General waste is collected on a weekly basis. Fat/grease sludge from the interceptors is taken on a regular basis by a tanker. The interceptors and drains are cleaned regularly to ensure no blockages occur. All inedible meat is stored in a separate chiller (locked at all times) and collected as a minimum twice a week.</p> |
| 24 | Site | Refrigeration of raw materials and burger products | Air Emissions | <p>Direct: Use of harmful gases used within the refrigeration / air conditioning system.</p> <p>Indirect: Gases such as chlorofluorocarbons and hydrochlorofluorocarbons used in refrigeration / air conditioning systems are gradually destroying the ozone layer. This ozone layer is vital in protecting the earth from harmful UV radiation from the sun.</p> <p>Regular leak testing & maintenance is carried out on refrigeration / air conditioning systems using competent contractors.</p> |
| 25 | Site | Usage of liquid nitrogen to freeze beef & pork burger products | Visual Impact | <p>Direct: When liquid nitrogen waste gas is released into the atmosphere it forms a white smog whilst it is warming up and dissipating in air. This smog affects visibility in areas immediately surrounding the site. This problem only occurs for a short period of time because nitrogen dissipates into the atmosphere quickly. However, could lead to potential complaints from the residents.</p> |
| 26 | Site | Usage of liquid nitrogen to freeze beef & pork burger products | Air Emissions | <p>Direct: Major spillage of liquid nitrogen will result in a white smog affecting the surrounding area of the plant for a short period of time. The environmental effects will occur immediately after the spillage has occurred. Liquid nitrogen will react with oxygen in air, causing there to be less oxygen to breathe and this could lead to unconsciousness. Liquid nitrogen will also cause serious burns to anyone close to the area of the spill. Liquid nitrogen dissipates into the atmosphere quickly so the effects of a major spill will not last for a long period of time.</p> |

Appendix C

Environmental Aspects

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|------|--|--|---|
| 27 | Site | Cleaning of production facilities & machinery | Water Discharges | <p>Direct: Cleaning chemicals are used as part of the site sanitisation process. Potential chemical spills, which could diffuse the soil to groundwater supplies.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> <p>These chemicals are stored in bunded tanks located in the yard area.</p> |
| 28 | Site | Energy Usage | Use of natural resources | <p>Direct: Sourcing energy from suppliers, resulting in a depletion of natural resources.</p> <p>Indirect: It is the source of the energy (e.g. fossil fuels and nuclear providing a high proportion of electricity to the national grid) that is the main concern relating to energy usage, opposed to the actual use. Such fuels are major contributors to resource depletion, global climate change, acid rain, smog and radioactive contamination.</p> |
| 29 | Site | Delivery & despatch of raw materials & burger products | Air Emissions | <p>Direct: Use of transportation for despatch of raw materials and finished product. Resulting in fuel consumption and transport emissions.</p> <p>Indirect: Emissions from transportation contribute to global climate change and air quality reduction.</p> |
| 30 | Site | Delivery & despatch of raw materials & burger products | Land Contamination / Water Discharges | <p>Direct: Potential for hydraulic oil leaks which can result in significant contamination to land and water. Although the quantity of the oil leak may be small, the clean-up process is time-consuming and the materials used would need to be disposed as hazardous waste.</p> <p>Indirect: Oil could leach to nearby watercourses and diffuse into groundwater areas. Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> |
| 31 | Site | Delivery & despatch of raw materials & burger products | Noise | <p>Direct: The daily deliveries / despatches could cause noise which may potentially impact on the local community.</p> |
| 32 | Site | Manufacture of beef & pork products | Noise | <p>Direct: Machinery used in production areas provides high levels of noise. This can have damaging effects to human health such as temporary / permanent damage to hearing, fatigue, increased heart rate & blood pressure. The daily operations on site could also cause noise which may impact on the local community.</p> |
| 33 | Site | Vandalism | Land, Water & Ground-water Contamination | <p>Direct: Unauthorised disposal of waste on site land, in waste containers or to drainage systems. Damage to chemical / oil containers and spills. All could result in land, water and / or groundwater contamination.</p> <p>Indirect: Pollution effects would be damaging not only to individual species and populations, but also to ecosystems.</p> <p>Controlled by use of 24 hour security surveillance, security systems and restricted access to site.</p> |
| 34 | Site | Failure of main services | Production of Waste | <p>Loss of Electricity</p> <p>Direct: Loss of production, potential loss of the refrigeration/freezer system. If alternative cold storage could not be sourced, this would result in the loss of raw materials and finished product. This would mean vast amounts of inedible meat waste.</p> <p>Indirect: Indirect: SRM category 1 and 2 material is pressure cooked to remove any pathogens. Oil is extracted and reused by industry, remaining waste is disposed of to landfill. Landfill sites are becoming scarce. A large number of adverse impacts may occur from landfill operations. Damage occurrence can include infrastructure; pollution of the local environment (such as contamination of groundwater) and residual soil contamination during landfill usage. As well as after landfill closure; off gassing of methane generated by decaying organic wastes; harboring of disease vectors such as rats and flies, injuries to wildlife; and simple nuisance problems.</p> |

| Unique ID | Area | Activity / Product / Service | Aspect ('potential') | Environmental Impact (both positive & negative) |
|-----------|-----------------------|--|--|--|
| 35 | Site | Failure of main services | Water Discharges / Production of Waste | <p>Loss of mains water.</p> <p>Direct: Failure of water would mean equipment could not be cleaned / sterilised. If during cleaning process, this could mean concentrated cleaning chemicals could enter the drainage system. Potential increase to discharge consent limits that could affect the water treatment plant. This could result in unauthorised discharges. Possible pollution issues if overflow into controlled waters.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> |
| 36 | Site | Failure of main services | Water Discharges / Production of Waste | <p>Direct: Drainage system shut off by water company. Blocked drains could result in a backflood into the production area. Resulting in the fouling of premises and a volume of waste that would need to be disposed of. Also prevents the discharge of any trade and domestic waste to sewer. Possible pollution issues if overflow into controlled waters.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> |
| 37 | Site | Previous land use | Land contamination | <p>Direct: Use of land for the installation of the site. The installation and associated structures were built in 1988. Prior to development, the area was used as agricultural land.</p> <p>Indirect: Potential land contamination issues dependant on the previous land use.</p> <p>A site baseline survey was conducted as part of the PPC permit application. The site was deemed to be in a good state of repair and the vegetation on site showed no visible signs of 'stress' that could have been caused by land contaminants."</p> |
| 38 | Site | Night lighting of site | Light Nuisance | <p>Direct: Use of electricity for the low level security lighting. This is in place in all key areas of the site. Potential impact on residential areas if lighting becomes a nuisance.</p> <p>All residential areas are surrounded by trees and banking, therefore the impact is minimal.</p> |
| 39 | Site | Housekeeping of external areas | Visual Nuisance | <p>Direct: Visual nuisance of any external storage of waste skips & containers.</p> <p>All site waste is stored within sealed skips / containers. Any returnable product packaging is left within the warehouse and is never kept in the outside areas. All employees are responsible for ensuring any waste is correctly disposed of. In addition, a gardener is on site daily to keep the grounds tidy and presentable.</p> |
| 40 | Water Softening Plant | Removal of calcium & magnesium 'hardness' from water | Sewer Discharges | <p>Direct: The waste brine from the water softening plant is discharged to the trade effluent sewer. If this was discharged at levels in exceedence of the consent limit. Potential increase to discharge consent limits that could affect the water treatment plant. This could result in unauthorised discharges. Possible pollution issues if sewage works overflow discharges into controlled waters.</p> <p>Indirect: Contaminated water can affect lakes, reservoirs and rivers. Surface water run-off of oils, chemicals, detergents and organic matter are washed off the surface of land into lakes and rivers. This can cause the water to become toxic and the dissolved oxygen in the water to reduce. Both of these can kill aquatic wildlife.</p> |

Appendix D

Environmental Legislative Requirements

OSI Food Solutions has a Register of Environmental Regulations in place, which captures all legislation that the company must comply with. This register also includes details of other requirements the Company must meet, such as customer specifications and voluntary agreements. A six monthly legislation review is carried out to capture any new / amended legislation. In addition, a full annual review is conducted against the legal register and it's requirements to ensure the site continues to be compliant.

The site has well established working relationships with the regulators such as the Environment Agency, Anglian Water, Severn Trent and North Lincolnshire Council.

The table below provides details of our specific monitoring requirements, results and level of compliance.

| Legislation Requirement | Monitoring Requirements / Limits | Monitoring Results | Compliance |
|---|--|---|--|
| Pollution Prevention & Control Permit - Permit No. BX3848IA | No emission parameters have been set Annual Reporting required in the following areas: "Energy: Electricity, Gas & Liquid Nitrogen Water: Main Supply Other Indicators: Energy, Potable Water Use, Waste, Hazardous Waste, Refrigerants & COD/SS Load" | N/A No breaches | N/A Fully compliant |
| "Trade Effluent Discharge Consents - Consent No. 006485V (Beef) Consent No. 006486V (Pork)" | OSI discharges water that has been used for the cleaning processes. These go through interceptors that are then discharged to the sewage system. Regular monitoring conducted throughout the year by Severn Trent to check COD (Chemical Oxygen Demand), Suspended Solids, Non Volatile Matter & pH" Parameters are as follows: "70m3 (from Beef Hall) of effluent can be discharged into the public sewer in a 24 hour period at a rate of no more than 7 litres per second 18m3 (from Pork Hall) of effluent can be discharged into the public sewer in a 24 hour period at a rate of no more than 7 litres per second" "The following concentration limits must never be exceeded: Consent No. 006485V (Beef)" Suspended Solids - 1000mg/litre Chemical Oxygen Demand - 3000mg/litre Non Volatile Matter - 150mg/litre "pH of the effluent should remain between pH 6.0 and 10.0. Consent No. 006486V (Pork) Suspended Solids - 1000mg/litre Chemical Oxygen Demand - 2000mg/litre Non Volatile Matter - 150mg/litre pH of the effluent should remain between pH 6.0 and 10.0." | Please see table shown for the Effluent Analysis Results for Year's 2007-2013. 2013 Analytical Results: For Consent No. 006485V (Beef) all analytical results were compliant. For Consent No. 006486V (Pork) all analytical results were compliant excluding an unusual Non Volatile Matter result for October 2013. | Discharge Consent flow rates were revised by Severn Trent in Sept-11 for both consents. 2013 Analytical Results: For Consent No. 006485V (Beef) all analytical results were compliant. For Consent No. 006486V (Pork) all analytical results were compliant excluding an unusual Non Volatile Matter result for October 2013. |
| Climate Change Levy Agreement - Agreement No. FDF/00479/732 | The requirements of the CCLA include improving energy efficiency by 5% by 2020. This must be achieved by meeting the following targets: Targets are as follows: Milestone Year TP1 (2013/14): 1.23% - Primary Energy Target 1670.316 kWh/tonne Milestone Year TP2 (2015/16): 2.50% - Primary Energy Target 1648.819 kWh/tonne Milestone Year TP3 (2017/18): 3.77% - Primary Energy Target 1627.327 kWh/tonne Milestone Year TP4 (2019/20): 5.04% - Primary Energy Target 1605.836 kWh/tonne | First target reporting period January to April 2015 | Fully compliant. OSI signed up to a Climate Change Levy Agreement (CCLA) as per the new CCLA Scheme launched in March 13. This scheme is managed by the Environment Agency. |
| Hazardous Waste Regulations - Registration No. NED069 | Annual registration as a producer of >500kg of hazardous waste. | N/A | Fully compliant |
| Valpak Packaging Compliance Scheme - Membership No. RM01074 | Annual packaging submission to demonstrate compliance to our recycling and recovery obligations. The packaging targets increase year on year. Recycling Performance as per Valpak Compliance Certificates: Yr 2007 - Recycling of 318 tonnes of material Yr 2008 - Recycling of 376 tonnes of material Yr 2009 - Recycling of 375 tonnes of material Yr 2010 - Recycling of 391 tonnes of material Yr 2011 - Recycling of 404 tonnes of material Yr 2012 - Recycling of 403 tonnes of material | Quarterly obligations achieved and OSI contribute to the corporate packaging returns each year. | Fully compliant |
| CRC Energy Efficiency Scheme Order - Registration No. CRC5576650 | Site is registered for exemption from these regulations. | N/A | N/A |

Appendix E

Severn Trent Effluent Analysis Results

| Rear Interceptor (Beef) * | Limit | Feb 07 | Apr 07 | Jul 07 | Aug 07 | Oct 07 |
|---------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 1290 | 2320 | 4860 | 1740 | 1690 |
| SS (mg/l) | 2000 | 368 | 778 | 1320 | 258 | 272 |
| NVM (mg/l) | 150 | 47 | | 656 | 5 | 14 |

* There was no pork facility until October-07, therefore no front interceptor in use

* Fail - but no further action was taken by Severn Trent as result in August-07 was well within limits

| Rear Interceptor (Beef) | Limit | Feb 08 | Apr 08 | Jul 08 | Aug 08 | Sep 08 | Oct 08 | Dec 08 |
|-------------------------|-------|--------|--------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 1360 | 2030 | 2420 | 1720 | 846 | 1090 | 2110 |
| SS (mg/l) | 2000 | 348 | 344 | 990 | 556 | 234 | 262 | 238 |
| NVM (mg/l) | 150 | 60 | 22 | 44 | 70 | | | |

| Front Interceptor (Pork) | Limit | Feb 08 | Apr 08 | Jul 08 | Aug 08 | Sep 08 |
|--------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 760 | 2010 | 1550 | 936 | 523 |
| SS (mg/l) | 2000 | 220 | 646 | 464 | 414 | 162 |
| NVM (mg/l) | 150 | 43 | 121 | 44 | 11 | |

| Rear Interceptor (Beef) | Limit | Feb 09 | May 09 | Jul 09 | Aug 09 | Nov 09 |
|-------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 835 | 2460 | 996 | 909 | 1210 |
| SS (mg/l) | 2000 | 172 | 408 | 516 | 150 | 396 |
| NVM (mg/l) | 150 | | 13 | 16 | | |
| pH | 10 | | | | | 7.9 |

| Front Interceptor (Pork) | Limit | Jan 09 | Feb 09 | May 09 | Jul 09 | Sep 09 |
|--------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 578 | 623 | 1070 | 1030 | 1020 |
| SS (mg/l) | 2000 | 132 | 132 | 380 | 428 | 332 |
| NVM (mg/l) | 150 | | | 17 | 174 | 31 |
| pH | 10 | | | | 6.8 | |

| Rear Interceptor (Beef) | Limit | Feb 10 | Mar 10 | May 10 | Jul 10 | Nov 10 |
|-------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 1160 | 1230 | 1600 | 1370 | 1574 |
| SS (mg/l) | 2000 | 125 | 612 | | 264 | 112 |
| NVM (mg/l) | 150 | 32 | 308 | | | |
| pH | 10 | 7.6 | 7.7 | 7.8 | 7 | 7.4 |

* Fail - but no further action was taken by Severn Trent as result in Jan-11 was well within limits (15 mg/l)

| Front Interceptor (Pork) | Limit | Feb 10 | Mar 10 | May 10 | Jul 10 | Nov 10 |
|--------------------------|-------|--------|--------|--------|--------|--------|
| COD (mg/l) | 3000 | 1190 | 905 | 780 | 498 | 688 |
| SS (mg/l) | 2000 | 234 | 244 | | 180 | 116 |
| NVM (mg/l) | 150 | | | | | |
| pH | 10 | 7.5 | 7.8 | 7.9 | 7 | 7.1 |

| Rear Interceptor (Beef) | Limit | Jan 11 | Oct 11 |
|-------------------------|--------|--------|---------|
| COD (mg/l) | 3000 | 914 | 1250 |
| SS (mg/l) | 1000** | 124 | 476 |
| NVM (mg/l) | 150 | 15 | 31 |
| pH | 6-10 | 7.5 | No Test |

| Front Interceptor (Pork) | Limit | Aug 11 | Sep 11 | Oct 11 |
|--------------------------|--------|--------|--------|---------|
| COD (mg/l) | 2000** | 325 | 452 | 331 |
| SS (mg/l) | 1000** | 138 | 182 | 98 |
| NVM (mg/l) | 150 | 8 | 18 | 22 |
| pH | 6-10 | 6 | 7 | No Test |

| Rear Interceptor (Beef) | Limit | Jan 12 | Feb 12 | Jun 12 | Jul 12 | Aug 12 | Oct 12 |
|-------------------------|--------|---------|--------|--------|--------|--------|---------|
| COD (mg/l) | 3000 | 856 | 1260 | 864 | 942 | 1450 | 312 |
| SS (mg/l) | 1000** | 320 | 422 | 418 | 310 | 276 | 294 |
| NVM (mg/l) | 150 | 35 | 66 | 79 | 21 | 25 | 26 |
| pH | 6-10 | No test | 8 | 7 | 7 | 6 | No test |

| Front Interceptor (Pork) | Limit | Jan 12 | Feb 12 | Jun 12 |
|--------------------------|--------|--------|--------|--------|
| COD (mg/l) | 2000** | 808 | 424 | 1500 |
| SS (mg/l) | 1000** | 276 | 70 | 370 |
| NVM (mg/l) | 150 | 57 | <4 | 115 |
| pH | 6-10 | | 7 | 7 |

| Rear Interceptor (Beef) | Limit | Jan 13 | Mar 13 | May 13 | Jun 13 | Jul 13 | Sep 13 | Oct 13 | Dec 13 | Dec 13 |
|-------------------------|----------|--------|---------|---------|---------|---------|--------|---------|--------|--------|
| COD (mg/l) | 3000** | 277 | 570 | 761 | 706 | 588 | 326 | 460 | 161 | 491 |
| SS (mg/l) | 1000** | 172 | 194 | 148 | 292 | 120 | 94.6 | 87.7 | 62.7 | 193 |
| NVM (mg/l) | 150 | 91 | 59 | 39 | 101 | 57.2 | 33.2 | No Test | 18.9 | <4 |
| pH | 6-10 | 7 | No Test | No Test | No Test | No Test | 7 | 8 | 7 | 8 |
| Ammoniacal Nitrogen | No Limit | | | | | | | 20.3 | 2.34 | |

| Front Interceptor (Pork) | Limit | Mar 13 | Aug 13 | Oct 13 | Dec 13 |
|--------------------------|--------|--------|---------|--------|---------|
| COD (mg/l) | 2000** | 1720 | 404 | 950 | 1150 |
| SS (mg/l) | 1000** | 292 | 80.1 | 297 | 202 |
| NVM (mg/l) | 150 | 46 | 7.8 | 712 | 18 |
| pH | 6-10 | 7 | No Test | 7 | No Test |

* Fail - caution issued by Severn Trent 23/10/13, further investigation conducted by OSI with no issues identified. Response provided with ST and a meeting to be held in 2014 to discuss. Retest in Dec-13 shows site back within limits (18mg/l).

■ = No analysis conducted

Appendix F

Energy CO₂ Emissions Key Performance Indicators

Conversion Factor Data:

Supplier CO₂ emission factors are used opposed to DEFRA emission factors, to allow consistency with our European site KPI reporting.

Electricity CO₂ conversion factor:

Total usage (kWh) multiplied by 0.457 kg CO₂-e (for Years 2009)

Source: E-On Fuel Mix Data, 1 April 2009 to 31 March 2010

Total usage (kWh) multiplied by 0.492 kg CO₂-e (for Year 2010)

Source: E-On Fuel Mix Data, 1 April 2010 to 31 March 2011

Total usage (kWh) multiplied by 0.449 kg CO₂-e (for Year 2011)

Source: E-On Fuel Mix Data, 1 April 2011 to 31 March 2012

Total usage (kWh) multiplied by 0.546 kg CO₂-e (for Year 2012 & 2013)

Source: E-On Fuel Mix Data, 1 April 2012 to 31 March 2013

All Fuel Mix data is sourced from E-On. Carbon Factors are retrospectively changed when updated factors are published by E-On.

Gas CO₂ conversion factor:

Total usage (kWh) multiplied by 0.231 kg CO₂-e (for Years 2009-11)

Source: Carbon Footprint ADEME Methodology
Total usage (kWh) multiplied by 0.20435 kg CO₂-e (for Year 2012)

Source: DEFRA 2012 GHG Emission Factors (changed as this was a more UK specific factor)

Total usage (kWh) multiplied by 0.18404 kg CO₂-e (for Year 2013)

Source: DEFRA 2013 GHG Emission Factor

Nitrogen CO₂ conversion factor: Total usage (kg) multiplied by 0.259 kg CO₂-e

Source: Air Products, March 2012 & February 13

Nitrogen CO₂ conversion factor: Total usage (kg) multiplied by 0.259 kg CO₂-e

Source: Air Products, March 2012

Please note that the 2009 CO₂ emissions calculations are based on those identified above, due to the data being backdated.



Our Next Environmental Statement

“Further to consideration of the documentation, data and information resulting from the organisation’s internal procedures examined on a sampling basis during the verification process, it is evident that the environmental policy, program, management system, review (or audit procedure) and environmental statement meet the requirements of Regulation 1221/2009 (The EMAS Regulation)”.

Signed: Ag Thorpe.
Amanda Thorpe

Date: February 2014

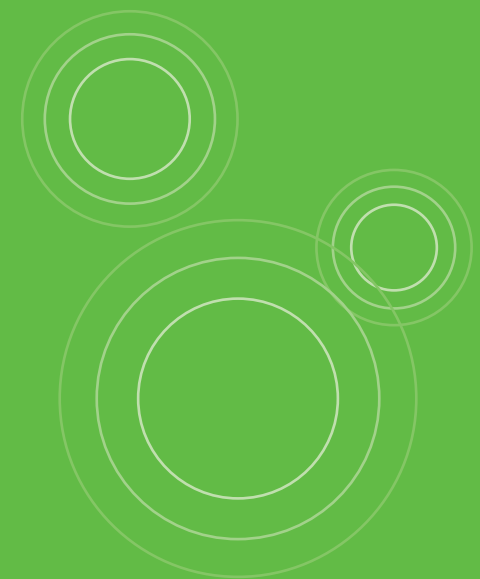
SGS United Kingdom Limited
UK-V-0007

The next Environmental Statement will be produced and published in December 2016 as part of the re-verification process. An interim update to the statement will be provided by OSI on an annual basis.

If you have any questions regarding this Environmental Statement please contact one of the following people:

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