

Environmental Statement

OSI Food Solutions UK Ltd
2016



**Our vision
is to lead the
reduction
of our
environmental
impact
throughout
our business
and our
supply chain.**

Contents



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Company Profile

OSI Food Solutions UK was formed in 1978 to be the exclusive supplier of red meat products to McDonald's Restaurants in the UK.

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.

Sited on the outskirts of Scunthorpe, the building, manufacturing and storage areas now occupy 16000m² with the entire site boundary and gardens occupying 36,000m². This is made up of a single building on two levels incorporating a production hall, a warehouse facility, office facilities on two levels; and a single storey lab facility. There were further developments of the site and plant concluded in August 2013, after a £6m investment in a building extension and new plant equipment.



The technology employed within the extension is spiral freezing, which significantly reduces our reliance on liquid nitrogen for freezing of our products. As a result we mothballed 3 existing manufacturing lines for use only in contingency situations. The environmental benefit was a reduction and positive impact on the sites carbon footprint.

The site employs 185 people; OSI UK produces over 40,000 tonnes of beef and pork product each year and 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.

The factory operates on a two-shift pattern, five days a week with no production at the weekend to allow for planned maintenance and cleaning. The factory has its own security team, who provide security surveillance 24/7.

Product Range in UK

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

Core Menu

100% Beef 10:1 patties
100% Beef Quarter Pounder Beef patties
Pork patties to support the breakfast menu

Promotional

100% Beef 6:1 patties
100% Beef Big Tasty patties
100% Beef 7:1 patties
100% Beef Rustic patties
100% Beef Thicker patties
McRib Pork patties

In addition to the above, development work is continuous and challenging.

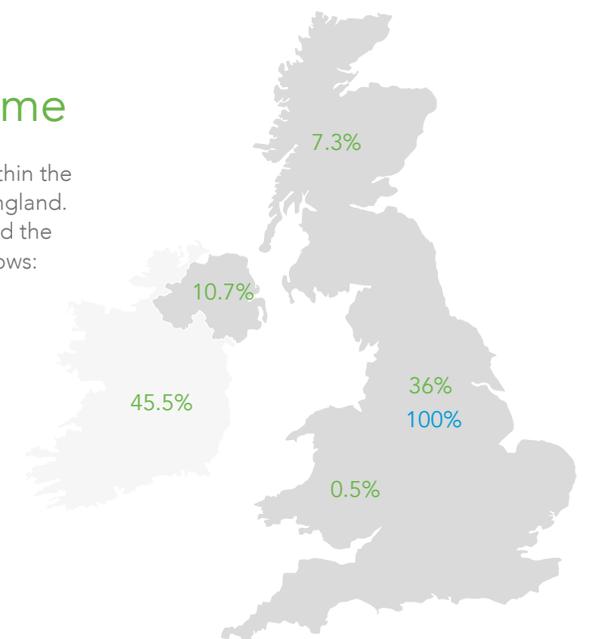
In partnership with other McDonald's suppliers the OSI NPD team strive to discover new products and product builds that will both enhance and improve the current offering, in regards to taste, texture and nutritional benefits.



2016 Regional Volume

OSI UK currently has 30 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





Phil Marsden

Managing Director – Europe

At OSI, we understand that environmental management is an instrumental part of our business both within our own facilities but also those of our supply chain. We are constantly striving to implement improvements within all of our plants and to identify projects that will enable us to reduce our environmental impact. We work closely with our suppliers to drive them to achieve defined standards we have set.

OSI has a number of measures in place to allow us to understand our performance and to determine improvements, with targets being set at a Global, European and local level. These targets are intrinsically linked to our European Sustainability vision and strategies, with clear and measurable objectives being defined across all of our plants.

OSI are committed to being a leader in this area and we will continue to focus our efforts on taking positive steps that will allow us to further reduce our environmental impact.





Gary Drane

General Manager

OSI are committed to implementing long-term sustainable solutions through internal operations and consider this when completing internal projects to further improve efficiencies whilst protecting the environment.

Our management systems ensure compliance with all laws, standards and regulations as we look to improve methods of reducing the environmental impact whilst operating our facility. OSI encourage and empower our personnel with the responsibility of environmental performance and support continued efforts to seek improvement as we move forward. OSI continue to work with our suppliers to best serve the environment which is at the core of our business plans and operational process.

“OSI encourage and empower our personnel with the responsibility of environmental performance and support continued efforts to seek improvement as we move forward.”



Sustainability at OSI

OSI recognises that our generation cannot compromise the development needs of future generations. For that reason, sustainability is close to our hearts.

The OSI Europe Sustainability Vision

Although we may not always have used the term 'sustainability' in the past, it's true to say that we have always considered the future in everything we do. We continue to work hard to ensure we care for our people, our environment and our customers.

In order to demonstrate the OSI commitment, we have created a Global Sustainability Report to highlight examples of our work. It provides an overview of our company and demonstrates our goals and achievements in three key areas:

1. Social Responsibility
2. The Environment
3. Sustainable Supply Chain

We have chosen these three key areas as they best reflect the nature of our businesses across the globe and our activities in all the countries where we operate.

Our global brochure is available to download using the following link:

<http://www.osigroup.com/sustainability>

To further support this, the European Sustainability Team has prepared the OSI Europe Sustainability Vision, which defines six key sustainability strategies to support it. There are measurable objectives defined, which are aligned to each of these strategies for the three key areas.



Sustainability Commitment Contract

In early 2014, the OSI Europe Sustainability Team launched an initiative to implement a “Sustainability Commitment Contract” in all of its European plants. This contract defines objectives that cover each of our three key Sustainability areas, these include:

Environmental

- + Energy efficiency
- + Water efficiency
- + Waste management

Social Responsibility

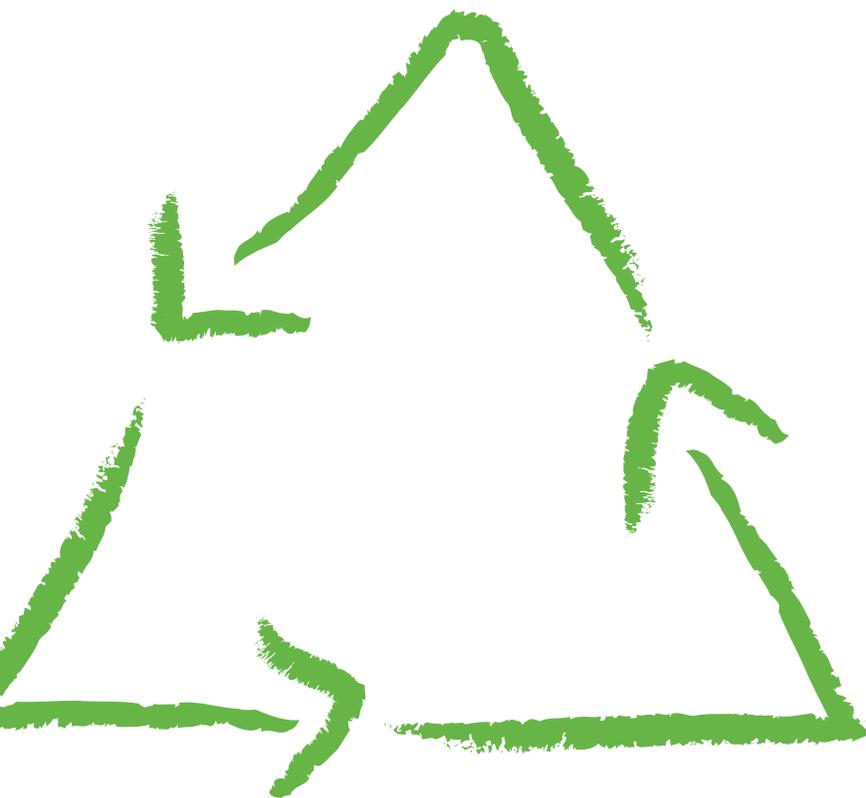
- + Training and development
- + Community engagement
- + Health & Safety

Sustainable Supply Chain

- + Animal welfare (farm slaughterhouse level)
- + Customer standards
- + Supplier evaluations

Every plant commits to completing these objectives within a 12 month period, with their progress being monitored and reported on a quarterly basis. Each plant has the same objectives in place allowing them to be benchmarked against one another. These contracts are renewed every 12 months with new objectives as defined by the OSI Europe Sustainability Team.

Each Plant Manager is required to sign this contract and own and implement it within their respective plants. Further support is provided by the European Sustainability Team to assist them in achieving their objectives.



Our Environmental Committee Team



Back Row (L-R): Michael Hughes (Purchasing), Christine Stringwell (Quality), Simon Preston (Production), Anthony Coyne (IT)
Chris Hughes (Engineering)

Front Row (L-R): Helen Stevens (Ancillary), Elaine Allen (Production), Kelly Grimwood (Environmental), Ian Hurley (Environmental), Rachel Smith (Logistics)

Other Members not shown: Gary Drane (Site), Ian Hughes (Factory), Julie Lister (Production) & Andrew Bayram (Laboratory)

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:

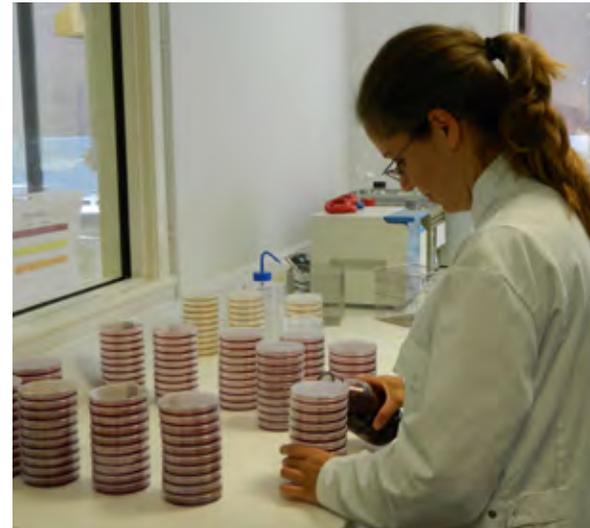
- + A Quality Management System with BRC Global Standard in Food Safety accreditation
- + An Environmental Management System with ISO 14001:2015, EMAS (Eco-Management & Audit Scheme) and BSC 5* accreditation
- + An Occupational Health & Safety System with BSC 5* & BS OHSAS 18001:2007 accreditation
- + 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.

Secure Supply Chain

The company has spent many years building a secure beef supply chain and has achieved this by closely working with a limited number of supplying abattoirs. The supply base currently consists of 30 beef abattoirs and 6 pork. 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.



Environmental Organisation



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. The site has installed an Energy Management System to further improve our controls and to identify potential improvements.

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

Potential environmental risks and opportunities are determined, with all possible risks resulting from the company products or processes being continually monitored, documented and evaluated. Suitable control measures are put in place to prevent or reduce the risk and to maintain compliance with current legislation and other obligations.

Legal Compliance

We regularly identify all applicable environmental legislative, regulatory and non-regulatory 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.

These objectives are then captured within a detailed EHS Programme, which then documents the individual actions required to achieve the objective, responsibilities and timescales.



Environmental Aspects

Identifying and evaluating our environmental impacts is a fundamental part of the business and one we treat with great importance. 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 subcontractors and suppliers, or in the case of administrative and legislative requirements.

In OSI Europe, a 'Green Purchasing' system defines the responsibilities and procedures of procurement to ensure the environmental sustainability of procured goods and services to promote environmentally conscious suppliers. OSI's Environmental Management Projects form facilitates the implementation of projects and includes environmentally relevant decision-making processes.



Environmental Legislative Requirements

OSI Food Solutions has a Register of Environmental Regulations in place, which captures all legislative, regulatory and non-regulatory requirements, such as customer specifications and voluntary agreements, which the company must comply with. 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.



Complaints

On the 25 November 2014 the site received a complaint and again on the 6th February 2015 from the Environment Agency relating to fog caused by the nitrogen.

The site has a standard procedure in place for managing nitrogen fog should it occur. Investigation results from the dates of the complaints clearly showed all steps had been followed in accordance with our procedure. This information was provided to the Environment Agency, who accepted this and formally closed off the complaints on the 23rd December 2014 and the 10th February 15 respectively. No further action was required.

On the 19 October 2015, OSI reported to the Environment Agency an incident relating to a chemical release to the surface water drain.

The cleaning chemical storage tanks were being filled in accordance with site procedures. When the tank was nearing its capacity, it resulted in some air being pumped in, which caused the chemical (Excel Plus) to foam and shoot out of the tank. The air was immediately shut off by the driver and a clean-up operation began by both the driver and a member of the OSI spill team. Whilst most of the chemical was captured using the site spill kits, some of the foam did escape to the surface water drain.

The Environment Agency was immediately notified of this incident, which was formally closed off on the 30th October 2015. No further action was required.



Environmental Achievements & Milestones



1978

McKey Food Service formed as a joint venture company.

1980

Opening of the Milton Keynes plant.

1989

Opening of the Scunthorpe plant.

1999

R22 refrigerant use for freezer was replaced with an Ammonia plant.

2000

McKey Food Service became 100% owned by OSI, the largest global supplier to the McDonald's system.

Milton Keynes & Scunthorpe enter into a Climate Change Levy Agreement for the next 10 years.

2003

McKey Food Service was rebranded as Esca Food Solutions.

2005

First ISO14001 certification achieved at both the Milton Keynes and Scunthorpe sites.

Both sites issued with an Integrated Pollution Prevention Control Permit from the Environment Agency.

Introduction of recycling systems.

2007

Manufacturing operation was consolidated into one site at Scunthorpe.

Introduction of Esca Supplier Environmental Management Specification for implementation across all Esca beef and pork suppliers.

Replacement of compressors with high efficiency units.

Installation of a new LV panel.

2008

Recertification to ISO14001 (renewed every 3 years).

Both boilers replaced with high efficiency alternatives.

Factory lighting replaced throughout with high efficiency alternatives.

Fridge compressors replaced with high efficiency alternatives.

Water pumps and control system replaced with high efficiency alternatives.

2009

Switched from CO₂ to N₂ for pork chilling, resulting in CO₂ no longer being used on site.

Replacement of freezer lights to phosphorous.

2010

Esca rebranded to OSI Food Solutions.

Development of a Carbon Footprint in accordance with an ISO14064 compliant methodology.

Reuse scheme implemented for lay flat tubes.

2011

First Certification to EMAS (Eco-Management & Audit Scheme) standard.

Recertification to ISO14001 (renewed every 3 years).

Introduction of an OSI Environmental Sustainability Award implemented across all beef and pork meat suppliers.

2012

First certification to British Safety Council Five Star Environmental Audit achieving the full five star rating.

Achieved zero waste to landfill across whole site.

Reduction of finished pork product carton size and plastic liner length on both beef and pork product.

Awarded the British Safety Council Globe of Honour.

2013

Recertification to British Safety Council Five Star Environmental Audit, maintaining the full five star rating.

Signed up as a signatory to the Federation House Commitment (FHC).

Extended the plant to provide a new production hall for beef patties on two new mechanical freezing production lines, resulting in a significant reduction to liquid nitrogen usage (three nitrogen lines have been mothballed).

2014

Recertification to British Safety Council Five Star Environmental Audit, maintaining the full five star rating.

Recertification to ISO14001 (renewed every 3 years).

Recertification to EMAS (Eco-Management & Audit Scheme) standard.

2015

Recertification to British Safety Council Five Star Environmental Audit, maintaining the full five star rating.

Awarded the British Safety Council Globe of Honour.

2016

ISO14001:2015 certification achieved.

Recertification to British Safety Council Five Star Environmental Audit, maintaining the full five star rating.

Awarded the British Safety Council Globe of Honour.

Installed new impingement freezers on the mechanical freezing production lines.

Environmental Performance Measurement System

Environmental performance is monitored and measured on a regular basis to ensure ongoing continual improvement and compliance to the Group Environmental Policy.

An OSI Europe key performance indicators (KPI's) system has been established, focusing on 7 key KPI's for electricity, gas, water, total solid waste, recycled waste, hazardous waste and CO₂ emissions. These are produced monthly and improvement is demonstrated by comparing the

results to improvement targets we have set at the beginning of each year.

This data is also provided via our proprietary OSI Global Advantage System, where all plants performance is regularly monitored against the OSI 2020 Global goals, as detailed below.

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

Objectives & Targets

Status of 2016 Objectives

In 2016 we set ourselves the following environmental objectives and targets; the status of these objectives is detailed below:

Objective	Targets & Actions	Target Date
Reduce environmental impact of site processes	Achieve 100% compliance to the 2015/16 OSI Europe Sustainability Commitment Contract <i>Site achieved 65% compliance for the contract, this was impacted by the site environmental KPI results for electricity, gas and water.</i>	Dec-16 Not Achieved
Reduction Energy Consumption	Implement recommendations identified within the site ESOS report, wherever possible <i>Recommission boiler controls - Complete</i> <i>Install heat recovery to compressed air - Not being implemented, as no capital available for this investment</i> <i>Install demand controls to dehumidifiers - Not being implemented, based on contractor advice</i> <i>Install LED lighting in designated areas - Ongoing, phased installation</i> <i>Seal passive ducts to processing area (Beef) - Not being implemented, due to legal restrictions</i> <i>Modify ductwork to over-door dehumidifiers - Not being implemented, as its not cost effective</i> <i>Insulate CIP pipework - Complete</i>	Dec-16 Achieved, where feasible
Reduce Energy CO ₂ Emissions	Reduce site CO ₂ energy emissions by 15% (with 2014 as the baseline) <i>In 2016, Nitrogen usage reduced by 6% against a target of 7%. This resulted in an overall reduction in CO₂ energy emissions by 12% (against the 2014 baseline).</i>	Dec-16 Amended Target 2017
Reduce Waste Arisings	Reduce total solid waste by 3% (with 2014 as the baseline) <i>Reduce RDF waste by 1.5%</i> <i>Reduce Inedible meat waste by 7%</i> <i>In 2016, actual total solid waste reduced by 4.31%. RDF waste was reduced by 3.37% and inedible meat waste was reduced by 6.07%.</i>	Dec-16 Achieved
Improve supplier compliance	In accordance with the OSI Supplier Environmental Management Standard, the following targets have been set: - All key meat suppliers to achieve a Grade 'A' or ISO14001 accreditation - No suppliers to be a Grade 'B' or below <i>OSI Europe Target for 2016 was revised early 2016 to 'All key Suppliers must achieve a minimum Grade 'B' (against OSI's European Supplier Management Specification'. Annual evaluations completed for all meat suppliers to determine compliance status, with 100% of OSI UK suppliers achieving target. A total of 97.06% of OSI UK suppliers achieved Grade A.</i>	Dec-16 Achieved

2017 Objectives & Targets

The following objectives have been set for 2017; the status of these will be reported in our annual EMAS update in February 2018.

Objective	Targets & Actions	Target Date
Reduce environmental impact of site processes	Achieve 100% compliance to the 2017 OSI Europe Sustainability Commitment Contract <i>Complete all specified objectives within the site commitment contract.</i>	Dec-17
Reduction Energy Consumption	Implement remaining recommendations identified within the site ESOS report, wherever possible <i>Install LED lighting in designated areas (ongoing, phased installation)</i>	Dec-17
Reduce Energy CO ₂ Emissions	Reduce site CO ₂ energy emissions by 6% (with 2016 as the baseline) <i>Reduce Nitrogen usage by 8%</i>	Dec-17
Reduce Waste Arisings	Reduce total solid waste by 15% (with 2016 as the baseline) <i>Reduce inedible meat waste by 37%</i>	Dec-18
Improve supplier compliance	In accordance with the OSI Supplier Environmental Management Standard, the following targets have been set: - All key meat suppliers to achieve a Grade 'A' or ISO14001 accreditation <i>Annual evaluations to be completed for all meat suppliers to determine compliance status.</i>	Dec-17

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

In addition to the specific OSI UK objectives, OSI Global has committed to the following goals:

Objective	Targets	Target Date
Energy	Reduce energy intensity by 10%	2020
Water	Reduce water intensity by 10%	2020
Water	Achieve zero waste to landfill	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

Helen Stevens,
Ancillary Team Leader &
Waste Champion

Q1. What does your role as the Waste Champion involve?

As part of my responsibilities I have to conduct a weekly site inspection to ensure that waste streams are being correctly segregated. I also make sure that all bins are clean, have clear signage and are not damaged.

Q2. What are the challenges you see with waste management?

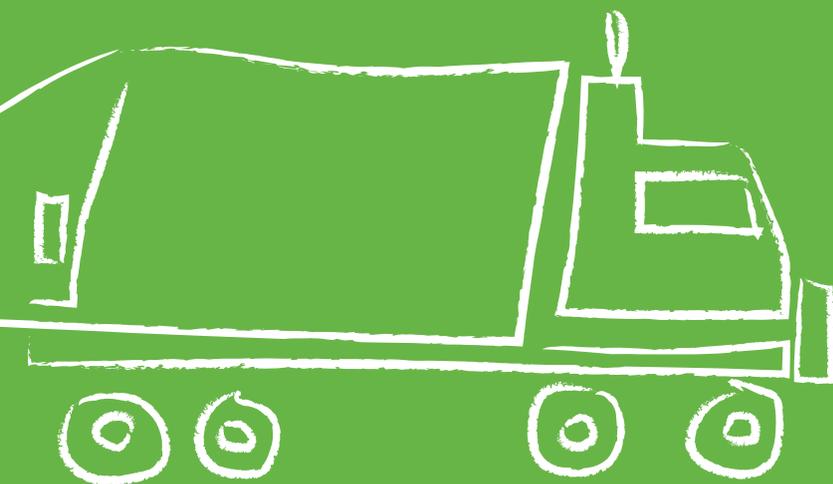
The main challenges are making sure that everyone understands what is required and segregates correctly. The systems are well established across the site and I rarely see any issues anymore.

Q3. Since you've been waste champion what changes have been made to waste solutions?

The biggest change was the site moving to zero waste to landfill back in 2012. More recently, we have streamlined the dry material recycling (DMR) so that all of our waste cardboard boxes and any other site DMR are now kept in one site container rather than two.

Q4. Why were these changes made?

As part of the biennial site waste review, the contractor provided a solution to improve waste segregation because it could all be stored within one container. This ultimately made the process much easier for the Ancillary team. Furthermore, a significant environmental benefit was that it reduced the weekly site collections and therefore less transportation.



Waste Key Performance Indicators

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. This was as a result of working closely with waste contractors to identify the best available solutions for managing our waste streams. This is subject to 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 years.

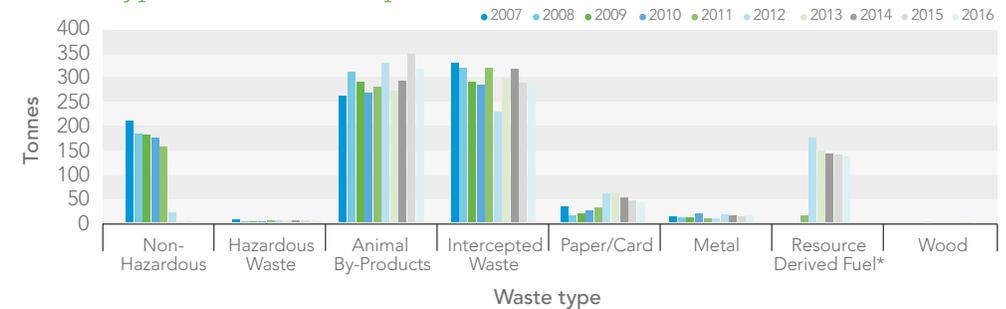
Since 2008 we have reduced our total solid waste

by 5.61%. In 2016, less than 0.38% of our waste was hazardous with the remaining 99.62% being recycled. In 2014 and 2015, the solid waste showed a positive variance, this was mainly due to some physical contamination issues that resulted in an increase to inedible meat waste.

Overall the site has achieved a reduction in total solid waste/tonne of production of 7.42% when compared with 2014 and a 15% reduction in comparison to 2008.

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

Waste Types - 10 Year Comparison



Hazardous Waste - 10 Year Comparison



Total Solid Waste - 10 Year Comparison



Non-Hazardous Waste Distribution - 10 Year Comparison



Energy Management



Interview with

Lee Thompson,
Engineering Manager

Q1. Have you implemented any of the recommendations from the ESOS Audit?

Yes we have implemented a number of them. They included lagging all of the hot water pipes around the factory, which is approximately 200 metres in length. This has obviously avoided the heat loss of the water as well as keeping the air temperature down in the roof space.

We are also looking into putting in an air compressor within the plant room, which would allow us to run the existing compressors on demand rather than constant.

Q2. Were there any savings achieved by implementing these?

By lagging the water pipe we have obviously prevented heat loss. The water is heated to 80°C at the boiler and drops to 40°C once sprayed through the cleaning lance. Since lagging the spray temperature has been maintained at 65°C, allowing a much more efficient clean.

Q3. What do you see as the benefits of having the ESOS audit?

It has pointed out a number of energy saving opportunities that we hadn't already considered. A fresh pair of eyes really has made a difference.

It was also beneficial for us to gain knowledge from an expert on some of the saving schemes available to us that we were previously unaware of.

"By lagging the water pipe we have obviously prevented heat loss. Since then spray temperature has been maintained at 65°C!"

Electricity Key Performance Indicators

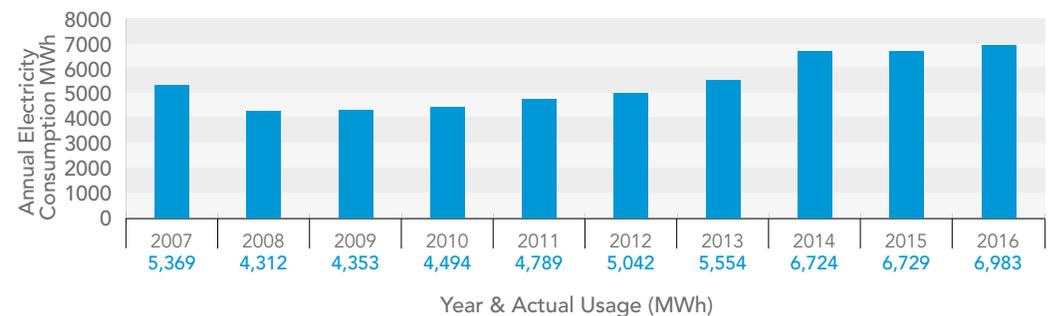
In 2013 the site was extended to provide a new production hall for beef patties on two new mechanical freezing production lines. The result was a major increase to our electricity usage, but a significant reduction to liquid nitrogen usage due to three nitrogen lines being mothballed. Electricity consumption continued to increase in 2014; however in September 2015 the two mechanical freezing production lines were replaced, which resulted in a 2.79% reduction in the 2015 electricity usage when compared with 2014. In 2016, the electricity usage increased by 2.37% when compared to 2015. The replaced production lines came back on line in March 2016, therefore once a full year's worth of data has been compiled with the new production process, this will then enable an accurate benchmark to be made and targets will be set accordingly.

The increases in 2013 and 2014 were primarily due to unforeseen downtime coupled with some physical contamination issues, 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.

The percentages shown above are based on the actual usage measured against the sites annual production.

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

Electricity Annual Usage -10 Year Comparison



Electricity Use Against Production - 10 Year Comparison



Gas Key Performance Indicators

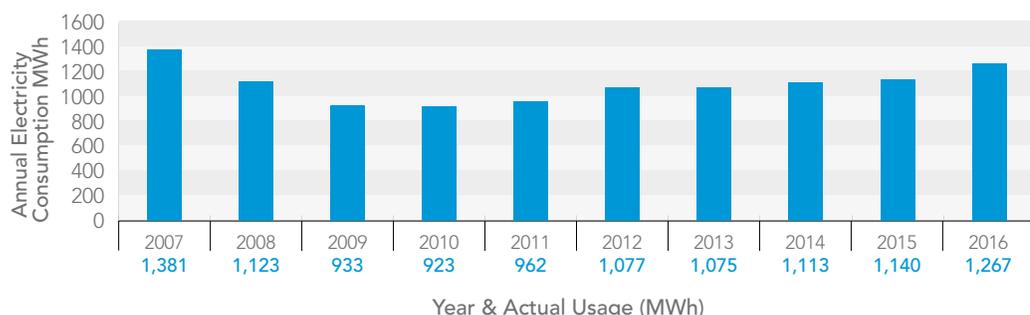
The gas used is required to heat the water for the cleaning process. Therefore, any increase is primarily due to additional demand for the plant cleaning that is attributed to the overtime and weekend working, as explained in more detail within the electricity consumption section above.

The gas usage increased by 9.66% when compared to 2015. This percentage is based on the actual usage measured against the sites annual production. In September 2015, the two mechanical freezing production lines

were replaced and came back on line in March 2016. This resulted in a number of trials being 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 impacted our gas usage.

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

Gas Annual Usage - 10 Year Comparison



Nitrogen & Carbon Dioxide Key Performance Indicators

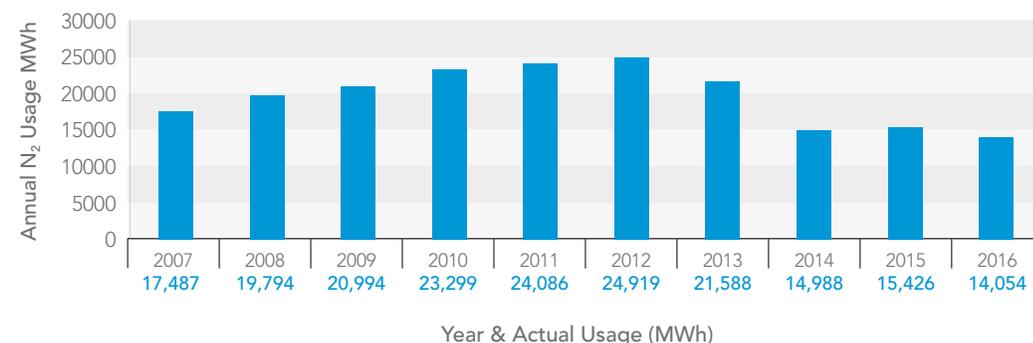
In July 2009, the site ceased using Carbon Dioxide (CO₂) for pork chilling and replaced it with Nitrogen (N₂). Nitrogen is also used for the freezing of beef and pork patties.

After moving to mechanical freezing in 2013 the site has achieved an overall reduction of 37% in the volume of liquid nitrogen used for every tonne of beef production. The usage has decreased year on year, with a reduction of

10.13% being achieved in 2016 compared to 2015. Furthermore, this resulted 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.

These percentages are based on the actual usage measured against the sites annual production.

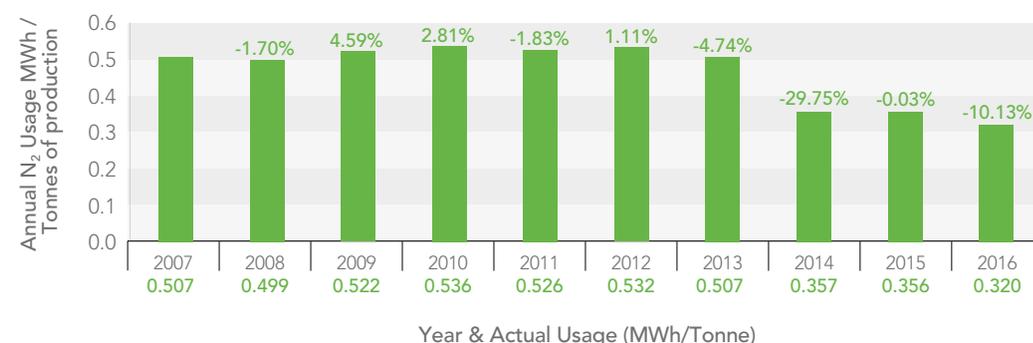
N₂ Annual Usage - 10 Year Comparison



Gas Annual Usage Against Production - 10 Year Comparison



N₂ Usage Against Production - 10 Year Comparison

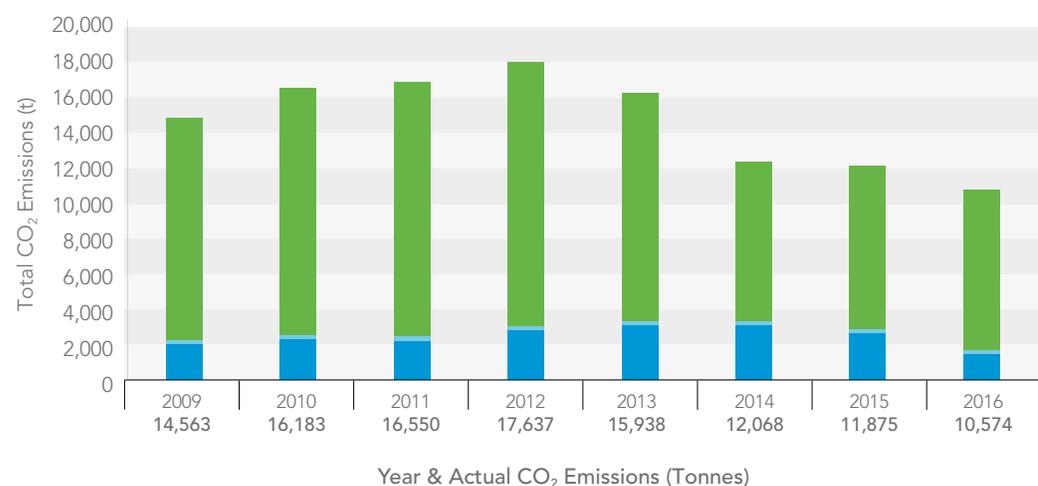


Energy CO₂ Emissions Key Performance Indicators

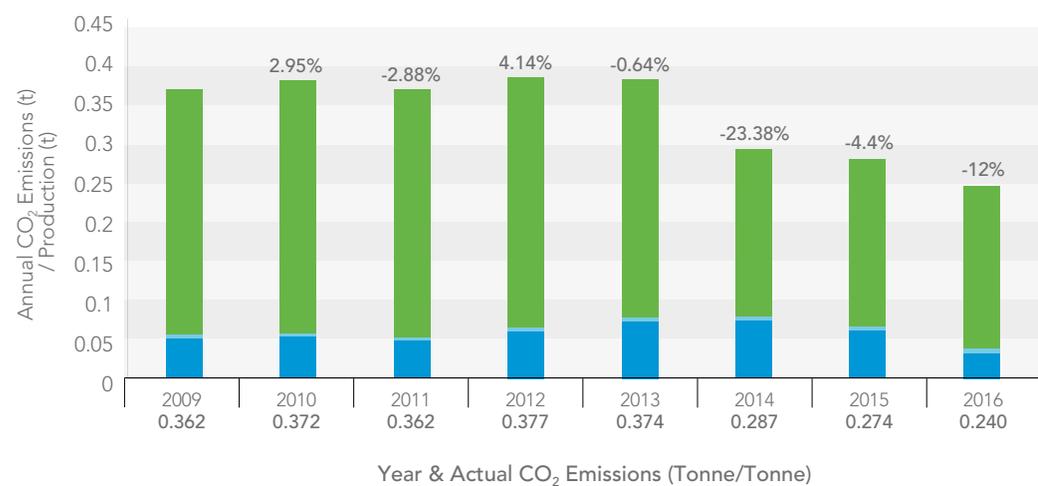
In 2011, OSI introduced a CO₂ emission KPI for our energy use (including Electricity, Gas and Nitrogen), which was backdated to include data for 2009 and 2010. This KPI calculates the total CO₂ emissions for the energy sources specified.

In 2016 the CO₂ emissions for energy decreased by 12% when compared to 2015. The reason for this decrease is the reduction of nitrogen use explained within the energy sections detailed above.

Annual CO₂ Emissions - 8 Year Comparison



CO₂ Emissions Against Production - 8 Year Comparison



For details of the conversion factors used for the calculation of this data,



Water Management



Interview with

Debbie Hodges,
Quality Manager

"The site moved to a program of daily titration testing, which resulted in 90% fewer tests to validate."

Q1. Why did you change to the Venturi cleaning system instead of CIP (Clean In place)?

There are several reasons for changing to the Venturi system, the main ones being that each wash-down box at point of use must be individually validated to ensure detergent & disinfection levels are within specification. This task takes around 4 hours to complete and best practice is to validate daily, this was not feasible with the current system due to the excessive time required.

Another reason was that the system relies on a supply of neat chemical distribution to each box; introducing the risk of chemical injuries should the pipework be compromised. We also realised that due to the detergents being used, it was very common for ingredients to 'drop out' and crystallise on the inner workings of the wash-down station. The result was the unit failing to pick up detergent at the correct level. In addition, the concentration of the detergent and disinfectants could not be corrected by staff, which meant that an offsite supplier had to complete a costly site visit to correct any concentration levels. However, with the Venturi cleaning system we are now able to complete this task ourselves.

Q2. What are the benefits of this system?

It was the most cost effective solution because there were no moving parts. Each unit is designed to last 5-10 years with no service requirements. The site moved to a program of daily titration testing, which resulted in 90% fewer tests to validate.

Overall, the site now benefits from a more consistent cleaning chemical application.

Q3. Are there any environmental benefits of this system?

The site has benefited from a reduction in water usage and because the chemical is now delivered in individual containers there is a significantly lower chance of accidental chemical spillage.

Water Key Performance Indicators

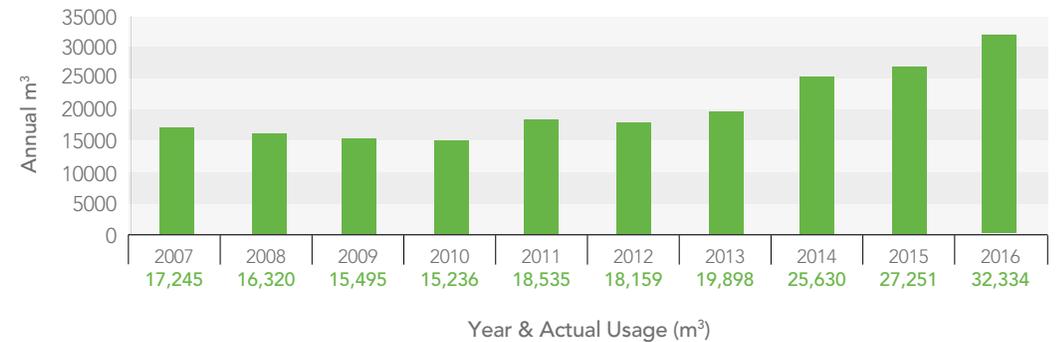
We have seen an increase in our water usage since 2013 when the site changed to mechanical freezing. The site water usage is attributed primarily to the cleaning process, which is why it has been measured against the sites production.

As detailed within the electricity and gas sections of this report, due to the replacement of the mechanical production lines a number of trials needed to be conducted. 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, which impacted our water usage.

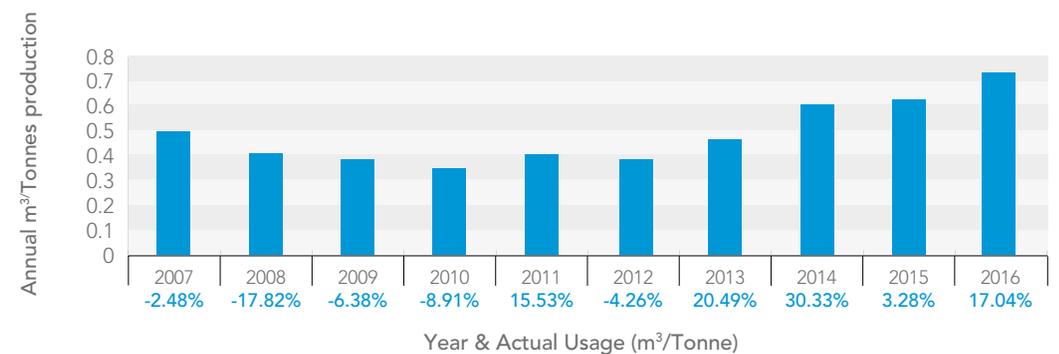
A further cause of the increase in the water used during 2016 was a fault within the Formax cooling system which resulted in a significant volume of water being unnecessarily discharged.

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.

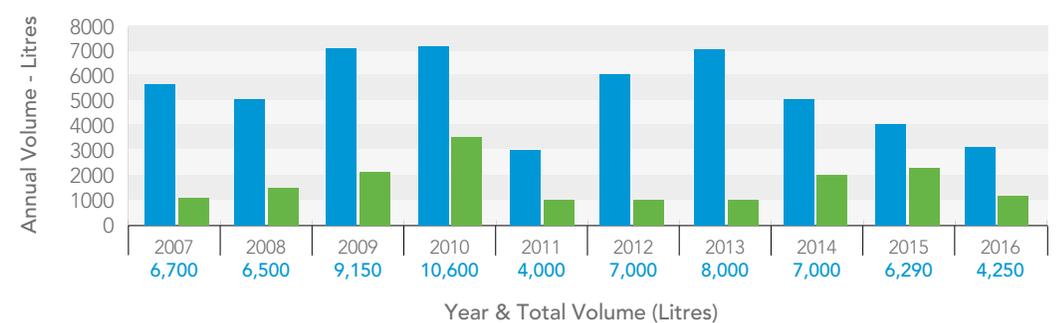
Annual Water Usage -10 Year Comparison



Water Use Against Production -10 Year Comparison



Annual Cleaning Chemicals -10 Year Comparison

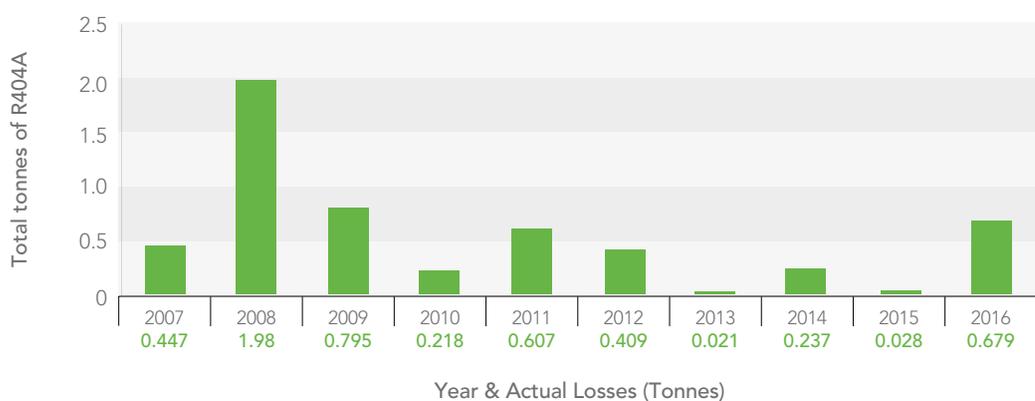


Air Emissions Key Performance Indicators

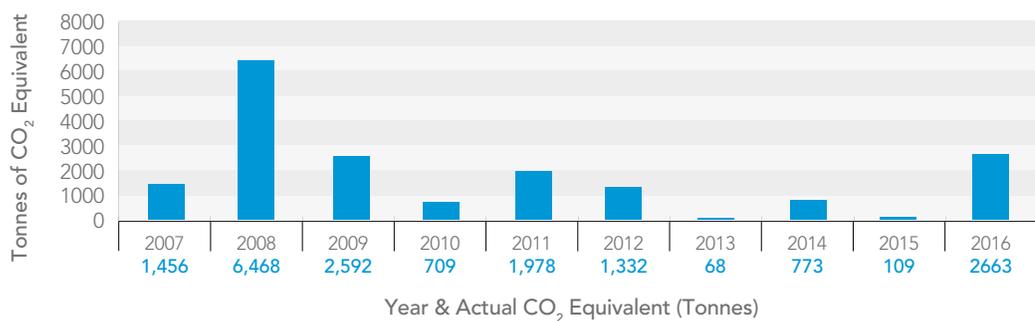
As shown in the graphs below there was an increase in air emissions related to refrigerant gas losses in 2016 when compared to 2015. These gases have a high global warming impact and this is why we monitor the emissions from leaks.

To further improve the refrigeration system a new Formax cooling system is due to be fitted by March 2017.

Total Annual Refrigerant Losses - 10 Year Comparison



Total Annual Emission of Greenhouse Gases – 10 Year Comparison



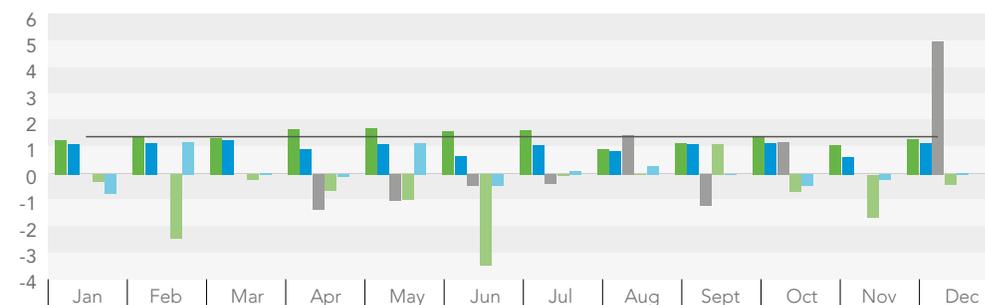
For details of the conversion factors used for the calculation of this data,

Resource Efficiency Key Performance Indicators

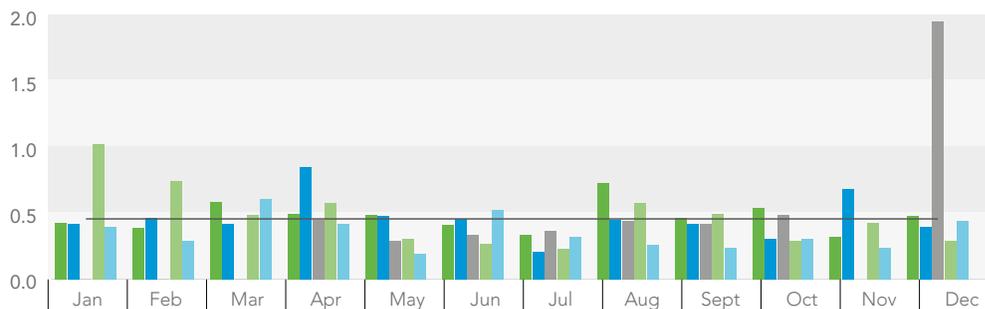
The graphs below show both shrink (unaccounted loss) and inedible (accounted loss). These figures represent the difference from the total meat delivered. As shown in the graphs we have a very high efficiency of incoming to processed meat.

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

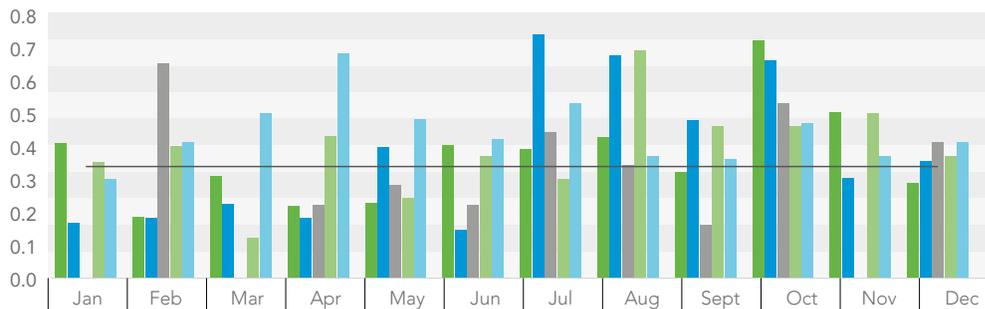
Shrink in % of kg production (pork)



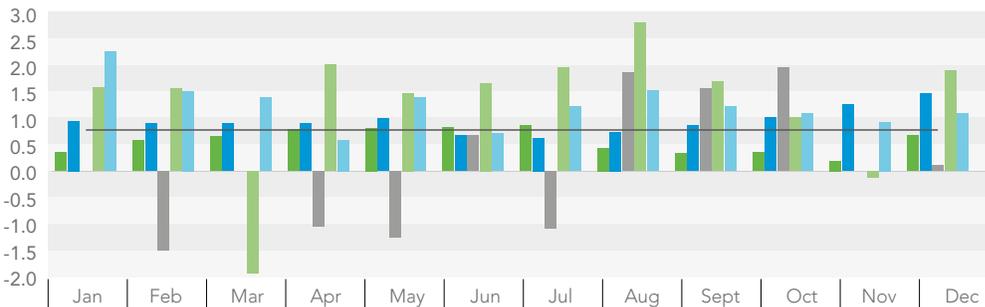
Inedible in % of kg production (pork)



Inedible in % of kg production (beef)



Shrink in % of kg production (beef)



■ 2012 ■ 2013 ■ 2014 ■ 2015 ■ 2016 — Target 2016

Our Environmental Commitments



Interview with

Ian Hurley,

Safety, Security &

Environmental Manager

Q1. What made you decide to go for the new ISO14001:2015 standard so early before the 2018 deadline?

“When I took up the position of SSE Manager 2 years ago, the Environmental Management System had already been accredited for 14 years and was well established and integrated across the site. Our regular external audit results supported this. Therefore, when the new standard was released the management team decided to move forward as soon as possible with the transition, as we felt with a few adjustments we would be ready.”

Q2. Did you have to implement many changes to achieve accreditation to ISO14001:2015?

“The first thing we did was conduct a Gap Analysis using the IEMA tool. This enabled us to identify exactly what was required. The main areas for development were to determine our context, identify risk opportunities and expand the criteria for our improvement programme. We then completed a PESTLE Analysis exercise, which involved all of our site management team. This was an excellent opportunity to gain a holistic view of the business and to identify needs and opportunities.”

Q3. How did you engage your employees?

“We already had in place a campaign called ‘ENVIRO5’, which was implemented in April 2014. The ‘ENVIRO5’ comprises of 5 key environmental actions that every employee must follow. Due to the differences in areas, one set was created for production and one set for the office. These points have become part of our employees’ daily routine and are still actively promoted across the site.

To further support this and also our Sustainability Commitment Contract, in 2016 we launched ‘Commit to 6’. This is so called because it focuses on 6 key areas. In each key area there are specific tasks, which the site management team are committed to fulfil. This helps strengthen our company by making environmental issues an integral part of all business activities. Each member of the site management team has signed a pledge to support the business in achieving them and ensures these are then understood and communicated to their respective teams.”



Our Enviro 5



Commit to 6 School Competition

In October 2016, we offered the opportunity to Westcliffe Primary School to participate in an art competition to design an image for the OSI Commit to 6 awareness campaign, which would also be featured in our EMAS brochure.

The purpose of this competition was to engage the children from the community in environmental issues and enable us (at OSI) to understand how the younger generation perceive the environment.

The competition was open to Year 6 (10 years old) and the heading for the competition was "Commit to 6".

"Commit to 6" is so called because it focuses on 6 key areas and gains commitment from everyone on the OSI site management team for the well-being of our world. The children were asked to think about 6 environmental topics they had learnt about and translate this into a picture, describing how they think we can look after and protect our planet, for the future.



Our competition winners (left to right): Abigail Smithson (1st), Urte Boksberger (2nd) & Karolina Gaubyte (3rd)



Our Commit to 6

Through our commitment to environmental excellence, we will continuously improve our practices in light of advances in technology and understandings in environmental science.

Management is responsible to educate, train and motivate employees to understand and comply with this commitment.

We will give resources, to meet this commitment and will do so in a manner that strengthens our businesses.

We will make measurable progress in implementing this commitment throughout our UK operation.

1. High Standards of Performance, Business Excellence

We will adhere to the highest standards of protection of our environment, our employees, our customers and the people of the community in which we do business.

We will strengthen our company by making environmental issues an integral part of all business activities.

2. Goal of Zero Waste and Emissions

We will drive toward zero waste generation. Materials will be reused and recycled to minimize the need for treatment or disposal and to conserve resources.

Where waste is generated, it will be handled and disposed of safely and responsibly.

We will drive toward zero emissions, giving priority to those that may present the greatest risk to health or the environment.

Where past practices have created conditions that require action, we will responsibly correct them.

3. Conservation of Natural Resources, Energy and Biodiversity

We will use fossil fuels, land, water, minerals and other natural resources efficiently.

We will seek to conserve biodiversity and will manage our land accordingly.

We will also work with our customers and suppliers to reduce impacts and improve efficiencies along the supply chain.

4. Continuously Improving Processes, Practices and Products

We will extract, make, use, handle, package, transport and dispose of our materials safely and in an environmentally responsible manner.

We will continuously analyse and improve our practices, processes and products to reduce their risk and impact throughout the product life cycle.

We will work with our suppliers, carriers, distributors and customers to achieve similar product stewardship, and we will provide information and assistance to support their efforts to do so.

5. Influence on Public Policy

We will build alliances with policy makers, businesses and advocacy groups to develop sound policies and practices that improve the environment.

6. Management and Employee Commitment, Accountability

The site management team will be informed about environmental issues and will ensure that policies are in place and actions taken to achieve this commitment.

Compliance with this commitment and applicable laws is the responsibility of every employee and contractor acting on our behalf.

We will regularly report our progress in meeting this commitment.

Awareness at Work

Cycle Safety Campaign

After a successful launch of the green travel plan to promote travel to work, it was decided to extend the promotion over the winter period to a “be seen be safe” cycle safety campaign. The aim was to raise awareness of the issue of cycle safety, to raise standards where necessary and reduce and prevent fatalities and injuries resulting from accidents between cyclists and traffic. It was also an opportunity to promote a healthy lifestyle. With this in mind, we held a cycle safety campaign and competition, which included prizes to encourage participation.

The campaign was launched to provide information, advice on cycle safety and simple tips to prevent accidents. This was quickly followed by a competition quiz which included prizes such as high-viz vests, bike lights and locks.



Our Cycle Safety Competition Winners

World Environment Day

OSI Europe was delighted to participate for the fifth time in the United Nations' (UN) World Environment Day, held every year on the 5th June. World Environment Day (WED) is the United Nations' primary tool for encouraging worldwide awareness and action for the environment. The main goal is to raise awareness of their unique development challenges and successes regarding a range of environmental problems, including climate change, waste management, unsustainable consumption, degradation of natural resources, and extreme natural disasters.

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

The themes vary year on year but for 2016 it was “Go Wild for Life”. This encouraged people to celebrate all those species under threat and to take action of our own to help safeguard them for future generations. This can be about animals or plants that are threatened within our local areas as well as at the national or global level - many local extinctions will eventually add up to a global extinction!



A number of our plants in Europe took part by holding a range of campaigns designed to raise awareness on this important topic. At OSI UK a photo / drawing competition was held, which was open to all employees and their children. The entries were required to demonstrate wildlife or habitats that were endangered, either locally or globally. There were some great entries and prizes were awarded to 1st, 2nd and 3rd place, well done to all our winners!

More information about World Environment Day can be found at: <http://www.un.org/en/events/environmentday>



Our World Environment Day Competition Winners

External Community Relations



OSI Europe's first International Intern Programme

In 2014, OSI Europe was given the opportunity to participate in an overseas intern program. Therefore, a program was developed which would not only improve the intern's professional skills, but also give them the ability to develop cross-cultural competencies by travelling to some of our plants across Europe to learn more about our organisation and processes.

In the summer of 2014, we welcomed Alisa Salesevic to our European Environmental Team for a 9 week programme. The team were delighted to be given the opportunity to be part of this programme, the first of this kind in OSI, and it fit perfectly with a new project to develop the environmental evaluation tool for the supply chain.

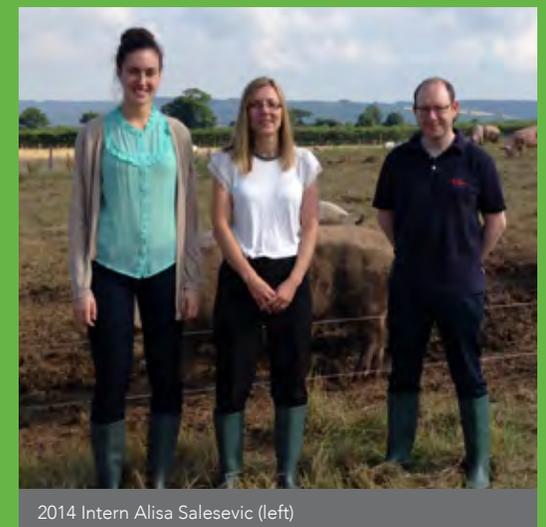
Both internships spent time at the OSI UK plant and also with our suppliers to learn and understand all stages of the meat process.

Following on from the success of our first programme, we welcomed Ellen Flickinger in the summer of 2015. Ellen was tasked with working on a group internal audit tool that would evaluate compliance across all OSI Europe plants, against the requirements of ISO14001 Environmental Management (both the 2004 and 2015 versions), EMAS and OSI European policies.

Both of these placements proved to be successful for OSI and the interns themselves. The supplier audit tool developed by Alisa is now actively used across the supply chain and the internal audit tool developed by Ellen has just been piloted across OSI Europe.



2015 Intern Ellen Flickinger (right)



2014 Intern Alisa Salesevic (left)

External Community Relations

OSI UK's "Learn To Earn" initiative

In March 2015, OSI UK delivered a programme to a group of year 10 students at Frederick Gough Secondary School, via the Young Enterprise Programme.

The concept behind the programme is to help students understand how education and continuous learning is key to their future success and happiness in work and in life. Students discovered that they may have talents that mean that careers which once might have seemed out of reach are actually achievable.

The programme explores themes such as career choices, personal skills and talents, recruitment and job interviews, salaries, earnings, tax and the cost of living, financial planning and budgeting. The students enjoyed the day and the feedback



Frederick Gough Year 10 students who attended the Learn to Earn Programme, showcasing their certificates.

provided was that they felt it was a worthwhile programme and they learnt so much about why education is so important to their career choices. All students who attended the course received a certificate of achievement award.

Cathedral Archer Project

The Cathedral Archer Project works with the homeless and vulnerable in Sheffield to help them find ways out of homelessness and exclusion.

Homelessness can include sleeping rough, occasional hostel spaces, camping on friends' floors, and squatting. The Archer Project is a place of safety and warmth, where homeless and vulnerable people are welcomed and supported.

Those who find help from the Archer Project include alcohol and substance abusers, street workers, people with learning difficulties and disabilities, refugees and failed asylum seekers. All are given free access to the Archer Project facilities and are supported by a team of dedicated project workers who assist them in seeking help via the relevant services for housing and accommodation, benefits advice, and anything else they may require.

OSI donated mince in October 2015 to make a cottage pie for 100 people, this involved two members of the OSI team Chris Stringwell and Katie Grantham who attended the project and helped prepare and serve the food as well as communicating with the people who use the Archer facilities.



Tough Mudder

In August 2016, twenty three OSI employees took on the gruelling Tough Mudder event in Leeds, to raise money for the Ronald McDonald House Charity (RMHC).

Tough Mudder is an endurance event which sees participants attempt a 12 mile-long military style obstacle course. It's designed to test mental and physical strength with the obstacles often playing on common human fears, such as fire, water, electricity and heights. The main principle of the event revolves around teamwork, encouraging camaraderie throughout the course.

The OSI Team successfully completed the course and raised a grand total of £5004.



Supporting Scunthorpe Samaritans

Scunthorpe Samaritans asked for local business to come along to help them start the process of business engagement, with the objective of raising awareness of the local issues we have and spreading the word about the support they can offer. In addition to the engagement we were also asked if we could support them in any way with projects, fund raising or volunteers.

Gary Drane our General Manager attended the engagement meeting and was more than willing to offer help, advice and support to the group. This included offering the use of our site meeting facilities for their training.

Rachel the Scunthorpe Samaritans lead said:

"Samaritans are all unpaid volunteers. The current premises have become rundown as all the money they raise is used to support the telephone lines and just keeping the doors of the centre open. Gary has already put into action a number of critically important structural improvements to our premises and invited us to use the Scunthorpe OSI facilities for our training sessions. It is with great anticipation that we commence a new chapter in our local Samaritan service thanks to Gary and OSI."



Supplier Environmental Management

At OSI UK we work extensively with our meat suppliers to ensure a good level of environmental management is maintained. We have a European Supplier Environmental Management Specification, which has been implemented across all of our European meat supply chain for several years. This specification is based on the foundations of the ISO14001 standard and contains 7 key sections:

1. Environmental Policy
2. Environmental Responsibility
3. Compliance with Legislation
4. Improvement Programme
5. Environmental Management System/Procedures
6. Training & Awareness
7. Environmental Risk Management

In 2015, OSI developed a new environmental evaluation system to improve the compliance of our meat suppliers in accordance to our specification. The new system includes a more detailed scoring approach, which provides a much fairer system to the supplier evaluations and enables our suppliers to improve their overall compliance score in smaller stages.

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.

To underline the intention of a sustainable supply chain OSI commits to the following target:

OSI Europe requires all meat suppliers to achieve Grade 'A' against its OSI environmental specification or achieve ISO14001 certification by end of 2017. Furthermore, all primary processing beef plants of OSI Foodworks have to be ISO14001 certified by end of 2016.

To achieve this target we defined some key steps to be achieved during this period. The new scoring process has already been successfully implemented within all meat suppliers to OSI Europe.

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.

One of these awards is for Environmental Sustainability, which is presented to the supplier who could clearly demonstrate their commitment to improving their environmental performance through an initiative or project completed in the last 12 months. This is judged by members of the OSI UK Environmental Committee Team.

The winner for 2015 was announced in the conference held in May 2016 and was won by Cranswick Norfolk.



Cranswick receiving their 2015 Environmental Sustainability Award

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 current best practice 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.

In 2016, OSI substantially increased the monitoring of animal welfare in abattoirs. 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 RSPCA Assured pork into the McDonald's breakfast sausage. Pigs reared to the RSPCA Assured 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, OSI are now the second largest user of RSPCA pork in the UK.

McDonald's Agricultural Assurance Programme (MAAP)

OSI UK works closely with McDonald's in supporting the Farm Forward programme.

The programme focusses on three key aims:

- + Developing skills and knowledge
- + Raising animal welfare standards
- + Making environmental improvements

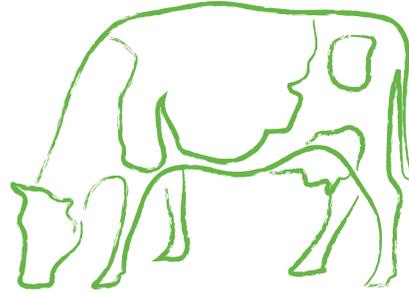
An example of the impact the McDonald's Farm Forward initiative has had can be seen in the results of their carbon reduction study. This was the biggest study into carbon reduction of its kind. Farmers were selected from OSI's main beef suppliers, with the aim of making small incremental adjustments to

farming practices to reduce overall carbon production and increase financial efficiencies.

Over 1300 on farm assessments were made, gathering around 800,000 pieces of information and the results were dramatic, a significant emission reduction of 23% was seen on the core farms monitored. This represents a drop of 4.6% per year against an industry benchmark of 0.94%.

Farm Assurance

All the beef purchased by OSI in the UK and Ireland comes from herds that are farm assured, audited and monitored by national schemes. OSI has input into the Standard setting procedures of the governing bodies of the national schemes and through the Presidency of the British Meat Processors Association. OSI has involvement on the main board of the Red Tractor Scheme in England and the Technical Advisory Committee of the Red Tractor Beef and Lamb sector.



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.

developed the "Principles for Sustainable Beef Farming" that forms a comprehensive framework for sustainable beef production in Europe. There had previously been no widely agreed definition of sustainable beef production. The Beef Working Group will shortly be issuing the Beef Farm Sustainability Assessment (FSA) tool, which will give direction to beef sustainability in Europe.

For more information about SAI Platform visit www.saiplatform.org



OSI sit on the SAI Platform Beef Working Group, which was established to bring together organizations to find solutions to sustainability challenges in the beef supply chain. The group



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.

Annual targets are in place to reduce our total CO₂ emissions for energy, process emissions and freight.



Occupational Health & Safety of Employees

OSI is committed to providing a safe and healthy working environment for our people, our visitors, customers and suppliers.

We believe that the provision of strict controls on health and safety issues arising from our activities is crucial to our business. We consult our employees on maintaining a safe working environment and are committed to ensuring that we continue to improve and monitor our operations.

OSI has a comprehensive plan for ensuring health and safety across all of our plants:

- + Safety Committees in each location, which meet regularly to continually optimise existing occupational health, safety and fire prevention standards through risk analysis, accident reviews and improvement projects.
- + Compliance Audits to confirm standards and monitor progress. OSI is regularly audited on health and safety and has received prestigious awards for our commitment and high standards.



British Safety Council Awards

In 2016, OSI was awarded the 'Globe of Honour' from the British Safety Council for the third time.

The site is constantly developing systems, policies and procedures to improve and sustain environmental practices with the ultimate aim of ensuring people can work in an eco-friendly environment.

We were one of eighteen organisations worldwide presented with a 'Globe of Honour,' which is awarded to organisations that have demonstrated excellence in environmental management.

In order to compete for the Globe of Honour, OSI needed to achieve the maximum five stars in the British Safety Council's environmental

management audit scheme for the period August 2015 to July 2016. OSI also demonstrated to an independent panel of experts that it continues to be excellent in its environmental management throughout the business – from the shop floor to the boardroom.

The award was formally presented by the British Safety Council at a luncheon on the 25th November 2016.

The site was also awarded with the 'Sword of Honour' in 2015, which is the Health & Safety equivalent. It is the fourth time we had received this award.



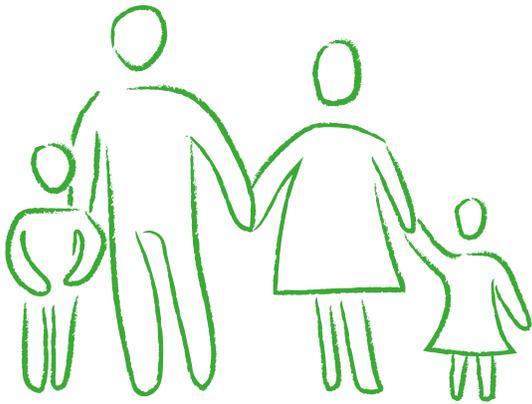
2016 Globe of Honour received by Kelly Grimwood, Environmental Manager Europe



2015 Sword of Honour & Globe of Honour received by Ian Hurley, Safety, Security & Environmental Manager (left) and Ian Hughes, Factory Manager (right)

Social Responsibility

Our goal at OSI is to provide a safe and diverse workplace for our employees – one in which they can thrive, develop, grow and add value to their local communities. This goal is founded on three core principles:



1. OSI is committed to protecting and ensuring the health and safety of all employees, suppliers, colleagues and customers and anyone who comes into contact with our activities. This commitment is reflected in the many awards for Health & Safety that we have received over the years.
2. OSI is committed to employee development at all levels in our business. This reflects the strong belief in our peoples' capabilities and in providing our employees with opportunities to progress to their fullest potential.
3. OSI is committed to making positive contributions to the communities we serve. We understand our role as a community leader, and we encourage our employees to take part in charitable events and activities in all our locations.

Investors in People

OSI UK became an Investor in People (IIP) in 2007. The objective of IIP is to ensure that through our people and working together we can achieve our strategy of providing a service level that exceeds our customers Global, European and local expectations and positively contribute to the value of the customer's supply chain.

After achieving the Silver Award in November 2013, OSI requested that they be assessed against the Gold Award as part of the continuous improvement process. Having carried out the assessment process 18 months after achieving Silver status and in accordance with the guidelines provided for assessors by UK Commission for Employment and Skills, the IIP Specialist recommended that OSI Food Solutions UK was rewarded with the Gold award in May 2015.

This demonstrates that our people are recognised within the organisation as being integral to its success.



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 and protecting the environment.

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 non-regulatory requirements. We regularly identify all applicable environmental legislative, regulatory and non-regulatory requirements, ensuring compliance by our sites.
2. Minimise the risk of environmental pollution through the use of environmental risk management. Environmental risks and opportunities are determined, with all possible risks resulting from the company products or processes being continually monitored, documented and evaluated. Suitable control measures are put in place to prevent or reduce risk.
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 us 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 other interested parties.



Phil Marsden
Managing Director – Food Solutions Europe
(February 2017)

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 has 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 - Food Solutions Europe
(Dec 2016)

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	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. Indirect: Ammonia can also react with air to form nitrogen oxides. These contribute to global warming and photochemical smog's. Regular leak testing & maintenance is carried out on the ammonia plant using competent contractors.
2	Engineering	Maintenance of equipment, machinery & operational facilities	Production of waste	Direct: Disposal of hazardous waste chemicals and oils. 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. Any site hazardous waste is recycled / treated wherever possible in accordance with the waste hierarchy, using licensed contractors.
3	Engineering	Maintenance of equipment, machinery & operational facilities	Water Discharges	Direct: Potential oil/chemical spill if incorrectly stored or failure of bunds, resulting in a possible risk to land or water contamination. 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. All chemicals and oils are stored in locked, bunded areas which are accessible by authorised personnel only.
4	Engineering	Maintenance of equipment, machinery & operational facilities	Land Contamination	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. 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. All chemicals and oils are stored in locked, bunded areas which are accessible by authorised personnel only.
5	Engineering	Maintenance of equipment, machinery & operational facilities	Air Emissions	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. 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.
6	Laboratory	Chemical & microbiological testing of food samples	Production of waste	Direct: Disposal of hazardous waste chemicals and oils. 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. Any site hazardous waste is recycled / treated wherever possible in accordance with the waste hierarchy, using licensed contractors.
7	Laboratory	Chemical & microbiological testing of food samples	Air Emissions	Direct: Various different chemicals and solvents are used in the laboratory 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. Indirect: The key environmental issue in relation to solvents and degreasants is the potential to release VOCs, which are implicated in high-level ozone depletion and global warming.
8	Manufacturing	Inedible meat waste from the manufacture of beef & pork burger products	Production of waste	Direct: Production of inedible meat waste, requiring disposal. 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.

Unique ID	Area	Activity / Product / Service	Aspect ('potential')	Environmental Impact (both positive & negative)
9	Manufacturing	Effluent interceptor waste from the manufacture of beef & pork burger products	Production of waste	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. 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. 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.
10	Manufacturing	Ammonia & R404a Refrigerant decanting	Production of waste	Direct: The charging / decanting of refrigerants for the site refrigeration system. Potential for leakage of refrigerant gases into the atmosphere. Indirect: impact due to the energy consumption of refrigeration and air conditioning systems leading to CO ₂ emissions. This can lead to ozone depletion and global warming via the greenhouse effect. 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.
11	Manufacturing	Usage of liquid nitrogen to freeze beef & pork burger products	Use of natural resources	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. Indirect: The technology used to extract liquid nitrogen is very energy intensive and will have associated environmental impacts to this energy use. This includes CO ₂ from power stations and depletion of natural fuel reserves (see Energy Usage Aspect 27).
12	Manufacturing	Usage of liquid nitrogen to freeze beef & pork burger products	Air Emissions	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. Indirect: The technology used to extract liquid nitrogen is very energy intensive and will have associated environmental impacts to this energy use. This includes CO ₂ from power stations and depletion of natural fuel reserves (see Energy Usage).
13	Manufacturing	Cleaning of production facilities & machinery	Water Usage	Direct: The cleaning process on site results in a high volume of water usage, impacting on the depletion of fresh water resources. The use of water used for cooling the ammonia refrigerant in the spiral freezer results in water vapour loss. Indirect: Fresh water is a renewable resource, yet 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.
14	Manufacturing	Cleaning of production facilities & machinery	Land Contamination	Direct: Cleaning chemicals are used as part of the site sanitation 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. 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. These chemicals are stored in bunded tanks located in the yard area, which are regularly inspected.
15	Manufacturing	Mechanical freezing	Use of natural resources	Direct: Mechanical freezing is very electricity intensive. Sourcing energy from suppliers, resulting in a depletion of natural resources. 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. 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.

Appendix C

Environmental Aspects

Unique ID	Area	Activity / Product / Service	Aspect ('potential')	Environmental Impact (both positive & negative)
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 semivolatle 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.</p>
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	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>

Unique ID	Area	Activity / Product / Service	Aspect ('potential')	Environmental Impact (both positive & negative)
22	Purchasing	Procurement of raw material (beef/pork)	Loss of supply	<p>Direct: Customer animal welfare requirements can impact on how meat should be sourced e.g. specialist farm programmes like RSPCA Assured. This can limit the supply availability.</p> <p>Indirect: A number of factors can influence the supply of raw material including disease, water scarcity, loss of crops, feed prices, meat prices, all of which can then impact the processes attributed to the rearing of the animals.</p> <p>Consumer buying habits strongly influence the need for production. If less production is required, then the suppliers will take their volume elsewhere.</p> <p>The demographics of meat producers can have an impact on the sites carbon footprint, localised sourcing is not always achievable due to supply and demand.</p> <p>There is also a need for more young farmers to sustain the future of farming.</p>
23	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>
24	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>
25	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>
26	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>
27	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>
28	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)
29	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>
30	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>
31	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>
32	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>
33	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>
34	Site	Employees travelling to / for work	Air Emissions	<p>Direct: Use of transportation for commuting to work and business travel. Resulting in fuel consumption and transport emissions.</p> <p>Indirect: Emissions from transportation contribute to global climate change and air quality reduction.</p>
35	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>
36	Site	Vandalism	Land, Water & Groundwater 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>

Unique ID	Area	Activity / Product / Service	Aspect ('potential')	Environmental Impact (both positive & negative)
37	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: 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>
38	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>
39	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 backflow 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>
40	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>
41	Site House-keeping of external areas	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>
42	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>

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. BX38481A	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 2007-2016. 2016 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 January and February 2016.	Discharge Consent flow rates were revised by Severn Trent in Sept-11 for both consents. 2016 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 January and February 2016.
Climate Change Levy Agreement - Agreement No. FDF1/T00758	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	TP1 (2013/14) was passed. TP2 (2015/16) was passed.	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. OSIFOO	N/A	N/A	Fully compliant
Comply Direct Compliance Scheme -Membership No: CD02/00747	"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 Yr 2013 - Recycling of 423 tonnes of material Yr 2014 - Recycling of 396 tonnes of material Recycling Performance as per Comply Direct Compliance: Yr 2015 - Recycling of 369 tonnes of material Yr 2016 - Currently awaiting total recycled figures, due by mid 2017	Resigned from Valpak Packaging Compliance Scheme Membership No. RM01074 in August 15. 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	Mar-08	Apr-08	Jul-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	Mar-08	Apr-08	Sep-08	Oct-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 Interceptors (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 E Severn Trent Effluent Analysis Results

Front Interceptor (Beef)	Limit	Jan-14	Feb-14	Mar-14	Apr-14	Jul-14	Aug-14	Aug-14	Sep-14	Oct-14	Oct-14	Nov-14	Dec-14
COD (mg/l)	3000	688	894	673	420	460	331	512	456	454	561	371	318
SS (mg/l)	1000	208	225	221	89	180	118	153	86.5	178	182	100	117
NVM (mg/l)	150	21.2	99.7	63.2		10	11.2	85.3	15	8	75.8	170	35
pH	6-10		8.0	7	7	8		8	7			7	8
Ammoniacal Nitrogen	No Limit												

* Fail - caution issued by Severn Trent 02/12/14, further investigation conducted by OSI. No issues were identified that could have impacted the results of the NVM on or around that time. The only possibility was that the wrong water sample bottle may have been emptied at the water sampler located on site, resulting in the water bottles being out of sequence. Agreed some preventative measures with ST to ensure this isn't possible in the future. Retest in Dec-15 shows site back within limits (35mg/l).

Front Interceptor (Pork)	Limit	Jan-14	Apr-14	Jul-14	Aug-14	Aug-14	Nov-14	Dec-14					
COD (mg/l)	3000		613	831	643	455	695	773					
SS (mg/l)	1000		76.2	170	138	71.4	196	173					
NVM (mg/l)	150	<4		<4	15.2	7.33	78.4	61.2					
pH	6-10		7	7		7	7	7					

Rear Interceptors (Beef)	Limit	Jan-15	Feb-15	Mar-15	Apr-15	03/06 /2015	Jul-15	31/07 /2015	Sep-15	Oct-15	Nov-15	Dec-15		
COD (mg/l)	3000	308	418	663	228	283	353	361	93	323	325	390		
SS (mg/l)	1000	107	108	87.4	76.3	108	128	152	205	93	167	94.5		
NVM (mg/l)	150	19.4	30.2	83	7		33.8	22.8	26.4	68.8	51.2	42.4		
pH	6-10	7	7	7	7		7		8	8				
Ammoniacal Nitrogen	No Limit													
Phosphorous (total) as p (mg/l)	No Limit									3.89				

Front Interceptor (Pork)	Limit	Jan-15	Feb-15	Mar-15	Apr-15	26/05 /2015	03/06 /2015	25/06 /2015	Jul-15	31/07 /2015	Sep-15	Oct-15	Nov-15	Dec-15
COD (mg/l)	2000	685	583	950	651	559	666	244	1140	448	410	623	446	489
SS (mg/l)	1000	218	145	154	187	117	119	108	161	102	117	125	214	92.5
NVM (mg/l)	150	98.6	52	28.4	64	58.4	12.6	34.2	126	32.8	29.8	25.4	115	39.2
pH	6-10	7	7	7	7	7		7	8		7	7		
Phosphorous (total) as p (mg/l)	25												4.26	

Rear Interceptors (Beef)	Limit	Jan-16	Feb-16	Mar-16	27/04 /2016	18/05 /2016	15/06 /2016	29/06 /16	13/07 /2016	16/07 /2016	23/09 /2016	18/10/ 2016	16/12 /2016
COD (mg/l)	3000	514	299	584	545	420	369	146	295	99	206	266	559
SS (mg/l)	1000	188	98.5	132	113	114	102	85.9	117	166	210	139	108
NVM (mg/l)	150	39	46.6	73	34.2	66	49.8	11	29	27.6	28		
pH	6-10			7	7	7	7	7	7	7.42	7	7	7.9
Ammoniacal Nitrogen	No Limit												
phosphorous	25											3.73	4.49

Front Interceptor (Pork)	Limit	Jan-16	Feb-16	Mar-16	42487	18/05 /2016	15/06/ 2016	29/06 /2016	16/07 /2016	23/09 /2016	Oct-16	16/12 /2016	
COD (mg/l)	2000	1040	998	888	845	439	355	326	458	284		259	
SS (mg/l)	1000	171	263	213	121	116	123	90	105	130		216	
NVM (mg/l)	150	254	171	89.6	84.8	66	41	19	53.6	31.6			
Ph	6-10		7	7	7		7	7	7.33	7		7.9	
Phosphorous (total) as p (mg/l)	25											2.24	

* Fail - breach of NVM limit in Jan-16 & Feb-16, investigation conducted for both results by OSI with no issues identified. Meeting held with ST on 03/03/2016, retested in Mar-16 all limits back within consent (89.6mg/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

Total usage (kWh) multiplied by 0.452 kg CO₂-e (for Year 2014)

Source: E-On Fuel Mix Data, 1 April 2013 to 31 March 2014

Total usage (kWh) multiplied by 0.384 kg CO₂-e (for Year 2015)

Source: E-On Fuel Mix Data, 1 April 2014 to 31 March 2015

Total usage (kWh) multiplied by 0.200 kg CO₂-e (for Year 2016)

Source: E-On Fuel Mix Data, 1 April 2015 to 31 March 2016

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
Total usage (kWh) multiplied by 0.184973 kg

CO₂-e (for Year 2014)

Source: DEFRA 2014 GHG Emission Factor
Total usage (kWh) multiplied by 0.18445kg CO₂-e

(for Year 2015)

Source: DEFRA 2015 GHG Emission Factor
Total usage (kWh) multiplied by 0.184kg CO₂-e

(for Year 2016)
Source: DEFRA 2016 GHG Emission Factor

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

Source: Air Products, March 2012, February 2013, May 2014 & March 2015

Nitrogen CO₂ conversion factor: Total usage (kg) multiplied by 0.28 kg CO₂-e

Source: Air Products, March 2016

R404a CO₂ conversion factor: Total usage (tonnes) multiplied by 3260

Source: DEFRA 2012, 2013 & 2014 Greenhouse Gas Emission Factors

R404a CO₂ conversion factor: Total usage (tonnes) multiplied by 3921.6

Source: DEFRA 2015 Greenhouse Gas Emission Factors

R404a CO₂ conversion factor: Total usage (tonnes) multiplied by 3922

Source: DEFRA 2016 Greenhouse Gas Emission Factors

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: 
Amanda Thorpe

Date: 2nd February 2017

SGS United Kingdom Limited
UK-V-0007

The next Environmental Statement will be produced and published in March 2020 as part of the re-verification process.

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

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Our Mission is to responsibly manage our business within the social, economic and environmental frameworks in which we operate while continually exploring ways to improve our sustainability impact. OSI Food Solutions has published its latest Sustainability Report for 2012/13 where you will find further information. If you are interested in receiving a copy please contact sustainability@osi-foodsolutions.de

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