Carbon Neutral
PAS 2060:2014 Specification

Sutton Fields, Cranswick Foods

Qualifying Explanatory Statement

CRANSWICK plc
Great British Taste

Mission Zero team
SUTTON FIELDS, HULL, HU7 OYW

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1. Introduction

a. PAS 2060:2014 requires that an entity making a declaration in respect to carbon neutrality, in accordance with its provisions, make a qualifying explanatory statement (QES) that includes the evidence substantiating the declaration. This document forms the QES that demonstrates the commitment of Cranswick plc's Sutton Fields site to achieving carbon neutrality, which includes evidence substantiating the declaration under PAS 2060. All information is believed to be accurate at the time of issue. Should any further information be brought forward that would affect the validity of the statements herein, this document will be updated accordingly to reflect the most recent status of carbon neutrality for Cranswick Sutton Fields site.

b. Cranswick PLC is a leading UK food producer and supplier of premium, fresh, and added-value products. The company is listed on the London Stock Exchange and is a constituent of the FTSE 250 index.

   Cranswick PLC has pledged to become the world's most sustainable meat business, has committed to a Net Zero target by 2040, and is in the process of setting a group-wide Science-based target to encourage their individual sites to hit the Net Zero target in 20 years' time.

c. Sutton Fields is one of Cranswick PLC's sites that specialises in the manufacturing of chilled ready-to-eat foods, including the raw meat preparation, cooking, slicing,

packing, storage, and distribution of meat products to retail and food service customers. This site forms part of the food and agriculture industry, more specifically meat production, which contributes to the increase in significant amounts of greenhouse gases in the UK each year.

d. The Site Boundaries are defined as:

- The site is 8.02 acres and secured with fencing on Helsinki Road; a cul-de-sac on the Sutton Fields Industrial Estate in Hull, East Riding of Yorkshire.
- The Building is 10662m2 Split by Dry Goods existing 1281m2, General Manufacturing 6827m2 and a new extended packing hall 2513m2. Manufacturing facilities are on the ground floor along with some offices, meeting rooms and kitchens. A canteen, toilets and offices are on the first floor. 2 loading bays are used for incoming raw meat and two for outgoing goods. Non-meat ingredients are delivered to a separate dry goods warehouse on the same site. Processing areas are segregated into goods-in, low risk cured and un-cured manufacture, high risk production area, finished product packing, and dry goods store.
- Vehicle movements around the site include heavy goods vehicles, mechanical handling equipment, forklift trucks, some employees' and visitors cars. There are dedicated parking areas at the front of the building and a separate car park outside the fencing.

Sutton Fields, a site in Hull that is part of the Cranswick Convenience Foods group, have started their own journey as a site to reduce Scope 1 & 2 carbon dioxide equivalent (CO2e) emissions. The historic site emission data will be discussed in this document, including a detailed analysis of the current state and future ambition. Overall, this document will outline the site's road map to achieving PAS 2060 Carbon Neutrality for the 2020 – 2021 Financial Year and ongoing from that point.

Site Address: Cranswick Convenience Foods (Hull) 71-72 Helsinki Road Sutton Fields Industrial Estate Hull, East Yorkshire, HU7 0YW

e. General Information

Information required under PAS 2060:2014 guidance	Sutton Fields, Cranswick Foods PLC
Individual(s) responsible for the evaluation and provision of data necessary for the substantiation of the declaration	Carl Meade, Site Director, Sutton Fields Martin Gilchrist: Site environment and risk manager William Clare, Project Manager, Veris Strategies / Avon Energy Stuart Fowler, Third Party Auditor, Avon Energy on behalf of Carbon Footprint Ltd
Entity responsible for making the declaration	Cranswick Foods PLC, Sutton Fields site
Subject of PAS 2060 declaration	Scope 1 & 2 of all direct operational emissions of Sutton Fields site's operational boundaries
Rationale of the selection of the subject	The scope and subject of this PAS 2060 includes all direct emissions in operational control, as stated in the PAS 2060:2014 guidelines.
Type of conformity assessment undertaken	3rd party validation (ISO14064-3)
Application Period	2020-2021 Financial Year (April to March)
Commitment Period	Continued annual commitment to offset operational emissions from Scopes 1 & 2 aligned to the financial year commencing 2020-2021
Senior Representative Signature	
Name and Position:	CARL MEADE SITE DIRECTOR.
Date:	26/4/21

f. Checklist for QES supporting declaration of achieving carbon neutrality.

Information required under guidance	**Response**
Define standard and methodology used to determine its GHG emissions reduction	Section 2 b, 2 c
Confirm that the methodology used was applied in accordance with its provisions and the principles set out in PAS 2060 were met.	Section 2 b, 2 c
Provide justification for the selection of the methodologies chosen to quantify reductions in the carbon footprint, including all assumptions and calculations made and any assessments of uncertainty. (The methodology employed to quantify reductions shall be the same as that used to quantify the original carbon footprint. Should an alternative methodology be available that would reduce uncertainty and yield more accurate, consistent, and reproducible results, then this may be used provided the original carbon footprint is re-quantified to the same methodology, for comparison purposes. Recalculated carbon footprints shall use the most recently available emission factors, ensuring that for purposes of comparison with the original calculation, any change in the factors used is considered).	Section 4 of this report, and the Carbon Footprint Verification report (provided upon request, publicly available)
Describe how reductions have been achieved and any applicable assumptions or justifications	Section 5 a, 5 b
Describe the actual reductions achieved in absolute and intensity terms and as a percentage of the original carbon footprint. (Quantified GHG emissions reductions shall be expressed in absolute terms and shall relate	Section 4 b

to the application period selected and/or shall be expressed in emission intensity terms (e.g. per specified unit of product or instance of service)).	
State the baseline / qualification date	Section 1 d
Record the percentage economic growth rate for the given application period used as a threshold for recognising reductions in intensity terms.	1.4 % UK GDP
Provide an explanation for circumstances where a GHG reduction in intensity terms is accompanied by an increase in absolute terms for the determined subject.	N/A, 59% reduction in absolute site emissions since 2017-18
Select and document the standard and methodology used to achieve carbon offset.	Section 6
Offsets generated or allowance credits surrendered represent genuine, additional GHG emission reductions elsewhere	Section 6
Projects involved in delivering offsets meet the criteria of additionality, permanence, leakage and double counting. (See the WRI Greenhouse Gas Protocol for definitions of additionality, permanence, leakage and double counting).	Section 6
Carbon offsets are verified by an independent third-party verifier.	Section 6
Credits from Carbon offset projects are only issued after the emission reduction has taken place	Section 6
Credits from Carbon offset projects are retired within 12 months from the date of the declaration of achievement.	Section 6

Credits from Carbon offset projects are supported by publicly available project documentation on a registry which shall provide information about the offset project, quantification methodology and validation and verification procedures.	Section 6
Credits from Carbon offset projects are stored and retired in an independent and credible registry.	Section 6
Document the quantity of GHG emissions credits and the type and nature of credits actually purchased including the number and type of credits used and the time period over which credits were generated including:	
Which GHG emissions were offset	Section 6
The actual amount offset	**2205.84** tonnes CO2e
The type of credits and projects involved	Voluntary Carbon credits: VCS/Verra, WCU, Section 6
The number and type of carbon credits used and the time period over which the credits have been generated.	Links in Section 6
For events, a rationale to support any retirement of credits in excess of 12 months including details of any legacy emission savings, taken into account.	N/A
Information regarding the retirement/cancellation of carbon credits to prevent their use by others including a link to the registry or equivalent publicly available record, where the credit has been retired.	Section 6

Specify the type of conformity assessment.	Section 1 d
Date the QES and have it signed by the senior representative of the entity concerned (e.g. CEO of a corporation; Divisional Director, where the subject is a division of a larger entity; the Chairman of a town council or the head of the household for a family group).	Section 1 d
Make QES publicly available and provide a reference to any freely accessible information upon which substantiation depends	Completed one month after signature of QES

2. Project Summary

a. Executive summary

Sutton Fields are a site in Hull that form part of the Cranswick Foods group of sites that are working towards carbon neutrality over the next year. Sutton Field's scope 2 emissions are all accounted for by the market-based approach of REGO certificates purchased across group. The scope 1 on site is made up mainly of natural gas for heating and refrigerant leakage. These are two key issues that require focus and planning to reduce. This document summarises the ways the site is addressing these emissions long term, and how they are offsetting them in the immediate term.

b. Methodology

This carbon neutral project applied the Greenhouse Gas Protocol Corporate Standard (2015 edition) as a framework in accounting for emissions and developing an emissions inventory.

The business rationale for compiling the GHG inventory:

1. Managing risks and identifying reduction opportunities on site
2. Public reporting and participation in reporting programmes internally and externally (where applicable)
3. Participating in GHG markets in the purchasing of offsets (Scope 1 & 2)
4. Recognition for voluntary early action towards group Net Zero target

The boundaries of the site have been defined as 'operational', which includes all on-site and off-site activities, processes, services, and impacts. This is applicable to Sutton Fields as an operational entity, not Cranswick PLC, and will therefore only

include operational authority of the site as opposed to the company's operational authority.

The standard classifies emissions into 3 'scopes':

Scope 1. Emissions that arise from direct emission, primarily carbon-based fuel combustion, including on site combustion and processes using natural gas, and refrigerants as fugitive emissions.

Scope 2. Emissions which arise from purchased electricity, heat, steam, etc. – but whose production is from carbon-based fuel.

Scope 3. All other emissions, notably those that arise from:

a. Purchased goods and services including farm produce up-stream
b. Supply chain logistics from third party freight vehicles
c. Business travel & Employee commuting
d. Waste disposal
e. Investments

Scope 3 emissions are currently being developed at group level. However, a site-specific scope 3 analysis will also be carried out to ensure all emissions at upstream farms have been factored in. Scope 3 data is not included in this report or included in the assessment and specification to PAS 2060. This is currently a work in progress with an estimated date of 2022 to calculate for an initial calculation.

c. Specification (PAS 2060, ISO14064-1)

The specification in use to demonstrate carbon neutrality for the site is the BSI PAS 2060:2014 standard. PAS 2060 is an internationally recognised and applicable standard that sets out the requirements for achieving and demonstrating carbon

neutrality – allowing the site to maintain a consistent GHG inventory with accuracy and transparency. The benefits of PAS 2060 are:

- Meet customer, stakeholder, industry, and legal expectations
- Reduce greenhouse gas emissions and quantify your carbon footprint
- Identify areas of inefficiency and improve overall performance
- Make cost savings by reducing energy consumption and bills
- Gain credibility with an accurate carbon neutrality statement

Further to the above, the overall site emissions inventory for scopes 1 and 2 were audited and verified by **Carbon Footprint Ltd**. The methodology used for building the emissions inventory was ISO14064-1, and the verification of the inventory was in accordance with ISO14064-3:2019. The report issued by the 3rd party auditing team Carbon Footprint Ltd states: 'Cranswick's boundaries and system has satisfactorily captured the most significant and relevant emissions sources.'

3. Context and drivers

a. Site Governance & Strategy

The site has seen a considerable reduction since 2016 in energy use, which has positively contributed towards high environmental performance. As of March 2021, the site established a Mission Zero team to govern the multiple carbon reduction projects over the coming years. This governance team for PAS 2060 Carbon Neutrality is below in the RACI table:

Roles / Stages	Site Director **Carl Meade**	Programme Lead(s) **Martin Gilchrist**	Project Lead **Will Clare**	Project Sponsor **Cranswick Group /Second Nature team/Head of Compliance and Sustainability**	Project Auditor **Carbon Footprint Ltd**
Data Gathering & Analysis	**A**	**I / C**	**R**	**C**	
Carbon Management Plan	**A**	**I / C**	**R**	**I**	
Public Commitments	**A**	**R**	**C**		
Offset Portfolio Development	**A**	**C**	**R**		
Third Party Audit	**I**	**I**	**C**	**C**	**A / R**
Carbon Neutral PAS 2060 approval	**I**	**I**	**R**	**I**	**A / R**

R = Responsible A = Accountable C = Consulted I = Informed

The site vision and strategy are inextricably linked to Cranswick's overarching targets, with any additions noted below. Sutton Field's targets for 2021 are to be:

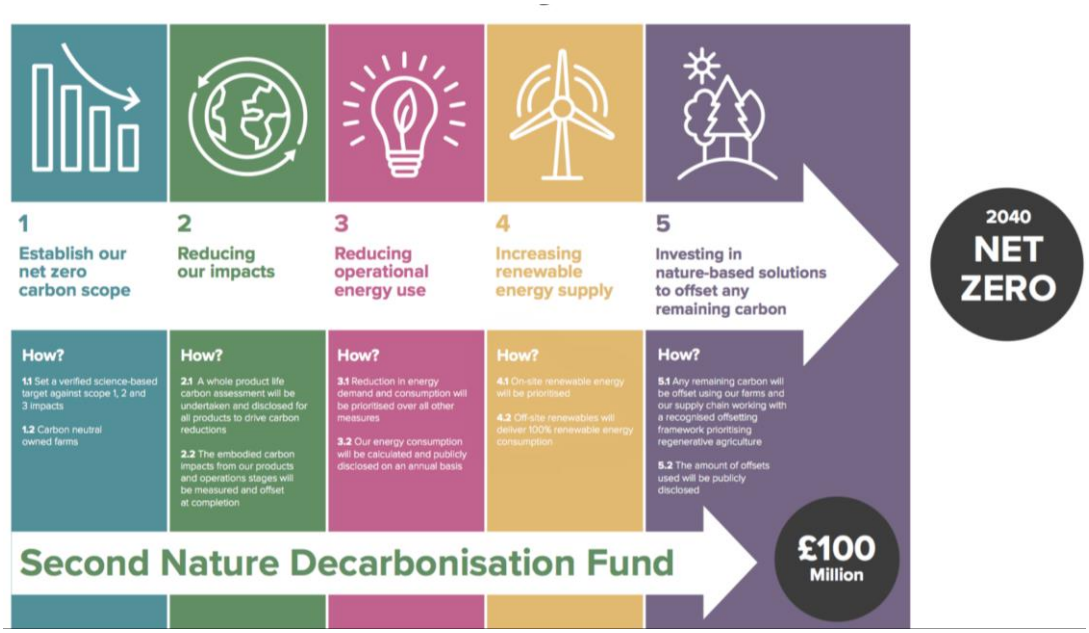
1. To be a carbon neutral site from 2021
2. To report on savings of carbon in all future energy reduction programmes on site
3. To contribute to the reduction in CO2e emissions in relation to group wide targets

b. Cranswick PLC Targets

As part of their Second Nature sustainability programme, Cranswick have set 3 ambitious targets in relation to carbon management:

1. The world's most sustainable meat business (2018)
2. Committing to the Science Based Targets initiative and setting a target (2020)
3. Net Zero by 2040, 10 years ahead of the UK Government target (2020)

Cranswick's Net Zero journey is broken down into 5 strategic aims, that ultimately form the base for the Sutton Fields site's carbon reduction journey:



4. Emissions inventory & projections

a. Measurement

At Sutton Fields, a 5-stage process in building an emissions inventory was developed:

1. **SLT Master Class**: an introduction for the site's senior leadership team to net-zero, carbon, and the management of emissions. This also involved the establishment of a 'Mission Zero' governance team as mentioned above to ensure ownership and accountability throughout the project.

2. **Scope & Boundaries**: Using the 'Operational Boundaries' approach as stated in the GHG Protocol Corporate Standard. This determined that the site's emissions were based on the electricity and gas consumption metered to the site, any transport owned by the site (within and on the site), and f-gas refrigerant leakage from the site's fridges / cooler / air conditioning units.

3. **Data Gathering:** with assistance from onsite HS&E and engineering teams, the data gathered was from source, metered data based on monthly readings both for indirect electricity consumption, and for natural gas consumption. The site's electricity has been backed by REGOs (Renewable Energy Guarantee of Origin) certificates since March 2018 and are reflected in the inventory. Refrigerant data was also gathered, with the site using R404a, R448a, R407a,R407c and R434a, making up 15% of the site's emissions in 2020-2021.The total consumption of LPG (kWh) was also recorded.

The data gathered is from a baseline year of 2016 up to the current reporting year of 2021. The data and emissions were split into the financial year for the site from April to March. Therefore, the years of emissions included in the emissions inventory are:

- 2016-17
- 2017-18
- 2018-19
- 2019-20
- 2020-21

4. **Data Interpretation:** the site's emissions data was then calculated using a combination of the following:

    a. UK location-based conversion factors for kgCO2e/kWh for electricity. This changed from year to year based on the grid's gradual decarbonisation from the baseline year of 2016:

Year	GB Grid Carbon Intensity (kgCO2e/kWh)
2016	0.41205
2017	0.35156
2018	0.28307
2019	0.2556
2020	0.23314
2021	0.23314

    b. UK location-based conversion factors for kgCO2e Natural Gas from 2016:

Year	Natural Gas Carbon Intensity (kgCO2e/kWh)
2016	0.18400
2017	0.18416
2018	0.18396
2019	0.18385
2020	0.18387
2021	0.18387

c. UK location-based conversion factors for kgCO2e LPG from 2017:

Year	LPG Carbon Intensity (kgCO2e/kWh)
2017	0.21448
2018	0.21448
2019	0.21448
2020	0.21448
2021	0.21448

b. Scope 1 & 2 emissions

1. Scope 1 emissions that significantly contribute to the site's GHG inventory are:
    a. **Stationary combustion of natural gas**: this measured at a total (over the period from (Jan) 2016 – (Mar) 2021 at: 9102.06 t/CO2e. Mainly used for on-site boilers, and process heaters (including ovens). Over the reporting period (2020-2021) natural gas accounted for 1864.09 t/CO2e.
    b. **Refrigeration & cooling** is prominent on site and one of the main consumers of electricity. The refrigerants from the fridges are high in

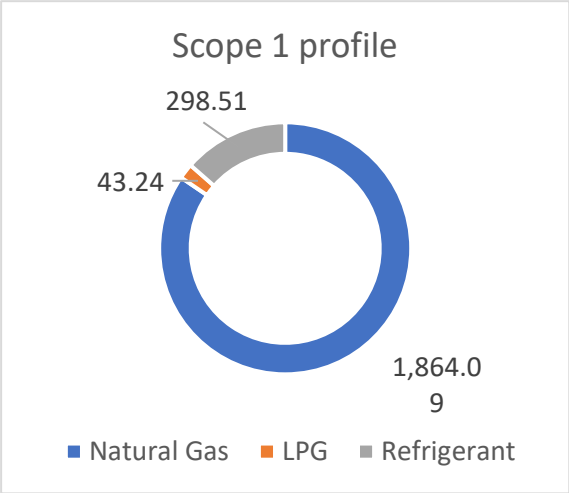
Global Warming Potential (GWP. Using a quantitative approach defined by the GHG Protocol Corporate Standard's F-Gas calculator, the leakages of R404a, R448a, R434a, R407c, and R407f in 2020-2021 amounted to 298.51 t/CO2e.

2. Scope 2 emissions are backed by REGOs due to the Cranswick group-wide procurement of 100% renewable energy decision since 2018. The electricity has however been calculated both from a market-based and location-based approach, meaning the would-be emissions are still collected for reporting purposes. This is to encourage further efficiency of the site's electricity demand. The market mechanism for the procurement of 100% renewable energy is through UK-based Renewable Energy Certificates known as REGOs (Renewable Energy Guarantee of Origin).

    a. Market-based approach electricity: this is measured as 0 for the site as all indirect electricity has been purchased from renewable sources.

    b. Location-based approach: the electricity generated using the GB grid's emissions factor is a total of 17,178.19 t/CO2e from 2016 (Jan) to present. Using the location-based approach, the total for the offsetting period (2020-2021) is 1886.87 t/CO2e. However, the market-based approach will be used for the specification of PAS 2060 when offsetting emissions.

3. Other: LPG emissions from site made up 43.24 t/CO2e for the reporting period (2020-2021), used as an input fuel for Forklift Trucks on site. All other emissions were either negligible and not significant enough to report on, or out of scope (not categorised as Scope 1 or 2).



Emissions summary (detail found in the emissions inventory):

To Date	Total Scope 1	Total Scope 2	Total Emissions of site (location-based approach)	Total Emissions of site (market-based approach)
	9253.59	17178.19	26431.78	17631.88

Baseline year	Scope 1	Scope 2	Total (location-based)	Total (market-based)
	3427.83	3961.42	7389.25	7389.25

Offsetting period	Scope 1	Scope 2	Total (location-based)	Total (market-based)
	2205.84	2484.21	4690.05	2205.84

Emissions to be offset	Total
	2205.84

c. Scope 3 measurement

Reporting on scope 3 emissions is reported at group level, however a site Scope 3 emissions inventory will be a project that the site may put forward as a future opportunity to reduce emissions beyond the direct operations of the site.

5. Reduction solutions

a. 2016 – 2021

Since 2016, the site has worked on several efficiency programmes to increase productivity, replace old equipment and machinery, and enhance the site's environmental performance. Reduction initiatives since 2016 include:

1. Installation of LED lighting across the site to curb energy inefficiency (location-based) method.
2. Invested in REGO backed electricity tariff to neutralise emissions from Scope 2 electricity consumption (market-based).
3. Upgrades have been made to the steam boiler and pipework.
4. Refrigerant R404a has been replaced with ammonia glycol, reducing the emissions from refrigerant leakage to close to 0 in this system.

Along with a gradual decarbonisation of grid electricity, and further site efficiencies, the site reduced its overall emissions by 59% since 2017-2018 (or 3,134 t/CO2e).

The site also adheres to ISO50001 and is awaiting a stage 1 audit for ISO14001 environmental management system.

Figure 1. Total site emissions location-based approach (2020-2021)

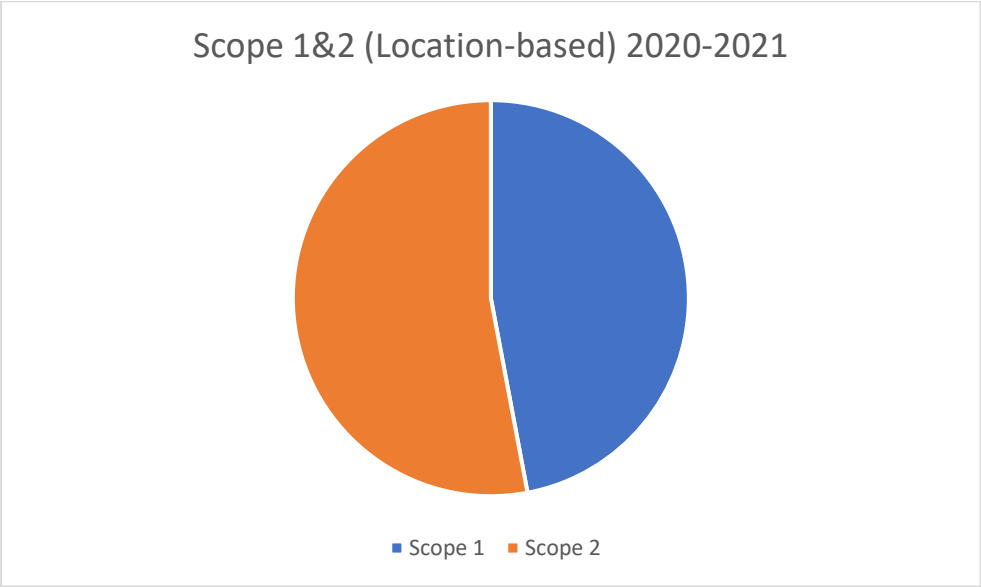
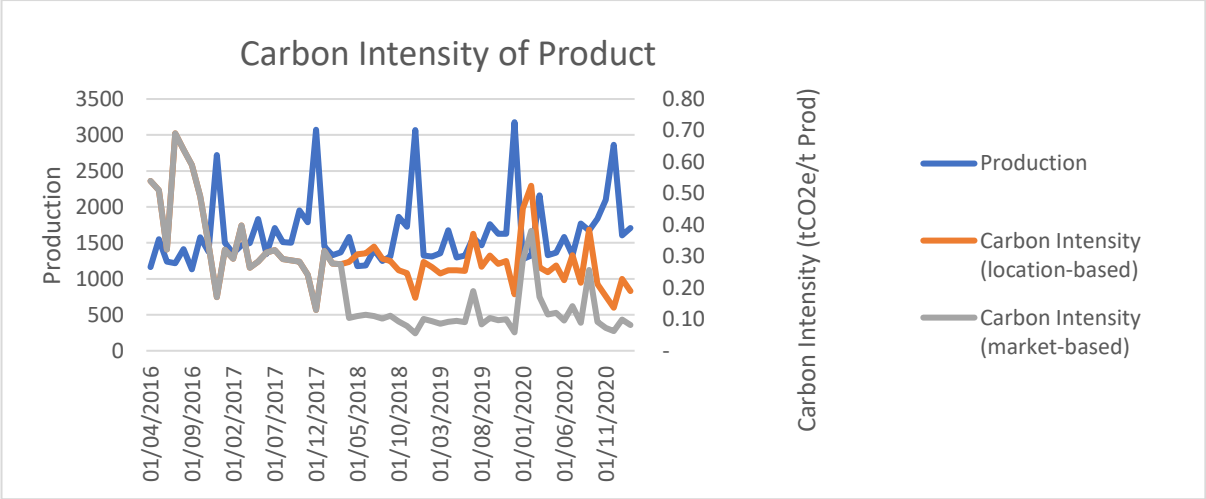


Figure 2. Site reduction against Production (carbon intensity)



Carbon Intensity: Average t/CO2e / tonne of product sold was 0.14 t/CO2e per tonne of product sold. In other words, this is 140kg of CO2e per tonne of product sold. This has declined from 440kg of CO2e per tonne of product sold in 2016-17, and 270kg of CO2e per tonne of product sold in 2017-18. However, this has increased by 40kg/CO2e per t/product in 2018-19 to 2020-2021. But overall the there has been a 69% decrease in emissions

intensity since 2016-2017, mainly attributed to the switch to renewable electricity and efficiencies on site.

Performance highlights of the site:

1. 59% reduction in absolute carbon of Scope 1 & 2 from 2017-18 to 2020-2021

b. 2021 - Reduction Solutions Outlook

The site is planning for a diverse range of energy efficiency measures and upgrades over the next 1 – 5 years. Initiatives that are being proposed include:

- **The replacement of refrigerants R404a, R407c, R407a, R448a, R434a**: to more environmentally friendly alternatives will be crucial in reducing emissions of harmful GHGs from leakage and disposal. In 2020-2021 the refrigerant leakage accounted for 298.51 tonnes/CO2e (15% of the site's emissions), this can be reduced to 0 with the use of CO2 grade refrigerant or ammonia alternative. These initiatives are up and running at several Cranswick sites and will be replaced over time.

- **Switching old gas fired boilers to higher efficiency sustainable models:** Replacement of old equipment, machinery, and other devices can lead to emission savings due to energy efficient designs.

- **Replace all remaining refrigerants with lower GWP refrigerant:** Lower GWP alternatives do exist such as R-434a, which is currently in use on site. This will lead to incremental benefits after each top up,

however, switching to CO2 grade refrigerant or ammonia alternative systems will cut f-gas emissions completely which is the eventual requirement to achieve Net Zero by 2040.

- **Exploring options to converting office heating from gas boilers to heat pumps:**

  Heat pumps can achieve adequate temperatures for hot water and space heating. This could remove the need for fossil fuel gas combustion and switch heating requirements to electricity, which is 100% renewable backed.

- **Optimising heat recovery of ammonia glycol system to reduce natural gas usage in boilers**

- **Switch from LPG to biofuel:**

  There are emission savings to be made from LPG to biofuel, however the economics are likely to change over the coming years due to the impact of biofuels on land use change. One alternative for LPG use in forklift trucks on site is switching them to battery operated, moving to electrification and 0 emission due to the REGO-backed tariff.

c. KPI – carbon reduction target

- The site adheres to the group wide 20% reduction in energy consumption target by 2025. This will have a material impact on the emissions of the site.
- The site also adheres to a net zero emissions target by 2040.

6. Offset portfolio

a. With the approval of the emissions inventory, the offset portfolio reflects the total amount for the agreed offsetting period 2020-2021 (2947 t/CO2e).

b. The offset portfolio was selected by the Mission Zero team to reflect the site's strategic aims:

	Project Name	**Project Type**	**Quantity**
2.	Portel-para Rainforest	Forestry	2206
3.	UK Forestry	Forestry	221*

*10% of the 2020-2021 offset portfolio has been dedicated to the UK Forestry project. This is additional to the total offset portfolio as they are Pending Issuance Units and won't yet begin to offset carbon emissions.

c. The projects are verified and validated by independent third parties and registered with Verra and the Woodland Carbon Code. Projects are given sustainable development goal labels based on the impact they may have beyond carbon sequestration, such as gender equality, food security, and other measures.

d. Here are the links to the publicly retired offset projects that have offset the total:

- Portel-para Amazon Project:

https://registry.verra.org/myModule/rpt/myrpt.asp?r=206&h=129743

- UK Forestry Project: Doddington North Moor, Northumberland, UK – Woodland Carbon Code Project. (link to be provided)