



# Embracing Sustainability

Sustainability Report 2021

# Introduction

The implementation of any plan always benefits from a moment to reflect on how far you have come. It is easy to feel that no progress is being made and that not enough is being done. I therefore always enjoy reading our annual sustainability report as it reassures me that we are making progress despite my strong desire to push for more, and to do it faster.

As with previous years, we have made excellent progress against some targets but still have work to do with others. Highlights this year include the reduction in carbon emissions by 10% from 4,194.13 tCO<sub>2</sub>e to 3770.29 tCO<sub>2</sub>e, the significant increase in the levels of renewable electricity used from the Anaerobic Digestion plant, the improvements to our new product development system, the implementation of GEMBA Boards in Production and the excellent progress to implement three new digital systems. All of these examples are significant and represent important improvements to the Company's level of sustainability.

While it makes uncomfortable reading, we also publish our lack of progress against other targets. This is important as it means we are more likely to address these targets going forward. Given increasing levels of "Green Washing," where companies use sustainability as a marketing tool, I also think that sharing our problems shows we are not perfect, but we are at least trying. Accident and incident rates are within industry parameters, but I believe should still be lower. To address this, over the coming year we will be inviting the British Safety Council to conduct a full site safety audit to understand where we can do more to improve safety. Our waste and VOC levels per ton of product have crept back up due to a period of heavy process development where optimisation is needed to bring these levels back down. We will be looking hard at this area to reduce waste and VOC levels.

Perhaps my biggest disappointment during the year, which is not included in the report, was the cancellation of a biomass boiler project to reduce our use of natural gas. Sadly, at the "go / no go" decision point the prevailing uncertain economic environment presented too many down-side risks to this multi-million-pound project. The impact of the Covid pandemic and significant disruption to the global supply chains took its toll and we were forced to abandon the project. We are now looking at alternative options for decarbonising our energy systems. I share this story with you to demonstrate that we are a functioning business that needs to constantly adapt to the changing World. Sustainability is not easy, reducing your carbon footprint can be challenging, hitting your self-imposed targets can be hard but it is worth the effort. We are a better company in FY22 than we were in FY21 and we are gradually reducing our impact on the planet on which we all ultimately depend.



Harry Swan, CEO



In 2015, the United Nations established 17 key global sustainability goals that provide developmental targets for businesses and individuals alike to work together to end poverty, protect the planet and ensure prosperity for all. At Thomas Swan, we aim to ensure that our sustainability targets correlate with many of the UN goals and play our part in protecting our planet ([www.un.org/sustainabledevelopment/sustainable-development-goals](http://www.un.org/sustainabledevelopment/sustainable-development-goals)).

Where one of our targets aligns with a UN goal, you will see the UN symbol displayed alongside it.



# 1

## People Development:

Our people are essential in delivering our vision to become a sustainable manufacturer of speciality chemicals. Not just by encouraging them to engage in our 'green' initiatives, but also by supporting the development of their skills and ensuring high levels of job satisfaction.



## Our targets for FY21 were as follows:



Achieve a target of two hours per month training for each employee

The COVID-19 pandemic continued to impact our working practices through FY21. Our priority was maintaining a COVID secure, safe working environment. Training of our people continued to take place, however at a reduced level, achieving one hour per month.



Achieve 100% return of Personal Development Reviews (PDRs) by the end of March 2022

With a COVID secure environment maintained and COVID restrictions relaxed towards the end of the financial year, a significant increase in PDR returns was achieved, increasing from 56% last year to 95% in FY21.



Strive to take on Apprentices to maintain skills within the business

It is crucial that the business invests in the improvement of skills that will allow our strategic goals to be met. Recruiting apprentices into the team is a method of achieving this. We have fulfilled our goals by employing four people under the Kickstart scheme (in Operations and Administration). One of the apprentices was made a permanent employee in Operations.



Develop a proposal for creating a Leadership and Management training scheme for staff with potential to lead

We have identified that we need to support members of our team whose performance and positive attitude have been recognised and rewarded with promotion. This training scheme will support our newly promoted leaders to be competent and to function effectively in managing and influencing their teams. Our HR department have engaged Eliesha Training to deliver Leadership and Management apprenticeships with five staff members enrolled to start this training in early FY22.



Draft, approve and communicate a "Positive People" programme

A working party consisting of staff from departments across the business has developed a code of conduct that reflects Thomas Swan's values. The aim of the working party was to document expected behaviours that are the cultural foundation of how we work together at Thomas Swan. The "Positive People" programme will be launched in FY22.



Unfortunately, we were unable to make progress on the objectives below:

- Draft, discuss, approve and communicate a clear grading structure of positions across the business.
- Draft, discuss, approve and communicate a road map to improve diversity and inclusion in all areas of the business.



# 2

## Excellence through Continuous Improvement

Sustainability is essential to how we work, from waste reduction and minimising resource use throughout our processes and systems, to the way we encourage and develop our people, and how we ensure that they work in a safe and productive environment. On refreshing our business strategy, the decision was taken to drive Excellence using Continuous Improvement.



## Our targets for FY21 were as follows:

### Target zero accidents

We strongly believe that a key aspect of sustainability is for all employees, contractors and visitors to leave the company in the same condition in which they arrived. This means we will always aim for zero accidents and incidents. As we are a family business, we take this responsibility very seriously. Unfortunately, there were two accidents recorded in FY21.

### Aim to keep rejects below 2% across our full product portfolio

Thomas Swan manufactures a portfolio of Speciality Chemicals to a high specification for use in a wide range of applications. The reject rate of 3.5% achieved in FY21 did not meet our target but was a significant improvement on last year's performance of 6.4%.

### Develop, agree, and implement a plan (including training) for the use of Continuous Improvement across all departments



Lean Sigma is a methodology which relies on a collaborative team effort to improve performance by systematically removing waste and reducing variation. Lean Sigma was introduced into our operations department first, facilitated by our Continuous Improvement Manager. This has been well received with the successful implementation of Gemba boards that are reviewed daily and track agreed process performance and product quality indicators. It is planned to roll out the methodology throughout the site at Consett.

### Implement three new digital systems which can integrate with existing systems

Thomas Swan will develop and implement a digital strategy that will use technology to transform business performance. The strategy will specify the direction we will take to create value with technology. In FY21, the target was to implement three digital systems that are integrated with existing systems. This was achieved as Sage 50 (Human Resources), Sage Export (Logistics) and Salesforce (Commercial and R & D) were all implemented.

### Achieve zero incidents



We classify an incident as any event that has a detrimental impact on health, safety, or the environment. In FY21 we had one incident under this classification. Our established near miss reporting scheme is used proactively to reduce the probability of the occurrence of accidents and incidents.

### Update and refresh corporate literature

To be true to our sustainability goals, we are working towards this goal on a project-by-project basis, ensuring all existing collateral is used before producing more. Where possible, we are making all hard copies digital. When any printed collateral is required, we source sustainable printing and paper.

### Implement an action plan to improve customer service, based on the results of the most recent customer survey

We scored an average of 4.1 out of 5 for our FY20 customer satisfaction survey. After a review of the results, business managers discussed lower scores with their customers, to see what improvements could be made. This resulted in an average score of 4.3 out of 5 for our FY21 survey.

### Maintain staff participation in the annual awards for Innovation, Operational Excellence and Sustainability



Each year the awards are actively promoted across the business, using all available communication channels. We received a total of 6 entries, which was lower than we had hoped. The senior team agreed to review the current system and try to find improvements which will increase the number of entries.

# 3

## Business Development:

In our five-year business strategy review, it was highlighted that, to meet our sustainable business growth targets, we need to innovate to transform our current product offering. This can be achieved by customer-focused development of new products, finding new applications for existing products and promoting the new skills and capabilities we have acquired to attract new and retain existing customers, driving sustainable business growth.

A key decision from the review was to create a focused New Business Development Division, Green Feather Innovations, to lead and deliver growth. The following sustainability objectives were designed to implement the business processes required to underpin our sustainable growth strategy.



## Introduce a New Products Innovation process via Green Feather Innovations by September 2021

The Research & Development stage gate project management process was adapted to facilitate the implementation of a New Products Innovation process. The introduction of Salesforce allowed Commercial and Technical departments to improve communication, assess, value and prioritise potential projects before committing resources to progress the opportunities. This work was completed before the September 2021 target.



## Green Feather Innovations to assess 20 potential projects by March 2022

Using the New Products Innovation process, Green Feather Innovations had evaluated 25 potential projects by March 2022 in a variety of applications.

## Identify and promote three examples of new competencies and capabilities

During FY21, Thomas Swan installed a new drying facility for use in the production of a new product. It was planned to promote this new drying capability once the customer had fully validated the product made using the new dryer. At the time of writing, the product has met all the quality requirements and the remaining validation tests are in progress.



# 4

## Sustainability

Setting targets and measuring results against those targets will help ensure that we remain focussed on our sustainability journey. Ultimately, we want to be a company that lasts for many future decades and has a positive impact on the environment. These initiatives are designed to help us achieve our goals.



## Our targets for FY21 were as follows:

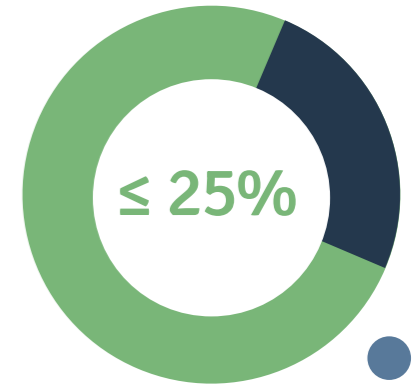


### Maintain year on year improvement in renewable electricity use on site

The Anaerobic Digestion plant changed ownership during 2020. Thomas Swan have continued to collaborate with the new owners of the Anaerobic Digestion plant towards achieving this target. In FY21, we used 60% renewable electricity, a significant improvement from last year's performance of 42%. (Fig.1)

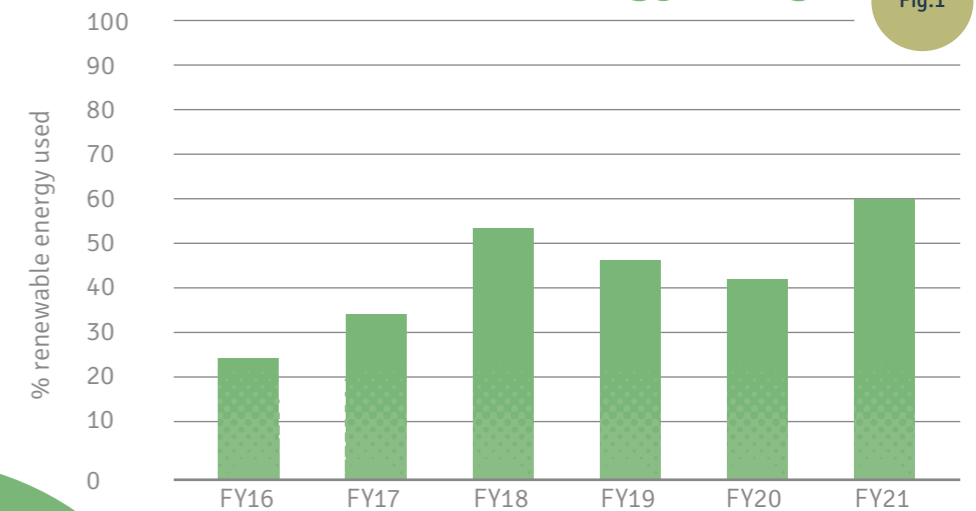
### Ensure financial leveraging remains below 25%

Despite significant investments across our business that required some bank financing, we still achieved our self-imposed target of maintaining leveraging below 25%.



### Renewable Energy usage

Fig.1



Ultimately, we want to be a company that lasts for many future decades and has a positive impact on the environment.



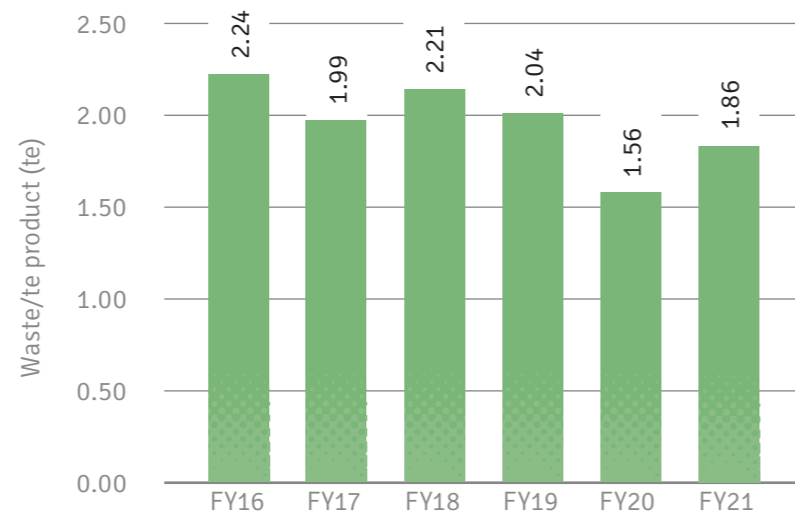
## Develop a plan to replace gas boilers and integrate biogas and integrate biogas

A plan to replace the gas boilers has been developed and is planned to be implemented over the next 12 months, dependent on business conditions. A facility to allow the use of biogas from the AD plant has been identified but will require the owners of the AD plant to invest to increase their biogas production volumes.



## Waste produced per ton product

Fig.2



## Achieve 5% reduction in utilities across the site (gas, water, electricity, cryogenic nitrogen)

At Thomas Swan, we use a range of utilities with variable consumption depending on the products being manufactured. FY21 saw a 23% reduction in gas consumption and a 17% reduction in electricity consumption. Unfortunately, water and cryogenic nitrogen usages increased. The reduced gas and electricity use is a result of the continued implementation of our energy reduction strategy. The increased water and nitrogen uses are linked to process development work on one of our manufacturing plants to increase capacity and improve product quality. (Fig.3)

Fig.3

Utility	FY20	FY21	Difference (%)
Gas (MWhr/t product)	3.79	2.90	-23
Electricity (MWhr/t product)	1.33	1.10	-17
Water (t/t product)	9.56	9.80	3
Cryogenic nitrogen (monthly average m3/t product)	8.2	9.1	11

## Achieve 5% reduction in waste across the site

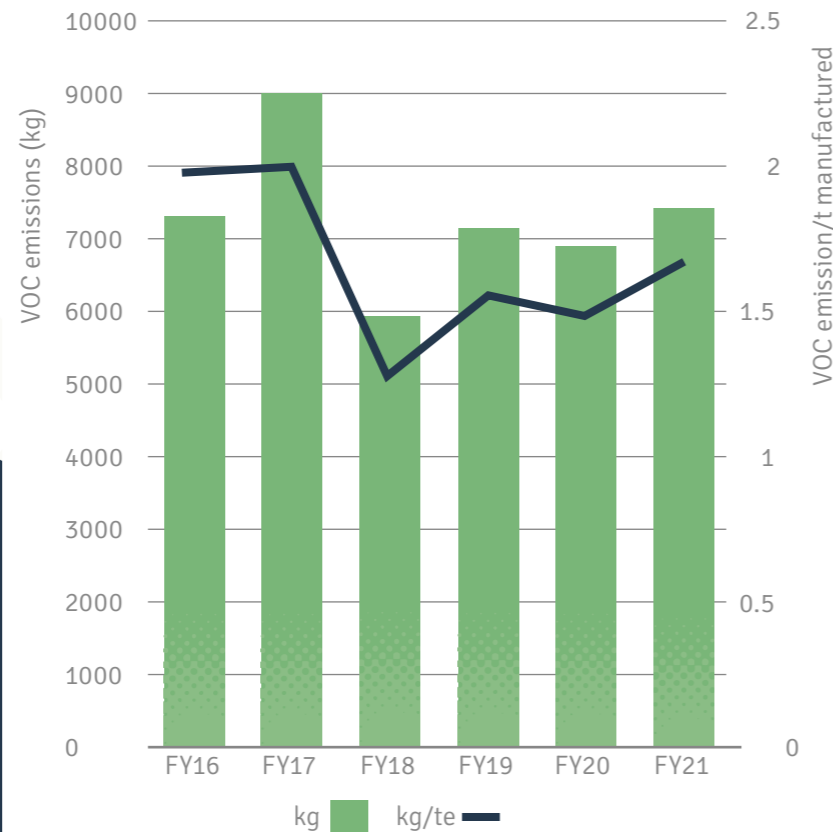
The reduction of waste produced by our manufacturing activities is a critical target for our business. In FY21, the waste per ton of product increased as a result of process development activities and reduced water recycling on one of our manufacturing processes. Significant work continues in this area to improve process capability and reduce water use. (Fig.2)





Fig.4

## Annual VOC emissions



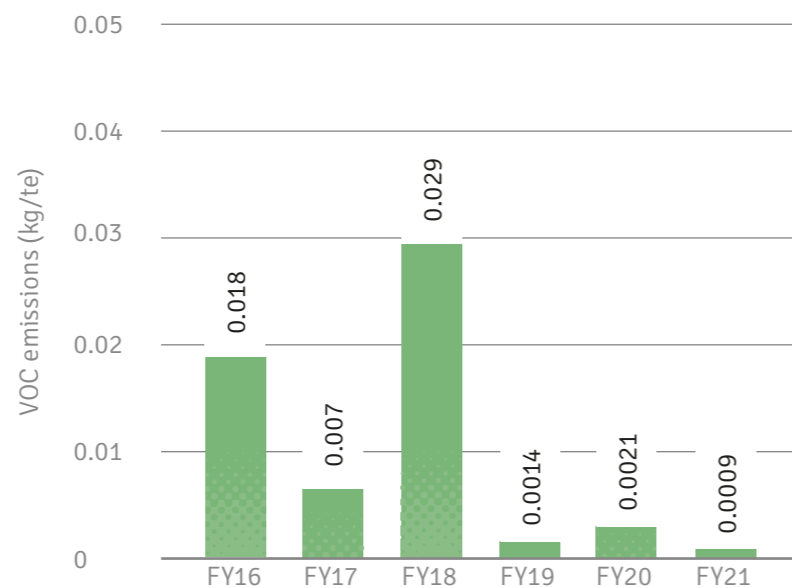
## Achieve year-on-year reduction in VOC emissions

In FY21 we unfortunately saw a 6% increase in our VOC emissions. This performance would have been influenced by the mix of products manufactured. Our Class A VOC emissions reduced from 0.0021 kg/ton to 0.0009 kg/ton (Fig.4). These levels remain extremely low, equating to less than 10 kilogrammes of Class A solvent emissions in FY21. (Fig.5)



Fig.5

## Class A VOC emissions



## Achieve year on year 5% reduction in Chemical Oxygen Demand in wastewater

Chemical Oxygen Demand (COD) is a test that measures the amount of oxygen required to chemically oxidise the organic material present in water. Higher COD levels indicate greater levels of organic materials are present in our wastewater. Our performance in FY21 saw an increase of 55% in the quantity of COD in wastewater per ton of product manufactured. This increase is linked to process development work on one of our manufacturing plants to increase capacity and improve product quality. We used more water in FY21 which resulted in the monthly average COD in wastewater decreasing by 29%. (Fig.6)

Fig.6

	FY20	FY21	Difference (%)
COD in wastewater (t/t)	5.4	8.3	55
COD in wastewater (monthly ave. mg/l)	4,357	3,093	-29





## Develop a plan to achieve net zero carbon by 2030

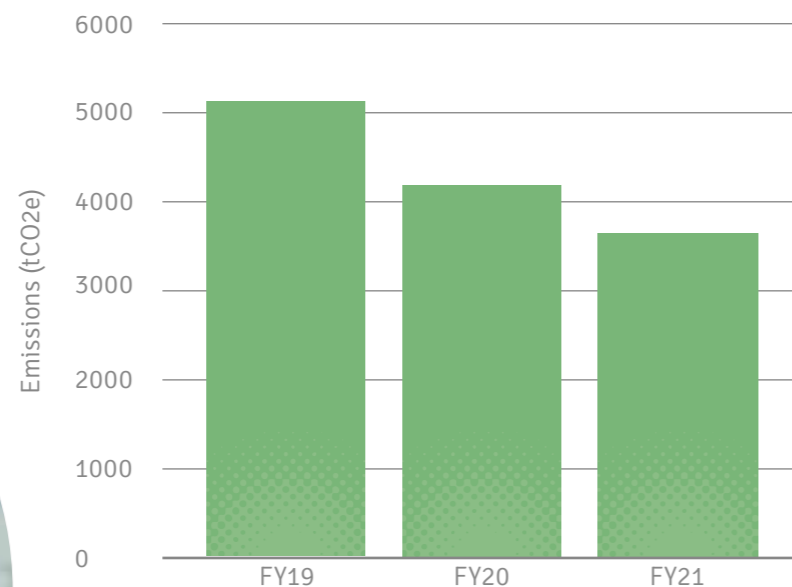
Thomas Swan has worked with the Carbon Trust to accurately measure our greenhouse gas (GHG) emissions from our activities at Consett. The measurement of carbon footprint consists of three areas (scopes) which are defined as:

- **Scope 1 emissions** are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by Thomas Swan.
- **Scope 2 emissions** are GHG emissions from the generation of purchased electricity, steam, heat, and cooling.
- **Scope 3 emissions** are GHG emissions from other indirect emissions. We considered only Thomas Swan business travel by aeroplane, train, and car for this work.

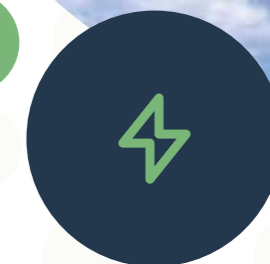


Fig.6

### TSCL Carbon Footprint (market based)



Our Carbon footprint was verified as 5,081.99 tCO<sub>2</sub>e (market based) in FY19 with the majority of our carbon footprint linked to our use of natural gas (Scope 1). In FY20, our carbon footprint reduced by 17% to 4,194.13 tCO<sub>2</sub>e (market based). In FY21, our carbon footprint reduced by a further 10% to 3,770.29 tCO<sub>2</sub>e (market based). This shows the continued beneficial implementation of our energy reduction strategy. Thomas Swan has decided against a Carbon Offsetting strategy at this stage and will continue to drive down its carbon footprint to a minimum before implementing carbon offsetting. (Fig.6)



## Maintain Ecovadis Platinum status

In FY20, Thomas Swan was awarded platinum status from Ecovadis for the first time. This significantly exceeded our target and placed Thomas Swan in the top 1% of all companies in the Chemicals sector, along with companies such as Croda. In FY21, we retained our Platinum status and improved our overall score. This means that Thomas Swan has improved its Corporate Social Responsibility practices in the four business areas that are assessed by Ecovadis: Environment, Labour and Human Rights, Ethics and Sustainable Procurement.



# 5

## FY22 Sustainability Objectives



### Business Development

- Ensure that all existing products, New Product Development and New Application Development projects have been assessed using the Product Sustainability Impact Assessment tool.
- Identify and promote examples of new Thomas Swan competencies and capabilities.



### Excellence through Continuous Improvement

- Target zero accidents.
- Aim to keep rejections below 3% across the full product portfolio.
- Develop strategies to minimise (remove/reduce/recycle) water that leaves the manufacturing site as aqueous waste (by tanker or via the effluent pit) to minimise disposal costs and tanker movements.
- Review the structure of the Thomas Swan website to reflect strategic changes made within the business.
- Review and update the processes used to encourage employee participation across the business in annual awards for Innovation, Operational Excellence and Sustainability.



### Sustainability

- Develop and communicate a road map to achieve net zero carbon emissions by 2030 or develop and communicate Science Based Targets.
- Achieve year-on-year 5% reduction in COD in aqueous waste per ton of product made.
- Achieve year-on-year 5% reduction in Utilities used across the site (gas, water, electricity and cryogenic nitrogen) per ton of product made.
- Achieve year-on-year 5% reduction in VOC use and emissions per ton of product made.
- Achieve year-on-year 5% reduction in waste produced across the site per ton of product made.
- Maintain year-on-year improvement in renewable electricity use.
- Ensure financial leverage remains below 25%.
- Agree and deliver a community project.



### People Development

- Achieve a target of two hours training per month, per employee.
- Achieve 100% returns of Personal Development Reviews by the end of March 2023.
- Draft, discuss, approve and communicate a clear grading structure of positions across the company.
- Draft, agree and publish a road map to improve diversity and inclusion in all areas of the business.
- Implement the agreed "Positive People" programme.
- Continue to take on apprenticeships where there is a need to develop skills required to support the business.



**Thomas Swan**

*Chemical manufacturing since 1926*