



Thomas Swan

Chemical manufacturing since 1926

**Responsible
and Regenerative**

Sustainability Report

20
22

01

A word from our CEO

As I write the introduction to our latest Sustainability Report, the news is awash with the decision by Rishi Sunak to delay the ban on the sale of petrol or diesel vehicles in the UK to 2035. While disappointing, it also shows how the practicalities or costs of meeting our climate change goals sometimes slows down our progress. Only time will tell if mankind did enough, and fast enough to avoid the worst predictions of climate change. My time on the Cambridge Institute for Sustainability Leadership course stressed the importance of moving quickly enough to ensure an “orderly transition” from our current state to the low carbon future we must achieve. The alternative of a “disorderly transition”, otherwise known as a full-blown global crisis, is an extremely unpleasant scenario to consider.

It is with that thought in mind that I reinvigorate my commitments to move my own business as fast as possible towards our sustainability goals.

Only time will tell if mankind did enough, and fast enough to avoid the worst predictions of climate change.

As always, this year’s report shows some encouraging progress and some areas that require continued efforts or greater attention. It is also worth remembering that sustainability is not just about climate change commitments. For us, it is also about ensuring we are here for the long term. Setting up the Company to run in a way that perpetuates its survival and long-term success. For me, this is often about non-monetary aspects such as our values and how we behave to each other and our wider stakeholders. I have recently signed off our most recent version of our Modern Slavery Statement which commits the Company to ensuring that our operations are free from involvement with slavery or human trafficking. To many people this would be a standard, even basic, expectation of any company, but such policies, and a commitment to enforcing them, ensure a safer and more prosperous World for all. In return we are rewarded with a stable environment in which to do business.

I am delighted to announce that we have recently acquired the Anaerobic Digestion plant on our land at Consett. We have since invested in a complete overhaul of the facility and expect it to restart over the coming weeks. This means we should finally see a sustained and significant electrical output from the plant that will allow us to run our production on 100% renewable electricity. This will be a significant step on our journey to become carbon neutral by 2030 and we have longer-term plans to address our gas use. Exciting times ahead!

Thank you for your interest in Thomas Swan as we continue our efforts to be a truly sustainable Company.



Harry Swan,
CEO
Thomas Swan



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02

People Development:


Thomas Swan will be unable to achieve its vision to become a sustainable manufacturer of speciality chemicals without the support of its employees. It is essential that we continue to develop their skills and use their talents to realise our goals, but we must ensure that they have high levels of job satisfaction which will maintain retention whilst attracting new talented people into the business.

Our targets for FY22 were as follows:



Achieve an average of two hours per month training for each employee

Unfortunately we were unable to meet this target as there was significant impact from the economic conditions on the business. With the introduction of the three shift system, this will facilitate time for staff to train on their current and new work areas.




Achieve 100% return of Personal Development Reviews (PDR's) by the end of March 2023

We did not achieve this target because of our response to difficult business conditions. We have utilised our "Skill Station" software, used to assess and record employee training, to improve the delivery of personal development reviews by converting the review document into an electronic format.





Strive to take on Apprenticeships to maintain skills within the business

The recruitment of apprentices into the Team is a means of maintaining skills within the business. This year two apprentices were recruited into the Logistics and Operations areas.






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

It is essential to the performance of Thomas Swan that we continue to both reward and support members of our Team who have been promoted into Leadership positions. Eliesha Training are delivering Leadership and Management apprenticeships at Thomas Swan. Three staff members are continuing their training under this scheme.


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 FY23, delayed from FY22.

Draft, discuss, approve and communicate a clear grading structure of positions across the business

During FY22, a grading structure was developed and agreed with the GMB Union for employees who work in Operations as there were sufficient people to make the grading structure effective. A different solution for other business areas will be developed to account for lower employee numbers.



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

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

03

Excellence through Continuous Improvement:

Thomas Swan's ethos is that Sustainability is at the heart of everything we do. This is embedded in how we work, by minimising our resource use throughout our manufacturing processes and systems, to encourage and develop our people, and how we ensure that they have a safe and productive environment in which to work.

We will continue to work hard to achieve Excellence in all that we do by continually learning and applying this knowledge constructively to improve our performance.

Our targets for FY22 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 was one accident recorded in FY22.



Achieve zero incidents

Incidents, which Thomas Swan describe as any event that has a detrimental impact on health, safety, or the environment, are reported as a key health, safety and environment key performance indicator. In FY22 we had two incidents under this classification. Our near miss reporting system is employed to reduce the likelihood of the occurrence of accidents and incidents.



Aim to keep rejections below 3% across our full product portfolio

Thomas Swan manufactures a range of Specialty Chemicals. These products are produced to a high specification and are usually the "active ingredient" in formulations used in a wide range of challenging applications. The reject rate of 2.9% achieved in FY22 met our target and was an improvement on last year's performance of 3.5%.



Develop strategies to minimise (remove/reduce/recycle) water that leaves site as aqueous waste (via effluent pit or by tanker) to reduce disposal costs and tanker movements

A cross-function team from Works Laboratory, Engineering and R & D performed a Pareto analysis of the sources of aqueous waste streams on site and targeted one manufacture process that had a significant contribution to aqueous waste. A program of process development and monitoring was undertaken alongside a planned debottlenecking and automation project resulting in a reduction in aqueous waste from this process.



Review the structure of the Thomas Swan website to reflect the changes made within the business

The website has been reviewed and this requires a significant body of work to produce a site that not only reflects the changes to the business but adds additional capabilities required by our strategy. A plan has been agreed and is in progress with a target of implementation of the new website in Q1 next financial year.



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

- Review and update the processes used to encourage employee participation across the business in the annual Innovation, Operational Excellence and Sustainability awards.

04

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 change our product offerings to ensure that they are tailored solutions for our chosen markets. This can be achieved by customer-focussed 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 was to create a focussed 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.

Our targets for FY22 were as follows:

Ensure that existing products, New Product Development and New Applications Development projects are assessed using the Product Sustainability Impact assessment tool

Following a project review a project priority list was agreed. For our new products from Green Feather Innovations, we have embedded our sustainability targets within the new product description. It became clear that the value of the information from the sustainability impact tool was in comparing our new products with existing products in estimating the potential benefits of the new product. This is currently work in progress.



Identify and promote three examples of new competencies and capabilities

Thomas Swan have commissioned a virtual reality video tour of our Keystone plant. The video gives customers the ability to take an immersive, interactive virtual tour of the plant, without adding to their carbon footprint by travelling to site.

The video is both promotional and informative, highlighting the capabilities of Keystone.



05

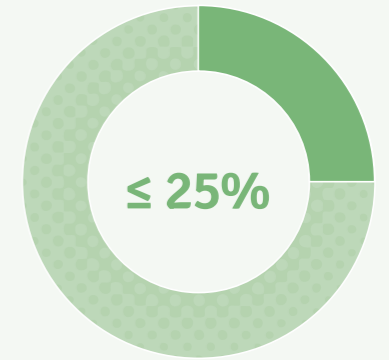
Sustainability:

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.

Ensure financial leveraging remains below 25%

We achieved our self-imposed target of maintaining leveraging below 25%, despite very challenging business conditions last financial year.



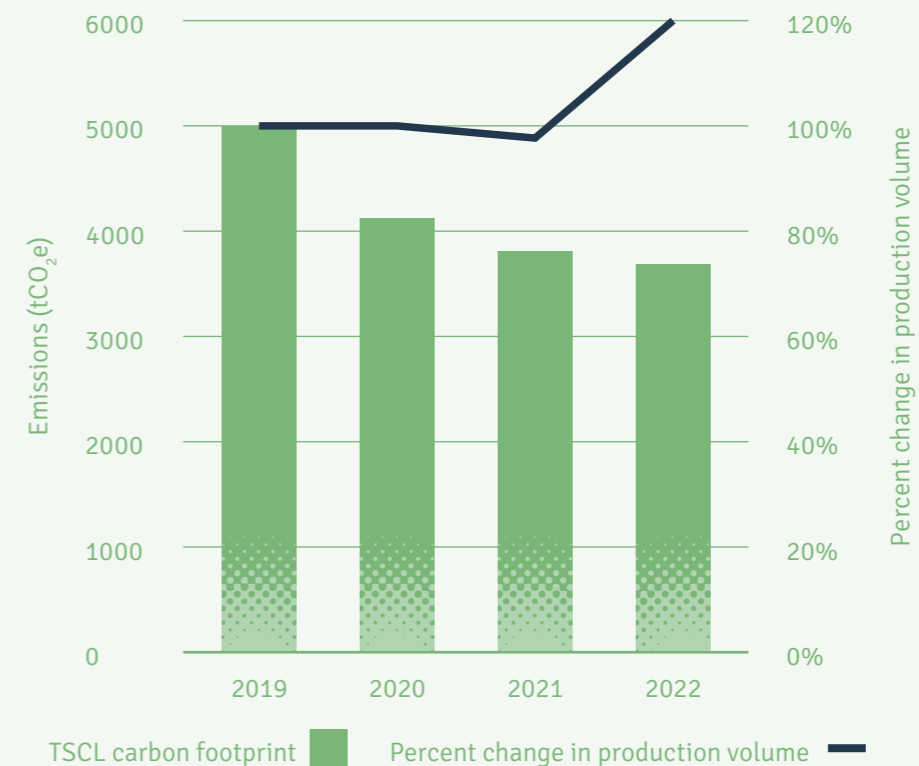
Develop a plan to achieve net zero carbon by 2030

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.



TSLC carbon footprint (market based) and percent change in production volumes (ref 2019)



Our Carbon footprint was verified as **5,081.99 tCO₂e** (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 tCO₂e** (market based). In FY21, our carbon footprint reduced by a further 10% to **3,770.29 tCO₂e** (market based) and in FY22 fell by 4% to **3,635.05 tCO₂e**. This shows the continued beneficial implementation of our energy reduction strategy. This result was obtained with a significant increase in production volume of 18% in FY22 compared to our FY19 baseline.

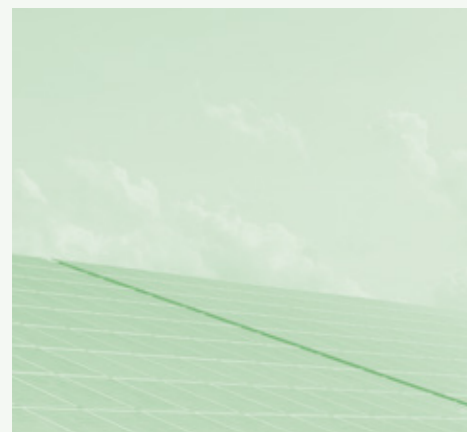
Thomas Swan has decided against a Carbon Offsetting strategy at this stage and will continue to drive down its carbon footprint to a minimum before implementing carbon offsetting.

Maintain year on year improvement in renewable electricity use on site

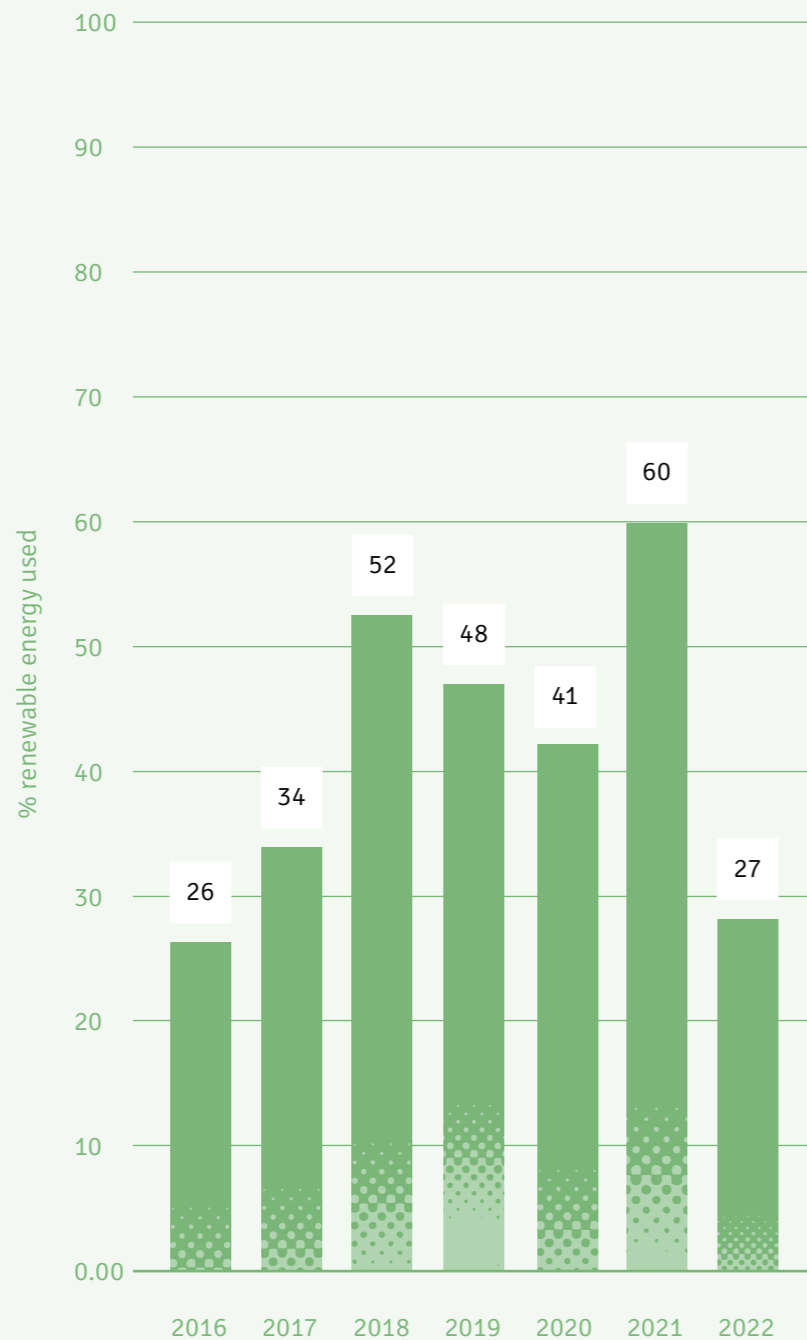
Thomas Swan was adversely affected by the performance of the anaerobic digestion process during last financial year where only 27% of our electricity needs were supplied, compared to 60% in FY21. This reduction in performance was driven by several issues with maintenance and reliability of operation of the plant.

A strategic decision was taken to purchase the Anaerobic Digestion plant when the opportunity arose this financial year. Obtaining this asset will benefit Thomas Swan in the future, as with investment:

- has the capability to supply all Thomas Swan's electricity requirements
- can produce biogas to reduce Thomas Swan's reliance on natural gas
- enables stability in supply and the cost of Thomas Swan's future energy needs
- will result in a marked reduction in Thomas Swan's carbon footprint. This will be a significant step towards our Net Zero by 2030 goal.



Renewable Energy usage



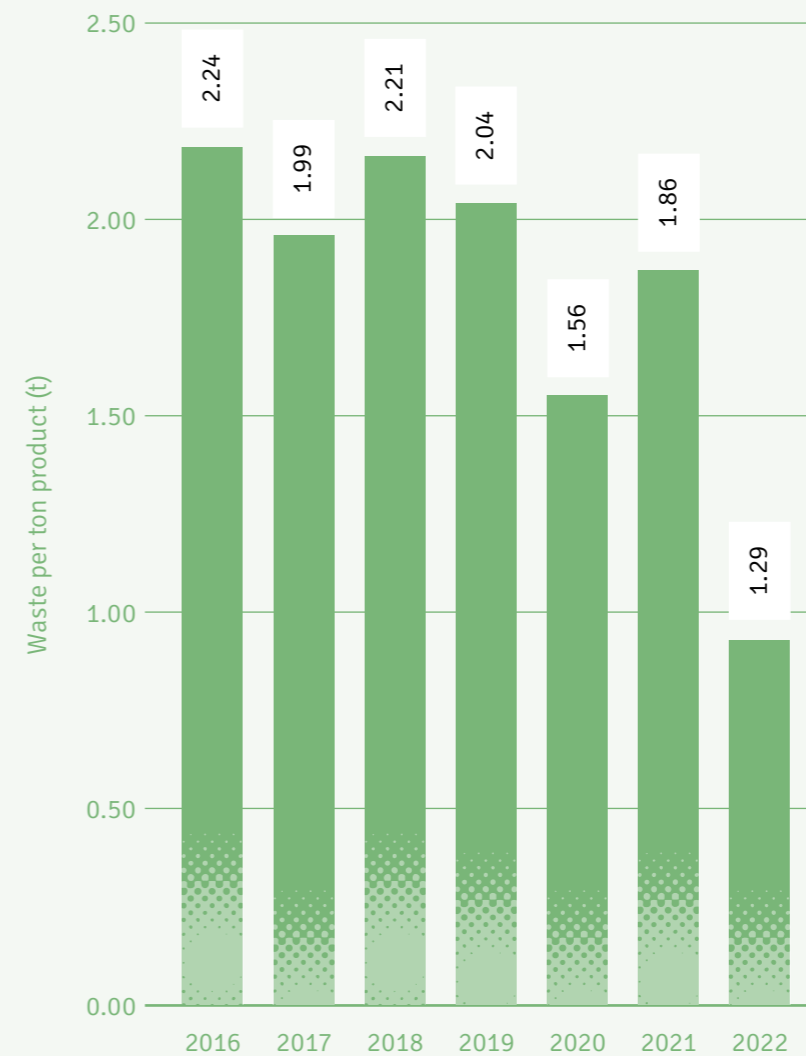
Develop and communicate a road map to achieve net zero carbon emissions by 2030 or develop and communicate Science Based Targets

Thomas Swan have assessed the guidance produced by organisations such as the Chemical Industries Association in setting intermediate targets towards our net zero carbon goal. With the knowledge that the largest contributions to our carbon footprint have been identified as our Scope 1 and 2 emissions we have, by our annual targets of 5% reductions in energy use, have a basis to which to build.

This objective was superseded with the acquisition of the Anaerobic Digestion Plant which will have a transformational effect towards achieving our Net Zero carbon goal by 2030.



Waste produced per ton product



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 FY22, the waste per ton of product decreased as a result of process development activities and water recycling as part of our continuous improvement programme on our manufacturing processes. Significant work continues in this area to improve process capability and reduce water use.



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. FY22 saw a 27% reduction in gas consumption, a 4% reduction in electricity consumption and 13% reduction in water use. Unfortunately cryogenic nitrogen usage increased. The reduced gas, electricity and water uses are a result of the continued implementation of our energy reduction strategy and the mix of products made. The increased cryogenic nitrogen use was linked to a fault in the facility used to generate nitrogen. The nitrogen generation plant is operating at a reduced output whilst the fault is rectified.

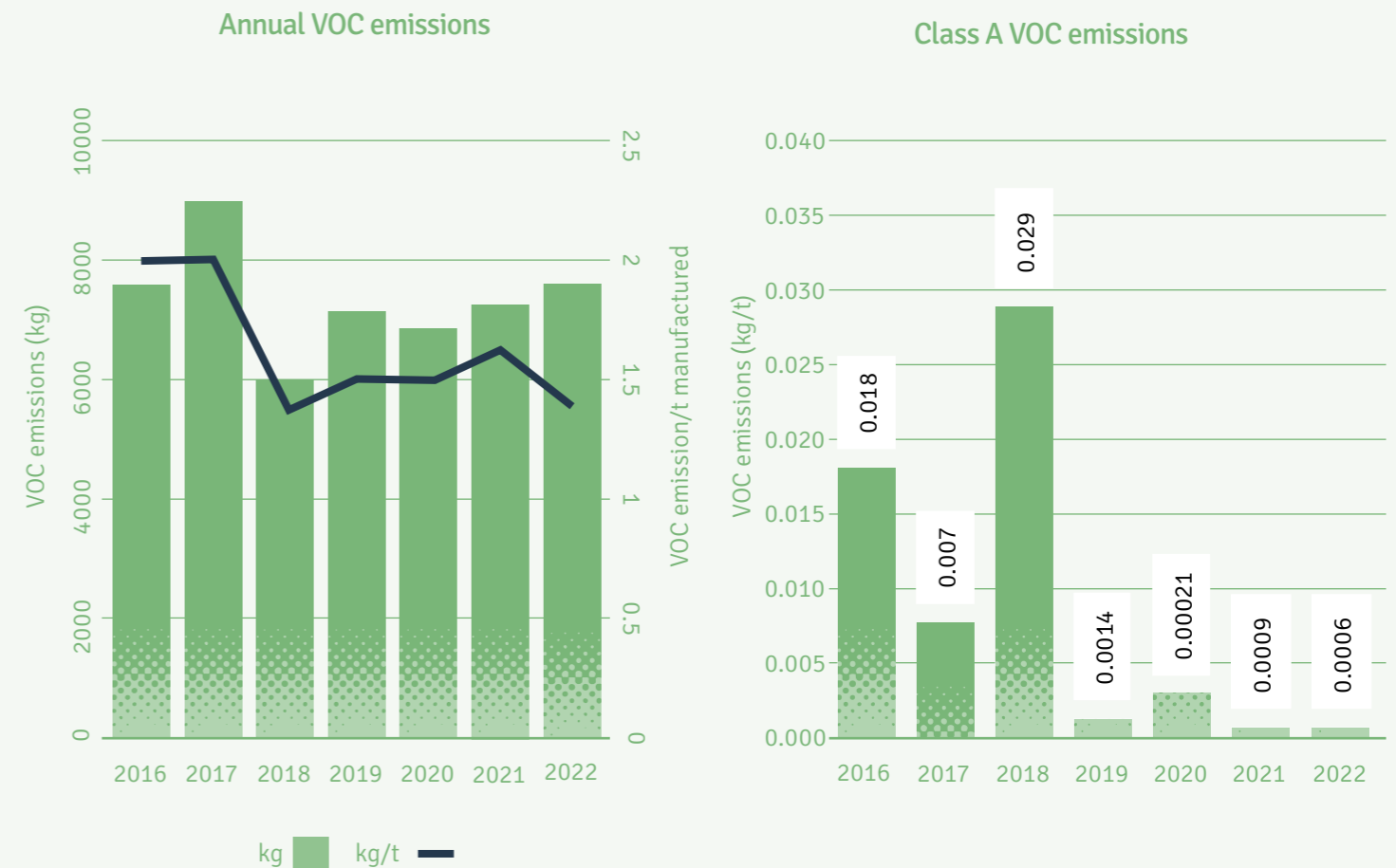


Utility	2021	2022	Difference (%)
Gas (MWhr/t product)	3.45	2.51	-27
Electricity (MWhr/t product)	1.10	1.06	-4
Water (t/t product)	9.75	8.50	-13
Cryogenic nitrogen (monthly average m3/t product)	9.1	15	65



Achieve year-on-year reduction in VOC emissions

In FY22 we saw a very small 6% increase in our VOC emissions. This performance would have been influenced by the mix of products manufactured. Our Class A VOC emissions showed a small decrease from 0.0009 kg/ton to 0.0006 kg/ton which is within the error of the measurement. These levels remain extremely low, equating to less than 10 kilogrammes of Class A solvent emissions in FY22.





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

Chemical Oxidation 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. Water reduction and recycling activities have proved successful in 2022 which resulted in a 33% reduction in waste water. We used less water in 2022 leading to average COD levels in waste water increasing by 41% The total amount of COD discharged in waste water was reduced despite the increased COD. This is an encouraging result as we increased manufacturing volumes by 18% in FY22.



	2021	2022	Δ (%)
Wastewater volume (tpa)	37,397	24,973	-33
COD in wastewater (monthly ave. mg/l)	3,093	4,370	41



Maintain EcoVadis Platinum status

Unfortunately we were unable to maintain our EcoVadis platinum status in FY22, narrowly missing the target to retain Platinum status by just 1%, we did achieve gold status, which is still a credit-worthy performance. Whilst losing platinum status is disappointing, the EcoVadis accreditation process identified areas where we can improve. Our experience demonstrates that to maintain the platinum status is challenging and requires year-on-year improvement in performance. A cross-functional team has developed and are implementing solutions to the improvement opportunities identified by EcoVadis.



06

Proposed FY23 Sustainability Objectives



Business Development

- Develop an objective definition of sustainability by which Thomas Swan existing and new products are benchmarked and perform the benchmarking exercise for TSCL's top 5 products in FY23.
- Perform "cradle to gate" life cycle analysis on top 5 TSCL products by end of FY 2024/5, on 50% of all products by end of FY 2026/7 and all products by 2027/8.
- Determine the Bio based content assessment (EN 16785-1) on TSCL's top 5 products by end FY23 and all products by end of FY 2024/5.
- Use the three metrics above (sustainability definition, life cycle analysis and bio-based content) as the method of communicating the product sustainability profile of TSCL's top 5 products to customers and stakeholders.
- Update TSCL ESG Materiality assessment and communicate on new TSCL website and include in FY23 Sustainability report.



Excellence through Continuous Improvement

- Target zero accidents.
- Aim to keep rejections below 2.5% across the full product portfolio.
- Deliver the plan to develop a new TSCL website for launch in Q1 FY24.
- Review and update the processes used to encourage employee participation across the business in annual awards for Innovation, Operational Excellence and Sustainability.
- Perform an audit of the digital systems in use at TSCL and their interactions to determine the current status. Develop, plan and communicate the strategy to prepare TSCL digital systems for future growth.
- Target world class performance of 95% for on time in full (OTIF) dispatch of products to our customers.
- Target 95% of Thomas Swan's key suppliers of products and services being members of EcoVadis or equivalent organisations.



Sustainability

- 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 - maintain the footpath around TSCL site.
- Provide three school (Primary or Secondary) engagements on site.
- Provide work experience for four students aged between 16 & 18.
- Perform two engagements with university students.
- Target regaining our Platinum EcoVadis score on accreditation in 2024.



People Development

- Achieve a target of an average of two hours training per month, per employee. This will include the following targeted training in the following areas:
 - Train 50% of managers in Equity, Diversity and Inclusion by 31/3/2024
 - Train 50% of managers in Unconscious Bias by 31/3/2024
 - Train 100% of all employees in Equity, Diversity and Inclusion by 31/12/2024
 - Train 100% of all employees in Unconscious Bias 31/12/2024
 - Train 100% or relevant employees in Competition Law by 31/3/2024
 - Train 100% of relevant employees in Prevention of Bribery in Business
- Achieve 100% returns of Personal Development Reviews by the end of March 2024.
- 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.
- Re-introduce Thomas Swan "Open Days" for all staff where Thomas Swan's values and business ethics are refreshed.



Thomas Swan
Chemical manufacturing since 1926

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