CRODA

Meeting global challenges
Capturing new opportunities

Annual Report and Accounts 2022

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Highlights in 2022

Sales

£2,089.3m

2021: £1,889.6m

Sales growth (constant currency)

+5.2%

2021: +43.2%

Adjusted profit before tax (PBT)

£496.1m

2021: £445.2m

IFRS profit before tax (PBT)

£780.0m

2021: £411.5m

Ordinary dividend (proposed full year)

+8.0%

2021: +9.9%

Scope 1 & 2 emissions ($TeCO_2e$)

121,093

2021: 133,899

Land area saved (hectares)

145,709

2021: 125,958

Total Recordable Injury Rate

0.74

2021: 0.76 (restated)

Note: We use a number of Alternative Performance Measures (APMs) to assist in presenting information in this report in an easily analysable and comparable form. APMs are defined in the Finance Review on page 47.

Sustainability is embedded into how we operate as a business and sustainability related content is interwoven throughout this report. This report forms part of a wider reporting suite and the table below details where to find certain disclosures within this suite.

Information provided	Annual Report	Sustainability Report	Non-financial data pack	Fundamentals factsheets	www.croda.com
Sustainability Commitment progress	✓	✓	✓	✓	✓
Non-financial information statement	✓				
TCFD	✓				
GRI			✓		
SASB review			✓		
Principal Adverse Impact Statement			✓		

Meeting global challenges

The world is facing global challenges that will shape our lives, consumer demands and technology megatrends for generations to come.

Living sustainably within our planetary boundaries

Global demand for health and wellbeing

Feeding a growing population and restoring nature

For more information on the global challenges
See pages 24-26

Capturing new opportunities

By applying our Purpose and using Smart science to improve lives™ we can rise to the challenges society faces, capturing new opportunities for growth.

Positively impacting everyday life

Consumer Care

For more information
See pages 28-29

Pioneering the future of Pharma

Life Sciences – Pharma

For more information
See pages 30-31

Innovating for sustainable agriculture

Life Sciences – Crop Care

For more information
See pages 32-33

How this report is structured

Our strategic report includes three core sections to communicate our story and how we are addressing global challenges and capturing new opportunities for growth:

Strength in our foundations

See pages 2-23

Our Purpose, culture, business model and strategy underpin our success and provide us with strong foundations.

Exploring new horizons

See pages 24-33

We are repositioning our portfolio to be more closely aligned with the powerful megatrends that are reshaping our markets, creating new growth opportunities, where we can apply our smart science to improve lives.

Delivering consistent outperformance

See pages 34-51

These pages cover our performance in 2022, demonstrating consistent execution against our strategy and commitment to be Climate, Land and People Positive by 2030.

At a glance
A balanced global footprint

About us

Croda is the name behind some of the world's most successful brands. We combine our knowledge, passion and entrepreneurial spirit to create, make and sell innovative ingredients that are relied on by industries and consumers around the world.

Our Purpose

We provide practical solutions to help address some of the world's biggest challenges. Our Purpose, **Smart science to improve lives™**, underpins everything we do.

Our Commitment

We are committed to being the world's most sustainable supplier of innovative ingredients by becoming Climate, Land and People Positive by 2030. The United Nations Sustainability Development Goals (SDGs) underpin our approach.

For more information on our Purpose
See pages 12-13

Where we operate

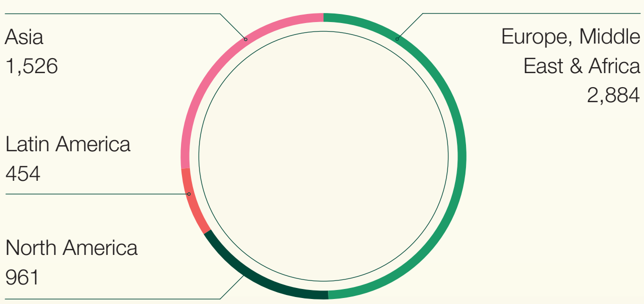
We operate globally with a balanced footprint across 92 sites, constituting global manufacturing, with local sales offices and innovation centres. Our footprint balances the need for efficient manufacturing operations with our desire to be close to customers. Our 24 principal manufacturing sites are complemented by 19 local manufacturing sites that typically support our Fragrances and Flavours and Seed Enhancement businesses. All our locations have externally validated decarbonisation roadmaps in place.

North America
5 manufacturing sites
6 innovation centres
6 sales offices

Latin America
5 manufacturing sites
6 innovation centres
11 sales offices

Key
- Principal manufacturing site
- Other manufacturing site
- Innovation centre
- Sales office

Employees by region



Our markets

Consumer Care

Positively impacting everyday life
We develop innovative and sustainable ingredients that provide vital functionality to Consumer Care formulations, enabling customers to differentiate their products.

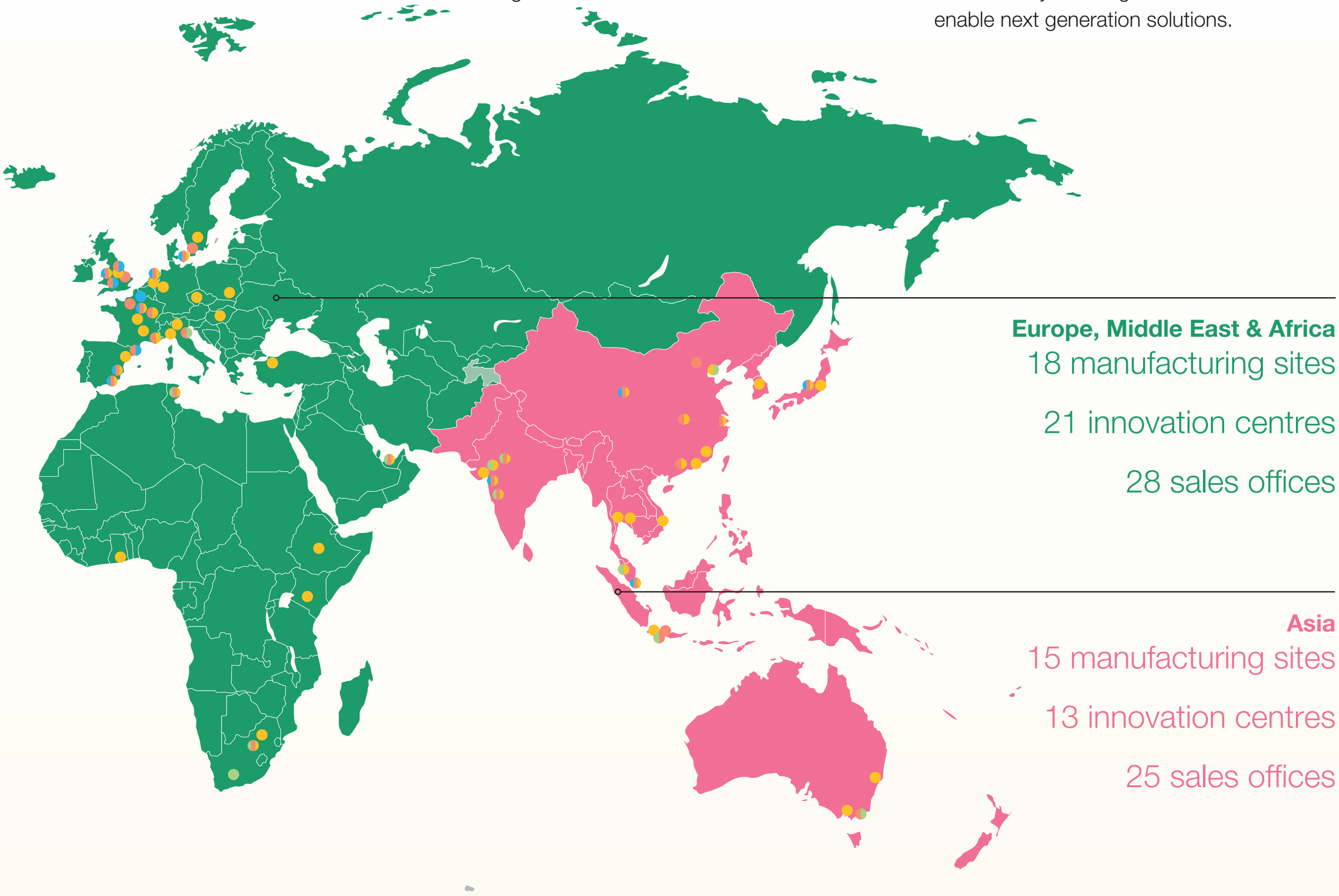
Life Sciences

Pharma

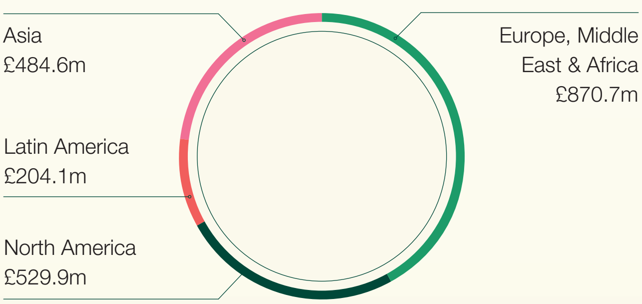
Pioneering the future of Pharma
We develop components and systems for the delivery of Active Pharmaceutical Ingredients (APIs), enabling delivery of the next generation of biologic drugs and vaccines.

Crop Care

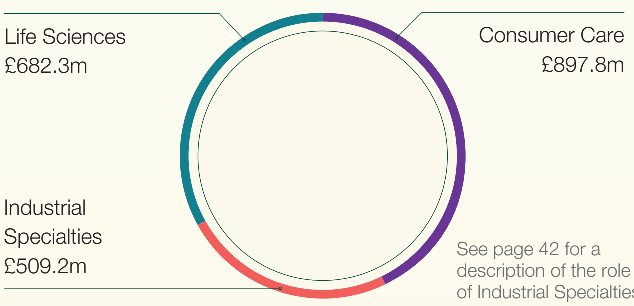
Innovating for sustainable agriculture
We are an innovation partner to crop science companies, developing delivery systems to meet the sustainability challenges and enable next generation solutions.



Sales by region



Sales by sector



See page 42 for a description of the role of Industrial Specialties.

Chair's statement
Strong foundations, new horizons and a consistent track record

Dame Anita Frew DBE, Chair

"Croda has always had a unique culture, built on customer intimacy and innovation, and reflecting an entrepreneurial spirit."

Ordinary dividend

+8.0%

(2021: +9.9%)

Lives benefitted by Croda Foundation

14.9m

Strength in our foundations

Following Croda's significant strategic transition over recent years we have a compelling, focused portfolio, operating in attractive market niches with long-term trends creating valuable growth opportunities. This Annual Report sets out how we are meeting the global challenges of today and capturing these new opportunities. Given Croda's long history of successful development, this journey is explored through our strong foundations, new horizons and consistent outperformance.

Purpose-led

Our Purpose is the bedrock of our approach. Firstly, 2022 has seen us strive to deliver more for our customers, working closely with our partners to overcome global supply chain and demand challenges. The second year of our global survey showed an improvement in our customer rating. Secondly, we have looked after our employees in the face of escalating living costs – already a living wage employer, in 2022 we added new benefits, such as free private health care for all UK employees and one-off payments that benefitted many of our lower paid employees the most. All employees globally were gifted 10 Croda shares under our Free Share Plan, enabling them to share in Croda's success as shareholders, and recognising that our success is driven by our people, whom I thank on behalf of the Board, for their hard work, dedication and customer focus. Thirdly, we are benefitting our communities, through our long-standing volunteering programme and educational outreach. In addition, the Croda Foundation has approved over £1.1m in funding for 13 projects and distributed £1.8m of restricted health care grants to vaccine and health infrastructure projects in South Asia, Africa and Brazil. Collectively these projects are benefitting over 14.9 million lives, including indigenous tribes in the Amazon as outlined in the case study to the right.

People-first culture

Croda has always had a unique culture, built on customer intimacy and innovation, and reflecting an entrepreneurial spirit. Promoting this 'One Croda' culture and our values is important to our long-term success; in our decentralised model, this allows decisions to be taken close to customers, making us more agile, whilst delivering the governance and consistency we expect. Our culture is also enabling us successfully to onboard new employees with over 3,000 new employees joining Croda either through recruitment or acquisition since the end of 2019. Our employee survey is delivering consistently high engagement scores. The Board is also promoting diversity, with a target to achieve gender balance in leadership roles by 2030. 2022 saw women occupy 38% of these roles (2021: 36%).

An experienced Board

Alongside having an effective and challenging Board, I am pleased that the Board has met gender and ethnic diversity commitments under the Parker and Hampton Alexander Reviews. We have also expanded the skill set of our Non-Executive Directors (NEDs) to reflect Croda's journey to a 'pure play' focus on Consumer Care and Life Sciences. During 2022, we welcomed Nawal Ouzren, CEO of biopharmaceutical company Sensorion, as a NED.

The 2023 AGM will see the retirement of two Board colleagues. Dr Helena Ganczakowski retires after nine years of NED service, having served as Chair of the Remuneration Committee and Senior Independent Director. Jez Maiden retires after eight years as Group Finance Director, to be replaced by Louisa Burdett, who joined the Board this January and who was, until recently, Chief Financial Officer of Meggitt Plc. On behalf of the Board, I would like to thank both Helena and Jez for their outstanding contributions to the development and growth of Croda and for the diligence, intellect and thoughtful manner in which they have approached their roles. With our recent appointments, your Board has the diversity of experience to provide effective oversight and guidance as Croda enters its next phase of growth.

Established business model

Croda has a well established and powerful business model, founded on a direct sales force who build relationships with customers and provide insights into new opportunities, that are key to developing new products. We are a leading innovator in our markets, with a technology portfolio differentiated by valuable know-how, giving our ingredients unique characteristics. We leverage this portfolio to target fast growth niches, where our innovative and sustainable ingredients are valued through higher margins. This business model is enabling successful implementation of our strategy and consistent outperformance.

Exploring new horizons

Whilst our Purpose remains constant and our culture and business model have developed with new challenges, our strategy has continued to evolve. Working together over the last two years, the Board and Executive Committee have repositioned Croda's portfolio to deliver future growth.

This repositioning is capturing new opportunities by refocusing the business away from maturing markets in order to capitalise on the future megatrends. In the consumer care market, sustainability is the biggest single driver over the next decade, accelerating the demand for sustainable ingredients. The life sciences market is being driven by the rise of biologics, complex molecules that are already transforming medicine and will transform agriculture over the next decade. Through our strategy implementation, including recent acquisitions and the successful divestment of most of our industrial business during 2022, we are responding to these megatrends, and becoming a pure play company focused on high value niches in Consumer Care and Life Sciences. This is creating a higher margin, higher return, less cyclical, more knowledge intensive, and lower carbon intensive business.

The divestment has also released capital to invest in scaling our consumer, pharma and crop care technologies. In line with our capital allocation policy, we are focused on reinvesting the proceeds in organic capital investment, leveraging the exciting growth opportunities in these markets. In 2022, we were pleased to agree co-investment programmes with the US and UK governments, recognising the importance of our pharma technologies to pandemic preparedness and drug discovery. Supporting our organic investment programme, we are continuing to explore opportunities in adjacent technologies that can further enhance our consumer and life science portfolio.

Alongside enhanced investment, we are also committed to providing regular, growing returns to shareholders. The Board has proposed an 8% increase in the full year ordinary dividend and will continue to monitor the Group's ongoing capital requirements alongside any surplus capital, in line with our policy.

Delivering consistent outperformance

Croda continued its consistent outperformance in 2022, despite challenging economic conditions resulting from the conflict in Ukraine, energy crisis and supply chain inflation. For the first time, we have delivered over £2bn in sales and more than £500m in adjusted operating profit. This has reflected continued exciting growth across our Life Sciences sector, as well as our geographic footprint and broader portfolio in Consumer Care, providing a resilient platform. Importantly, we continued to invest, stepping up innovation with a focus on 'big bet' projects, and enhancing our leadership in sustainability, as customers look for sustainable alternatives that current suppliers cannot offer. Most important is that everyone within our business is kept safe; we maintained our behavioural safety performance in 2022 and, in 2023, have introduced safety improvement as a measure within the annual bonus scheme for the first time.

With our strong foundations, new horizons and consistent track record of outperformance, we look forward to the future with confidence.

Dame Anita Frew DBE, Chair

For more information on our people and culture
See pages 20-21

Agroforestry in the Amazon

The Croda Foundation is supporting an Instituto Amazonas agroforestry project, which aims to revive traditional agriculture practices among indigenous tribes, improving food security and protecting their cultural heritage and environment. Targeting six tribes in Mato Grosso in the Brazilian Amazonia, this project will reach approximately 7,400 people and will use education programmes to build confidence in traditional agricultural methods.

Scan this QR code to read more

Chief Executive's review
Powerful operating model and consistent execution deliver record performance

Steve Foots, Group Chief Executive

"We are building a strong innovation pipeline, supplemented by new technologies and organic investment."

Sales
£2,089.3m
(2021: £1,889.6m)

Croda achieved another milestone in 2022, exceeding £2 billion of sales and £500 million of adjusted operating profit for the first time. This continues our record of consistent execution. We successfully recovered significant input cost inflation, and navigated challenging economic conditions and continued supply chain disruption. We are building a strong innovation pipeline, supplemented by new technologies and organic investment. Our performance demonstrates the power of our business model, the benefit of our global footprint, greater resilience following recent portfolio change and the increasing importance of our products in a range of niche markets.

We delivered an 11% increase in both sales and adjusted profit before tax, with good sales and profit growth in both core sectors. Consumer Care delivered a solid performance, with sales up 18% and adjusted operating profit 9% higher, albeit with margin diluted by lower volume and change in product mix. Growth remained robust in the second half year across Asia, Europe and Latin America, partly offset by customer destocking that was particularly apparent in North America. Life Sciences built on an exceptional 2021, delivering 19% sales growth and 10% higher adjusted operating profit, despite a reduction in COVID-19 vaccine demand by our principal customers. The balance of the Pharma business, together with Crop Protection and Seed Enhancement, each delivered double digit percentage sales growth.

Adjusted operating profit was also higher in Industrial Specialties, benefitting from strong trading ahead of the divestment of the majority of its Performance Technologies and Industrial Chemicals (PTIC) business midway through the year. Through this divestment, and the acquisitions in recent years, Croda has significantly repositioned to be more closely aligned with the powerful megatrends that are reshaping our markets. We are becoming a pure play company, focused on high value niches in consumer care and life science markets. This is creating a stronger margin, higher return, less cyclical and lower carbon intensive business. We are also more knowledge intensive, with exciting customer and technology innovation pipelines, particularly in sustainable solutions and drug delivery systems. This will translate into more consistent top line growth and increased margins, delivering superior returns in the years ahead.

Managing a challenging environment

Group sales grew by 11% to £2,089.3m (2021: £1,889.6m). Constant currency sales rose by 5%, driven by our ability to recover input cost inflation, with price/mix up by 24%. The chemical industry experienced a significant impact from inflation and average prices within our raw material basket rose by 23% in 2022, adding to a 17% increase in 2021. Commodity markets remained tight during the year but prices peaked in the third quarter, with signs of modest declines as the year ended. Operating cost inflation increased during 2022, with labour and energy most impacted. The strength of Croda's business model helped manage this challenging environment, ensuring inflation recovery and profit protection.

Group sales volume declined by 20%, with an estimated 13 percentage points of the reduction due to the divestment of much of the industrials business. In addition, after strong consumer demand and customer restocking post-pandemic in 2021, volume declined by 12% in Consumer Care, reflecting capacity constraints and customer reduction of excess inventory levels. Volume in Life Sciences was 8% higher, driven by strong Crop Protection demand, supported by the robust agricultural commodity pricing environment. Across the Group, the challenge of global supply chain constraints began to ease towards the end of the year.

Adjusted operating profit grew by 10% to £515.1m (2021: £468.6m). Over half of this increase was driven by underlying growth across all three sectors, with the balance primarily from favourable currency translation. Return on sales was broadly flat at 24.7% (2021: 24.8%), with an improved margin mix from the reduced share of industrial sales and a lower variable remuneration charge offset by normalisation of the Life Sciences margin, after an exceptional 2021, and a lower Consumer Care margin diluted by lower volume and weaker mix. Profit before tax (on an IFRS basis) increased to £780.0m (2021: £411.5m), which included a gain on the business disposal of £356.0m. Adjusting for this benefit and one-off exceptional items outlined in the Finance Review, adjusted profit before tax increased by 11% to a record £496.1m (2021: £445.2m).

Inflation and supply chain challenges saw increased working capital during 2021 and the first half of 2022. As expected, this began to moderate in the second half of 2022. Free cash flow increased to £167.4m (2021: £153.6m). Net debt reduced to £295.2m (2021: £823.2m) and debt leverage reduced to 0.5x (2021: 1.4x), due principally to the proceeds from the PTIC divestment.

Reinvesting in the business

The Group successfully completed the divestment of the majority of its PTIC business to Cargill Inc. on 30 June 2022 for gross proceeds of €775m (£665m). The divestment agreement also included a €140m option to sell Croda Sipo in China in which we have a 65% stake; however, this was subject to reaching agreement with our partner to also sell its stake, which now appears unlikely to occur in the near-term.

The divestment has released more capital to invest into a rich seam of growth opportunities in the consumer care and life sciences markets, whilst maintaining our discipline of careful capital allocation to projects which generate superior returns on capital. Our priority is organic capital expenditure, supplemented by targeted acquisitions, in line with our preferred approach to ‘buy and build’, as exemplified by our recent investments in Life Sciences, where we have secured new technology platforms through modest acquisition spends, then built scale through organic investment.

Our investment in organic capital expenditure was £138.5m (2021: £158.5m). This investment included a new Fragrances and Flavours (F&F) operation in Brazil, expansion in protein technology in Consumer Care and new laboratory capabilities in Life Sciences, together with additional capacity in our Singapore plant and initial work on a new greenfield manufacturing site in India which will together meet fast growing demand in Asia. In addition to our typical capital investment of around 6% of sales, which includes delivering our carbon reduction roadmaps as part of our sustainability commitment, we are investing an extra £175m over the period 2021 to 2024 to broaden our Pharma footprint and capabilities, particularly for nucleic acid drugs. We are investing in our existing GMP sites in Denmark, the UK and Avanti (US), and creating a new Pharma facility in Pennsylvania (US) to meet forecast market demand, with over £90m invested to date under this programme and spend expected to accelerate in 2023. Alongside this investment, the US and UK governments are co-investing up to an additional £75m, recognising the importance of new generation delivery systems to global pandemic preparedness and drug discovery. This investment will support our innovation pipeline of sales from new product development in the Pharma business.

We expect to supplement our organic plan with selective acquisitions to add adjacent and complementary technologies, particularly those which can accelerate our transition to greater use of natural raw materials or build new technology platforms, enhancing future growth. Shortly after year end, we announced an agreement to acquire Solus Biotech, a leading producer of premium, biotechnology-derived beauty actives based in South Korea. Solus consolidates our position as a global leader in sustainable actives, builds our biotech knowledge base, adds a North Asian manufacturing and innovation facility, and brings rich IP and proprietary know-how that we can leverage globally. Our continued capital deployment will be executed within our consistent capital allocation policy, set out in the Finance Review. Alongside organic and inorganic investment, the policy provides for a regular and increasing ordinary dividend to shareholders, while operating an appropriate balance sheet. As part of this, the Board has recommended an increased full year declared dividend of 8% per share to 108.0p (2021: 100.0p).

Strong performance in Asia, Western Europe and Latin America

On a geographic basis, all regions saw continuing good growth in sales and profit, other than North America. Asia achieved a record year with strong demand, particularly in Life Sciences, and modest growth in China, despite pandemic lockdowns. Demand in Western Europe remained robust, despite higher prices and energy costs, with strong growth in Crop Protection and Beauty Care. Latin America enjoyed good growth, led by demand in the regional Crop Protection market and supported by Consumer Care demand, including the new F&F operation. EEMEA (Eastern Europe, Middle East and Africa) saw a negative financial impact from the closure of our Russia business (which represented approximately 1% of Group sales in 2021).

In North America, sales peaked in the first quarter before softening in Consumer Care and Pharma, the latter partly reflecting lower COVID-19 demand post-pandemic. Consumer Care was negatively impacted by significant customer destocking, with US customers particularly impacted by lower exports to China following lockdowns.

Adjusted operating profit

£515.1m

(2021: £468.6m)

IFRS operating profit

£444.7m

(2021: £438.2m)

We use a number of Alternative Performance Measures (APMs) to assist in presenting information in this Report in an easily analysable and comparable form. We use such measures consistently at the half year and full year, and reconcile them as appropriate. Whilst the Board believes the APMs used provide a meaningful basis upon which to analyse the Group’s financial performance and position, which is helpful to the reader, it notes that APMs have certain limitations, including the exclusion of significant recurring items, and may not be directly comparable with similarly titled measures presented by other companies. APMs are defined in the Finance Review on page 47.

Chief Executive's review continued

Consumer Care sales growth

18%

Life Sciences sales growth

19%

Continued growth across sectors

Consumer Care performance demonstrating increased resilience

Consumer Care achieved record sales and adjusted operating profit in 2022. Sales grew by 18% to £897.8m (2021: £763.0m), with price/mix up 22% as significant inflation was successfully recovered. Adjusted operating profit increased by 9% to £204.7m (2021: £188.5m), resulting in return on sales reducing to 22.8% (2021: 24.7%). This primarily reflected the operating gearing effect of lower volume, alongside a weaker product mix as Beauty Care and F&F grew faster than the higher margin Beauty Actives business. IFRS operating profit declined to £144.5m (2021: £168.0m), which included an impairment charge of £34.6m on goodwill in the Flavours business, where the future value of this business is behind the acquisition case.

After a stand-out performance in Consumer Care in the first half of 2022, growth slowed in the second half year. Full year volume was 12% lower than 2021, driven by two components. Firstly, destocking developed across our customers and the retail supply chain. This followed strong demand in 2021 to meet the post-pandemic recovery, when customers, worried about global supply chain delays and meeting this recovery, restocked significantly; Personal Care sales grew by 20% in the second half of 2021. Slowing consumer sales led to destocking by customers in the second half of 2022, particularly in North America. Secondly, volume was lower due to selective demarketing of lower margin products due to capacity constraints in some Croda sites, together with the closure of our Russia office. It is estimated that customer destocking has accounted for five percentage points of the volume decline, with five points from demarketing and the balance from Russia and other impacts.

Our sector strategy is to Strengthen to Grow and delivery is progressing well, positioning Consumer Care as a more resilient growth platform.
Our ingredient transparency programme is supporting a structural shift in behaviour by customers and consumers towards sustainable ingredients, providing product information dossiers and carbon footprint data that includes upstream supply chain emissions. The sector delivered an increase in bio-based ingredients to 56% (2021: 50%), greater use of biotech across the product portfolio and nearly 290,000 tonnes of avoided carbon emissions in 2022. Greater innovation is also being delivered as part of an enhanced formulation capability, with our new Formulation Academies minimising the customer's time to market and giving smaller customers greater access to formulations containing Croda's high performance ingredients. Consumer demand is growing strongly in Asia and, to deliver fast growth in the China domestic market, we have acquired a new site for a fragrance and botanicals facility.

Encouragingly, sales growth was strongest in Beauty Care and F&F. Beauty Care benefitted from strong pricing, good demand from multinational customers and the move to sustainable ingredients. With strong growth in solar protection for daily wear, Croda's mineral sunscreens had a record year and sales of ECO bio-based surfactants to Personal Care customers increased threefold. In 2020 we added fragrances to Croda's portfolio and 2022 saw the creation of a full formulation service for customers. Sales in fragrances recovered well, after a challenging 2021, with growth in emerging markets, benefits from the integration of 2021's Parfex fine fragrance acquisition and a developing pipeline of sales synergies between Croda and Iberchem.
Flavours suffered its worst year for raw materials, with 32% price inflation and shortage of supply, and margin was squeezed as the business did not fully recover input cost inflation. A quieter year for Beauty Actives sales nevertheless saw development into adjacent technologies continue, with the launch of encapsulated retinol and a growing pipeline of biotech-derived actives. The smaller Home Care business continued its roll out of high value proteins for fabric care, extending the life of clothes, with new contracts underpinning future growth.

Life Sciences building on exceptional prior year

Following an outstanding year for Life Sciences in 2021, with the rapid expansion of Croda Pharma following the Avanti acquisition and exceptional demand for COVID-19 vaccines, 2022 saw further strong progress, driven by an excellent performance in Crop Protection and an extensive pipeline of non-COVID delivery systems in Pharma.

Sales grew by 19% to £682.3m (2021: £572.3m) with performance strengthening in the second half of the year. Price/mix grew by 6%, while volume was 8% higher. Adjusted operating profit increased by 10% to £229.4m (2021: £208.5.m), as did IFRS operating profit to £220.3m (2021: £201.0m). With Crop Protection a larger proportion of the sales mix and a normalising lipid systems margin, return on sales reduced to 33.6% (2021: 36.4%).

Our strategy to Expand to Grow in Life Sciences sees us empowering biologics delivery in Croda Pharma and reinforcing our existing leadership in sustainable delivery systems for Crop Care. In 2022, this saw the Health Care business repositioned as Croda Pharma, focused on technologies with the fastest growth and innovation needs. The relaunch was accompanied by a new brand, organisational structure and governance for its exciting customer and innovation pipelines. We are investing in innovation, knowledge and capacity, and secured co-investment from national governments. Crop Protection is meeting growing demand for sustainable crop care solutions and emerging delivery systems for crop biologics that are enabling customers to transition to biopesticides.

Encouragingly, 2022's performance was achieved despite the anticipated near 40% decline in sales of lipid systems due to lower demand from our principal COVID-19 vaccine customers. The balance of the Pharma business, Crop Protection and Seed Enhancement all grew sales by double digit percentages. Crop Protection was the standout business, benefitting from a strong agricultural commodity pricing and demand environment. Its strength in sustainability was reflected in Croda's recognition by Syngenta in its 'Reduction in Carbon' supplier award. Seed Enhancement's range of coatings free from microplastics has now been proven in field trials with customers in all major regions and commercial roll out has commenced.

In Pharma, Protein/Small Molecule Delivery grew strongly, providing delivery systems for both the more mature small molecule drugs and the higher growth protein and monoclonal antibody (mAb) applications, with over a thousand customer projects underway. Adjuvant Systems experienced lower demand in COVID-19 applications, offset by growth in its current generation adjuvants, now supplied to over 100 customers, while supporting hundreds of projects to develop new prophylactic vaccines and novel therapeutic vaccines that fight already contracted diseases. These included a respiratory syncytial virus (RSV) vaccine in phase III trials and a personalised cancer vaccine in clinical phase II development.

The Nucleic Acid Delivery systems business is the world's leading innovator of lipid and other components in this new field of drug treatment. The business is developing its portfolio from the blockbuster COVID-19 vaccines, which drove 2021 demand, to new mRNA and gene therapy vaccines, and therapeutic drugs. 2022 sales in this business were approximately US$170m (2021: $230m), a little ahead of expectations, mainly due to additional COVID-19 vaccine demand; sales outside the principal COVID-19 vaccine customers already represent almost 40% of this business and are expected to be the majority of the $120m sales forecast for 2023, as COVID-19 sales continue to decline. We are supplying delivery systems to customers for close to 100 nucleic acid drugs currently in development, including the world's first human trial of a gene therapy application.

Industrial Specialties established

With the divesting of the majority of Croda's PTIC business on 30 June 2022, the remaining industrials business, including the Sipo joint venture in China, has become the Industrial Specialties sector. It plays an important role in our manufacturing model, supporting the Consumer Care and Life Sciences sectors on shared sites and operating a medium-term supply contract to the new owner of the divested business. 2022 therefore comprised the full business in the first half year and the retained business in the second half year. Reported sales were £509.2m (2021: £554.3m) and adjusted operating profit was £81.0m (2021: £71.6m). It is estimated that, had the divestment occurred at the start of 2022, sales would have been £191m lower and adjusted operating profit £39m lower in 2022. Reported IFRS profit was £79.9m (2021: £69.2m). After a strong first half year pre-divestment, Industrial Specialties continued to perform well, benefitting from higher commodity prices, with second half sales of £167m and a return on sales of 12.3%.

Our Pharma business is developing delivery systems for biologic drugs which will enable the next generation of vaccines and therapeutics. Recognising the importance of our delivery systems for a wide range of nucleic acid applications, the US Government is supporting a capital expenditure programme, co-investing up to $75m to establish a lipid facility as part of a new multi-purpose cGMP site in Pennsylvania.

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Chief Executive's review continued

71%

of our people are motivated by our Purpose

Delivering our strategy

We combine leadership in sustainability with market-leading innovation to deliver consistent top and bottom-line growth, with profit growing ahead of sales, ahead of volume in the medium-term. This is enabling us to help to meet global challenges and capture new opportunities.

Delivering our sustainability Commitment

Sustainability trends are developing rapidly in our markets as consumers look to make a positive contribution to living more sustainably through the products that they buy. In addition, climate change poses a major risk to the planet which we must all address. We enable customers to realise their sustainability ambitions through the application of our innovation, creating sustainable alternatives that current supply chains cannot offer. We are reinforcing our sustainability leadership by reducing the adverse impact of our operations, by replacing fossil-based ingredients with bio-based materials, reducing emissions, promoting biodiversity and ensuring our sourcing activities make a positive contribution to communities in our supply chains. Our sustainability strategy is built on 23 UN SDG targets grouped around the themes of climate, nature and society, supporting our commitment to be Climate, Land and People Positive by 2030.

To be Climate Positive, our verified carbon reduction target will ensure we contribute to limiting the global temperature rise to no more than 1.5°C above pre-industrial levels, providing customers with an average 35% reduction in carbon emissions associated with our products by 2030, compared to our 2018 baseline. To achieve this Science Based Target (SBT), we have developed externally validated decarbonisation roadmaps for every Croda location and adopted an internal carbon price to ensure investment decisions align with our sustainability ambitions. We have also continued our focus on upstream supply chains, with almost a quarter of suppliers by volume committed to SBTi carbon reduction targets.

Building on our Land Positive commitment, we announced our aspiration to be Net Nature Positive by 2030 and are working to understand our impacts and dependencies on biodiversity. We also joined the World Business Council for Sustainable Development and its Nature programmes, with the aim of being an early adopter of the future Science Based Targets for Nature, when published.

Our People Positive objective addresses the needs of both our communities and our employees. Living our Purpose, Smart science to improve lives™, we have met our target to protect 60 million people from the damaging effects of the sun, seven years ahead of schedule. Additionally, the Croda Foundation distributed £1 million of funding to 13 projects and another £2 million of grants for health infrastructure projects in South Asia, Africa and Brazil, in total benefitting 15 million people. Our employee engagement surveys show that 71% of our people are motivated by our Purpose and 69% feel involved in delivering our sustainability ambitions. With a target to achieve gender balance in Croda leadership roles by 2030, 2022 saw women occupy 38% of these roles (2021: 36%). Reflecting our absolute commitment to be a safe company for our communities and our employees, we set a stronger safety target to reduce our Total Recordable Incident Rate (TRIR) to 0.3 by 2025, requiring us to more than halve our current rate of 0.74 (2021: 0.76 restated), excluding COVID-19 cases. We conducted a safety culture survey at more than 40 sites, enabling us to identify areas for particular focus.

We have reflected the impact of the PTIC divestment in our sustainability targets. Scope 1 and 2 emissions reduced by 26% as a result of the sale and we have re-baselined our target to maintain the original challenge. The proportion of bio-based organic raw materials reduced to 59% due to the disposal (2021: 69%) but we have retained our original target to achieve 75% by 2030. We have also retained our carbon cover target (where use of our products avoids four times the carbon emissions associated with operating our business) which becomes more stretching as a result of the divestment.

Driving innovation

Innovation is at the heart of what we do, creating new market and technology niches. We have stepped up our rate of innovation through more resource investment, more external partnerships and a focus on 'big bet' projects. This will support higher growth, improved mix and better margin as we become a more knowledge-intensive company, capturing more intellectual property (IP).

The foundation of our innovation model is internal R&D investment, applying the expertise of our scientists at our global innovation centres to meet customer needs. This is complemented by our open innovation network, which provides access to over 500 universities and SMEs to help develop new intellectual property. We also invest externally in disruptive technologies, the benefits of which can be seen in recent product launches that have leveraged expertise in both biotech and encapsulation to reduce impacts and improve efficacy.

Our 'big bet' projects are reinforcing our leadership in formulation science and harnessing the potential of biotech, alongside our conventional chemical technologies. In formulation science, we are developing a greater understanding of the impact of our ingredients on wellbeing and self-esteem through neuroscience research, and are sharing our expertise with customers through our new Formulation Academies. We are scaling biotech, with projects to develop more sustainable actives and bio-based fragrance ingredients. R&D here is led by our five biotech laboratories, mostly established through technology acquisitions over the last decade. Candidate technologies are then scaled up at application laboratories in Paris and two UK facilities, before being taken to market by existing business units. Beauty Actives is launching novel anti-ageing and anti-dandruff ingredients developed in this way.

We seek to drive New & Protected Product (NPP) sales growth at least as fast as total sales over the cycle, targeted at mid to high single digit percentage growth. This allows the business to grow through IP-rich NPP and technology acquisitions, while leveraging our rich heritage product portfolio by finding new applications and data for existing products. In 2022, NPP sales grew at 2.6% in constant currency, adjusting for the impact of the PTIC divestment, despite lower lipid systems sales in the year.

Sector strategies to deliver consistent growth and even stronger margins

Within our strategy to drive sustainability and innovation to deliver profitable growth, each of our seven businesses within the two focus sectors targets superior sales growth, at least one and a half times global GDP, margins of at least 20% and return on invested capital (ROIC) of at least twice our cost of capital over the medium-term.

Our vision for Consumer Care is to be the most sustainable, innovative and responsive solution provider globally through our Strengthen to Grow strategy. Consumer Care targets annual organic sales growth of at least 5%, supplemented by synergies from integrating the recent F&F acquisitions, with a return on sales at or above 25%, over the medium-term.

Our vision for Life Sciences is to empower biologics delivery, enabling our customers to transition to biologic actives which are transforming pharmaceutical and crop science markets. Our Expand to Grow strategy is reinforcing our leadership in sustainable delivery systems in Crop Care and positioning Croda Pharma in drug and vaccine markets which need complex, innovative delivery systems. Life Sciences targets high single digit percentage annual sales growth, with a return on sales over 30% over the medium-term.

Supporting our strategic themes of ‘Strengthen to Grow Consumer Care’, ‘Expand to Grow Life Sciences’ and ‘Scaling Biotech’, as set out above, are three additional strategic initiatives:

‘Fast Grow Asia’, where we are expanding our technical capabilities and building new manufacturing capacity, to serve rising regional consumption of Consumer Care products and growing opportunities in Pharma and Crop Care. Investment in innovation and sales resource helped deliver a record year for Asia. We are continuing to expand our manufacturing capability in Asia, including commencing construction of a new greenfield site in India, to support the exciting opportunities ahead;

‘Proactive Acquisitions’, where our global scouting network is identifying potential adjacent technology opportunities in Consumer Care and Life Sciences, such as the Solus Biotech acquisition announced in February 2023; and

‘Doing the Basics Brilliantly’,which is improving our customer and employee experience through a combination of digital technology, customer insights, new data architectures, enhanced manufacturing capability and employer branding. 2022 saw good results in our customer ‘Net Promoter Score’ (NPS) and a new customer self-serve ordering online portal developed for global roll-out.

Outlook

Though early in the year, the Group is trading in line with expectations. We expect the customer destocking that has been particularly apparent in North America to come to an end in the first half year, supporting continued sales growth this year in Consumer Care. In Life Sciences, we expect good sales growth in Crop Care and the non-COVID related Pharma business to offset the previously indicated decline in COVID-19 vaccine demand. Group performance in 2023 will be more second half weighted than in the prior year, reflecting the divestment of the majority of PTIC in June 2022 and the phasing of lipid systems shipments to our principal COVID-19 vaccine customers.

The combination of our differentiated business model, enhanced investment programme and exciting innovation pipelines in sustainable ingredients and drug delivery, will continue to deliver consistent, superior returns.

Steve Foots, Group Chief Executive

69%

of employees feel involved in delivering our sustainability strategy

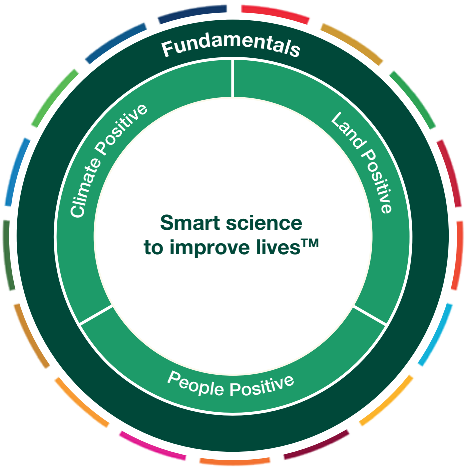
The Strategic Report was approved by the Board on 27th February 2023 and signed on its behalf by Steve Foots.

Purpose
A Purpose-led company

Smart science to improve lives™
Why we exist

Our Commitment
What we will achieve

Our Commitment is to be Climate, Land and People Positive by 2030 which will ensure we achieve our mission of being the world's most sustainable supplier of innovative ingredients. Through this we will help provide solutions to some of the world's biggest challenges.



Read more on our Commitment in our Sustainability Report at **www.croda.com**

Our Values-led culture
How we work every day

Our distinctive values-led culture governs how we work and guides our relationships with our partners. Our shared values of 'Responsible', 'Innovative' and 'Together' focus our work to ensure our smart science helps to improve lives.

Responsible

Innovative

Together

For more information on our people and culture
See pages 20-21

Delivered through our strategy
Our strategy sets out the approach we are taking to deliver our Purpose.
By combining sustainability and innovation to deliver growth, our smart science helps our customers to satisfy consumer needs and deliver on their own sustainability commitments, while we achieve our own.

For more information on our strategy
See pages 22-23

Integrated into our risks and opportunities framework
Our risk appetite is guided by our Purpose. We are willing to accept more risk where doing so is integral to delivering our Purpose. By contrast, our appetite is low where the risk is contrary to our values and culture.

For more information on risk
See pages 52-58

Governed by our Board
The Board oversees robust governance processes to ensure our Purpose is embedded throughout Croda and guides the strategic choices we make.

For more information on our governance approach
See pages 84-85

Reflected in remuneration
Our Purpose is reflected in our Remuneration Policy through targets aligned with sustainability and innovation, and a discretion framework that ensures performance is not to the detriment of our values.

For more information on our remuneration
See pages 108-110

Our Purpose in action

At Croda, our Purpose is to use Smart science to improve lives™. We combine our knowledge, passion and entrepreneurial spirit to create, make and sell innovative ingredients that are relied on by industries and consumers around the world. We improve people's lives every day by helping to:

Prevent, treat and potentially cure diseases through the development of drug delivery systems

Improve more lives through the Croda Foundation which is funding 21 projects in 19 countries with 14.9 million beneficiaries

Preserve the planet's scarce resources through the delivery of our sustainability Commitment

Enhance crop yields, enable land savings and improve food security through the development of crop care technologies

Promote the hygiene, health, wellbeing and confidence of consumers through the creation of Consumer Care ingredients

Business model
How we create value

What our business needs

- Employees
- Raw materials
- Sites, assets and infrastructure
- Capital
- R&D
- Supply chain and logistics
- Energy
- Regulations

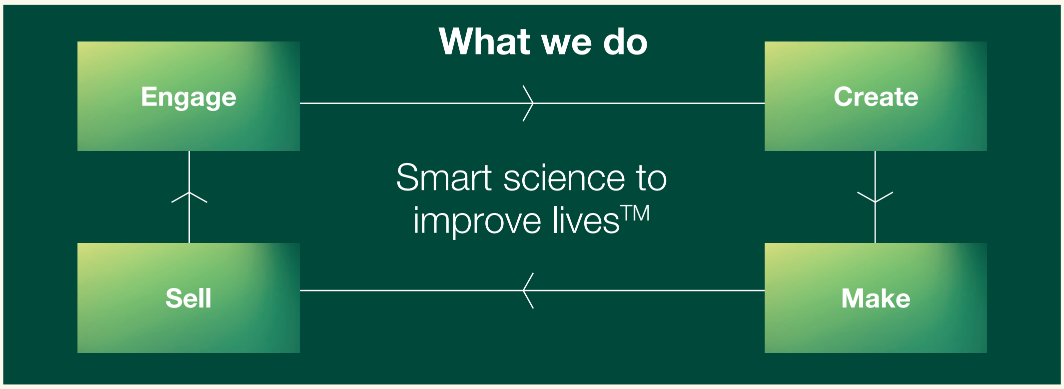
Our sustainability Commitment

- Climate Positive
- Land Positive
- People Positive

For more information on our Commitment
See pages 48-49

Our competitive advantages

- 'One Croda' culture
- Customer intimacy
- Innovation leadership
- Sustainability leadership
- Our approach to growth



The solutions we provide

Consumer Care

For more information on Consumer Care
See pages 28-29

Pharma

For more information on Pharma
See pages 30-31

Crop Care

For more information on Crop Care
See pages 32-33

Delivering value

Environment | Our stakeholders | Society

Employees	Customers and consumers	Suppliers	Innovation partners	Shareholders	Communities	NGOs
100%	>17,000	45%	>500	>30	5,336	89%
of employees receive at least the living wage	customers benefit from our innovative and sustainable ingredients	of raw material volumes from suppliers with public commitments to carbon reduction	innovation partners working collaboratively to advance science	year track record of unbroken dividend growth	hours donated by employees through our 1% club	of global palm derivatives consumption was RSPO physically certified

What we do

We use our smart science to create high performance ingredients and technologies that improve people's lives. We are a B2B company that sells small, but valuable, quantities of ingredients to customers of all sizes. These ingredients deliver vital functionality at low inclusion levels, giving us a strong competitive advantage.

Engage

We employ our own sales team rather than using distributors, enabling us to build close partnerships with customers and to be proactive when demands start to change.

Create

We design innovative ingredients that deliver vital functionality to customer formulations.

Make

We produce ingredients to consistently high standards and are transforming how we manufacture to meet our sustainability Commitment and support customers in meeting theirs.

Sell

We sell and deliver ingredients directly to our customers using local warehouses for speed and flexibility.

The solutions we provide

We operate globally, with a focus on high-value niches in consumer care and life sciences markets.

Consumer Care

We develop innovative and sustainable ingredients that provide vital functionality to Consumer Care formulations, enabling customers to differentiate their products, build strong brands, meet their sustainability commitments and satisfy changing consumer requirements. For example, we extract wrinkle reducing actives from plants that are critical ingredients in anti-ageing skin creams.

Pharma

We develop components and systems for the delivery of Active Pharmaceutical Ingredients (APIs), supporting customers across the whole lifecycle of a drug – from early-stage research to commercial manufacture. For example, our ingredients encapsulate the mRNA used in vaccines allowing it to be transported into human cells.

Crop Care

We are an innovation partner to major crop science companies and an increasing number of smaller customers, developing delivery systems to meet the sustainability challenges of current generation products and to enable next generation solutions. For example, our technologies ensure crop care formulations are biodegradable in the soil.

In each of these markets, the move to sustainable ingredients and the move to biologics are driving future growth.

For more information about technology megatrends
See page 26

Our sustainability Commitment

Climate Positive

We are successfully leading our sector in delivering absolute reductions in our GHG emissions, in line with our verified 1.5ºC Science Based Target. We are working to provide our customers with the verified product-level carbon footprint data that, together with the avoided emissions in use that our technologies can bring, will help them deliver on their climate targets.

For more information on our Climate Positive commitment see our Sustainability Report
Pages 22-27

Land Positive

Using natural resources brings with it the responsibility to take a holistic approach to the role natural ecosystems play in achieving global climate goals while addressing social inequalities. We are already land net zero – with our crop and seed technologies saving more land than is used to grow our bio-based raw materials, and are working to deliver on our aspiration to be Net Nature Positive by 2030.

For more information on our Land Positive commitment see our Sustainability Report
Pages 28-31

People Positive

Our People Positive commitments impact both our employees and wider society. We deploy our smart science to improve the lives of people around the world, targeting vaccine solutions to the most challenging diseases and protecting millions of people from damage caused by the sun. Internally, we recognise the value diversity brings to our organisation and are progressing well against our ambitious targets to make a positive difference.

For more information on our People Positive commitment see our Sustainability Report
Pages 32-35

Business model continued

What our business needs

Employees
We employ 5,825 people and employee costs are ~19% of sales. We commercialise people's knowledge, which is key to delivering a high return on sales. We have a growing global employee base, with an increasing proportion of employees in science-based roles and improving workforce diversity.

Raw materials
Raw material costs are ~35% of sales. We use a broad basket of raw materials, which are mostly bio-based rather than petrochemical-derived, including grown commodities and natural oils. We successfully manage the impact of cost inflation through pricing.

Sites, assets and infrastructure
We invest ~6% of sales in capital expenditure each year to maintain, develop and decarbonise our sites, assets and infrastructure. This is lower than most peers as we manufacture comparatively low volumes. We are currently augmenting this with targeted organic investment to scale up our pharmaceutical technology platforms.

Capital
Our capital needs are serviced principally by loans and credit facilities including a green banking facility. Our leverage ratio of 0.5x net debt to EBITDA is below our target range of 1-2x over the medium-term cycle, allowing future investment, both organic and through acquisitions.

R&D
We spent £66m in 2022 on in-house innovation. This is complemented by a pipeline of technology acquisitions and over 500 open innovation partners. These partnerships are important to our business model as they facilitate collaboration with leading scientists in universities and SMEs and give us access to specialist, world class expertise and facilities.

Supply chain and logistics
We have a global network of local warehouses around the world ensuring we can deliver ingredients directly to customers with speed and agility. Despite recent global supply chain challenges, our focus on high value, low volume niches and successful supply chain management means we have avoided significant disruption, beyond escalating freight costs which are a small proportion of our costs.

Energy
Energy costs are ~3% of sales. We use heat to accelerate chemical reactions with energy provided from a variety of internal and external sources. Energy is a relatively small percentage of our cost base compared with others in our sector and we have limited direct exposure to potential gas disruption in Europe.

Regulations
All regions where we operate have regulations that apply to the ingredients we produce and the applications they are used for. Correctly scoped regulation builds confidence in the efficacy of our products and we actively shape regulations and voluntary standards, working collaboratively with industry partners.


Multi-sector R&D facility at Cowick Hall, United Kingdom.


Manufacturing capability at our Beauty Actives site in Le Perray-en-Yvelines, France.

Our competitive advantages

'One Croda' culture
United by our strong sense of Purpose and our values, we work as one team. We promote a 'One Croda' culture through our Remuneration Policy and high levels of employee share ownership which encourages everyone to work together to achieve our goals. We strive to be more agile and entrepreneurial than our competitors, with a decentralised operating model that ensures decisions are made 'close to customers'.

Together

For more information on our people and culture
See pages 20-21

Customer intimacy
We employ our own local, science-focused sales force who understand our customers. This is unusual in our markets where sales are often through distributors. This direct selling model builds relationships with customers and provides us with insights about their challenges, as well as changing consumer behaviour, that are key to how we innovate. We complement direct selling with local innovation centres where we co-formulate with customers in our laboratories and accelerate their time-to-market.

Innovative

Innovation leadership
We are the leading innovator in our markets with a technology portfolio differentiated by valuable protected intellectual property and know-how, including 1,500 patents across 250 patent families. This means our ingredients have unique characteristics and deliver higher value add. We have a collaborative, open innovation model which combines internal R&D with partnering and technology acquisitions. We are becoming a more knowledge-intensive company as a result of this innovation ecosystem and our recent acquisitions.

Innovative

Sustainability leadership
We were founded in 1925 to create lanolin from wool grease, a by-product of the textile industry, and have been building sustainability into our business ever since. Now, we have a long-term sustainability strategy embedded in the way we work to ensure we deliver on our Commitment to be the world's most sustainable supplier of innovative ingredients by 2030. With consumers determined to make a positive impact through the products they buy, the creation of sustainable ingredients is a key driver of our future commercial success.

Responsible

Our approach to growth
We grow by creating new market and technology niches rather than by winning market share in large established markets. We target fast-growth niches that value our leadership in innovation and sustainability through higher margins. This allows us to compete on value rather than on price, supporting our goal of delivering profit growth, ahead of sales growth, ahead of volume growth.

There is no one big competitor that spans all our markets; instead, there are different competitors in each of our niches. We have a broad base of customers, large and small. This high number of customer/product combinations reduces our exposure to any specific customer, market or geography.

We sell in test tube and vial quantities, rather than tanker loads, and are increasingly moving to selling in dollars per gram rather than dollars per kilo. This means we operate flexible, capital-light manufacturing sites, rather than large continuous operation plants, and do not have to invest significant capital to create value.

For more information on our investor proposition
See page 43


Sensory testing with consumer panellists in Singapore.


The solutions we provide enhance everyday life.

Stakeholder engagement
Creating value for all stakeholders

Employees

The value we create

All our employees and contractors globally receive at least the living wage. They work in an open and inclusive environment where we are committed to full gender balance in leadership roles.

What matters to them

- A safe working environment without exposure to unnecessary risks
- An employer who takes their wellbeing seriously
- Rewarding and engaging careers with a positive impact
- An inclusive environment

How we engage

- Global emails, intranet news, regular global newsletters, webinars, podcasts, culture surveys, town halls and listening groups
- Informal networks, cascade meetings, works councils and consultation committees

Topics of engagement and activities in 2022

- Cost-of-living crisis and supporting employees, including one-off payments benefitting our lower paid employees the most
- PTIC separation activities
- Safety and inclusive behaviours
- Our Purpose and sustainability commitment

Customers and consumers

The value we create

We deliver around 6,000 speciality ingredients to over 17,000 customers worldwide. Our customers use our ingredients to differentiate their products, ensuring they meet consumers' requirements.

What matters to them

- Reliability of supply and product quality
- Technical and regulatory support
- Innovative and sustainable ingredients that improve performance
- Engaged and responsive sales teams

How we engage

- Research, sales and marketing teams work closely with customers' R&D, purchasing, regulatory and sustainability teams
- Face-to-face meetings, attending industry events, inviting customers to our seminars, workshops and application labs

Topics of engagement and activities in 2022

- Increased engagement with customers following pandemic restrictions
- Conducted annual customer survey with >3,300 responses. Satisfaction levels maintained despite challenging operating conditions
- General engagement topics included innovation, investment in manufacturing capacity and flagship projects to enhance customer service

Suppliers

The value we create

We partner with suppliers to improve sustainability practices in supply chains and commit to sharing the benefits equitably. Our commitment to positive impact sourcing is enabled by supply chain mapping, certification and transparency.

What matters to them

- An open relationship
- Fair payment practices
- Support in understanding our requirements around supply chain transparency, ethics and human rights
- Sustainability expertise to help improve their impact

How we engage

- Suppliers assessed through EcoVadis with actions agreed to improve sustainability performance
- Procurement teams meet regularly with suppliers face-to-face
- Participation in trade shows and industry events globally

Topics of engagement and activities in 2022

- Securing raw materials in a challenging market
- Supplier Code of Conduct updated encompassing sustainability principles and requirements
- Product carbon footprint methodology to enable measurement of carbon reduction
- Gaining greater transparency throughout palm oil derivatives supply chains

Innovation partners

The value we create

Our innovation partners contribute to the high proportion of New and Protected Products (NPP) we sell. Our shared knowledge helps them secure funding, advance science and make breakthroughs.

What matters to them

- Scientific expertise
- Collaborative working
- Funding and recognition that successful breakthroughs can bring
- Ensuring a positive impact through sustainable innovation

How we engage

- Student sponsorships at leading universities
- Directly with SMEs to lend experience and capability in commercialising new technology
- Directly with customers to overcome their challenges

Topics of engagement and activities in 2022

- Sustainable innovation
- Biotechnology and harnessing nature
- Green chemistry and new sustainable process technologies
- New acquisition, licensing and commercial partnerships to scale and globalise new technologies

	Shareholders	Communities	NGOs
	With a focus on consistent top and bottom-line growth, we deliver strong returns to shareholders through a balance of earnings growth and dividend growth.	We support local communities through educational outreach and provide access to our smart science through the Croda Foundation.	Acting responsibly ensures we satisfy regulatory requirements, protect our reputation and extend our positive impact through our influence within trade associations and other non-governmental organisations (NGOs).
	• Effective governance and appropriate controls • Ethical culture considering our impact on all stakeholders • Successful delivery against our strategy and sustainability commitments • Consistent long-term growth	• A responsible neighbour operating safely and sustainably • A positive contributor to the local community	• Industry engagement and sufficient dedication of time and resources to ensure practical outcomes for new and existing regulatory challenges and issues • Businesses taking responsibility for their impacts
	• Results presentations, investor roadshows, attendance at conferences, investor seminars, site visits, ad-hoc meetings and the AGM • Meetings on governance topics, such as remuneration	• Outreach activities, volunteering and supporting local charities through our 1% Club • Community liaison groups, on-site meetings and open days • Maintaining open dialogue with local officials and emergency services	• Membership of national and international industry associations • Industry working groups • Task forces for specific ad-hoc activities, topics and issues • Engagement with regulators directly and via industry associations
	• Hosted investor seminars on Consumer Care sector and Pharma business • Hosted multiple site visits, including to Iberchem, Spain • Over 1,000 investors met with topics of engagement including the impact of inflation, sustainability and the PTIC divestment • Corporate governance lunch hosted by Chair, Senior Independent Director and Remuneration Committee Chair	• 13 Croda Foundation projects investing £1.1m in local communities with the greatest need • Outreach in North America to support increasing employability of under-represented local communities • Emergency preparedness drills and safety engagement	• Advancing the science of alternatives to animal testing • Appropriate risk management measures for chemicals

Section 172(1) statement

The Board of Directors confirms that during the year under review, it has acted to promote the long-term success of the Company for the benefit of shareholders, whilst having due regard to the matters set out in Section 172(1)(a) to (f) of the Companies Act 2006, being:

- the likely consequences of any decision in the long term
- the interests of the Company's employees
- the need to foster the Company's business relationships with suppliers, customers and others
- the impact of the Company's operations on the community and the environment
- the desirability of the Company maintaining a reputation for high standards of business conduct
- the need to act fairly between members of the Company.

The information on pages 18 to 19 in the Strategic report should be read in conjunction with the information provided in the Directors' report on pages 78 to 81. The content on these pages constitutes our s.172 statement, as required under the Companies (Miscellaneous Reporting) Regulations 2018.

People and culture
Unlocking potential

Our culture

Our people strategy is focused on delivering our Purpose, further strengthening our culture and creating inclusive and engaging environments for all. We believe that embedding our values throughout the organisation will enable us to attract and retain the best talent, unlock our people's full potential and deliver high performance and engagement within our teams.

Our culture is defined through our values of 'Responsible', 'Innovative' and 'Together' and in 2021 a set of 14 competencies were introduced describing how our values are exhibited and can be developed through specific behaviours within our work.

These competencies are used as part of our annual performance and development reviews, succession planning and talent processes. They are also used as selection criteria for promotion and participation in our global development programmes.

All of our new competencies encompass inclusive behaviours with one dedicated to inclusivity. We are making progress implementing our Diversity & Inclusion (D&I) Roadmap which covers data gathering, improving awareness, developing our brand, measurement, and alignment to reward. In 2022, we promoted awareness through new development programmes and improved our data gathering through better measurement of employee engagement.

Measuring our culture

To measure employee engagement and commitment to our Purpose and sustainability goals, we introduced surveys in 2022 to define a Purpose and Sustainability Commitment (PSC) score.

While the overall score of 68% was good, the survey identified focus areas where there is further work to do to build the best workplace for all.

We intend to measure our PSC score over several years to track our progress in creating a positive environment for our employees and to understand how we can further improve employee engagement. This score will be reported in our Annual Report and, for 2023, improvement in the PSC score will be a metric within our long-term incentive plan (see pages 108-110).

Our 2022 culture surveys

	Topic	Quarterly theme
Survey 1	Safety, health and environment	'Reward'
Survey 2	Our Purpose	'Motivated by Purpose / Commitments'
Survey 3	Our values	'Great place to work'
Survey 4	Our sustainability Commitment	'Doing what we say'

As part of our 'One Croda' culture we have prioritised supporting our employees through the global cost of living crisis.

To read more on how we are supporting our people through the current cost-of-living crisis
See pages 102-105

Competencies

Responsible
- Authenticity
- Cross cultural sensitivity
- Inclusivity
- Living the values

Innovative
- Curiosity
- Strategic perspective
- Adaptability
- Delivery

Together
- Working together
- Empathy
- Care and compassion
- Managing conflict

Foundational competencies
- Technical/functional expertise
- Self-led learning

Purpose and Sustainability Commitment score for 2022

Our overall PSC score for 2022 was 68%, with an average participation rate for the surveys of 77%. The PSC score is a measure of employee satisfaction using a five point scoring methodology. As many of our employees work shifts in production environments, we made the surveys as accessible as possible. Every survey was translated into 16 different languages and could be completed online, via a QR code on mobile devices, or on paper copies. Surveys were completed anonymously with only basic personal data collected to aid understanding.

Results were shared with local and regional teams to develop tailored site plans to address specific opportunities for improvement. Many local management teams ran listening groups to gain further insight and greater understanding.

Our PSC score reflects responses across the five point scoring criteria and is the median response given, with the lowest score for any of the questions we asked being 53% and the highest 80%.

We consider our score in 2022 to be 'good', however, recognise there is further work to do to ensure we continue to build the best workplace for all. Key insights from our 2022 surveys are shown below.

74%
of employees would recommend Croda as a great place to work

71%
of employees feel motivated by our Purpose

74%
of employees would agree that SHE is not compromised

69%
of employees feel they can get involved in sustainability

Recruitment, development and retention of talent

We continue our transition to a pure play Consumer Care and Life Sciences business and are focused on attracting and retaining talent capable of supporting our growth. Using our competency framework, we have progressed several projects to further embed our Purpose and values into our processes for recruiting and developing people.

To support our recruitment process, we worked in partnership with an external agency to integrate our competencies into their Occupational Personality Questionnaire (OPQ). This will improve hiring decisions, helping to recruit people whose behaviours align with our values and culture.

Our global leadership development programmes were relaunched in 2022. We recognise that having an inclusive culture is the only way that diversity can thrive, and embedding our values to develop and reward inclusive leadership starts with the way we select attendees for our global leadership programmes. We select colleagues who exhibit model behaviours aligned with our values and use the programmes to develop them further, with content tailored to our strategic objectives through the competency model.

Our development programmes

Phoenix Rising
For a cross section of colleagues looking to unlock potential and/or increase contribution – must display a strong commitment to inclusion and self development.

LDG* Plus – For established senior colleagues in key roles, who may have completed a past version of the LDG.

LDG – High performing, high potential senior colleagues.

Accelerated Leadership Programme – High performing mid-level employees showing leadership behaviours.

Leading with Purpose – A values aligned development programme available to all grades.

Responsible, Innovative, Together

We also launched a regionally based early careers programme for managers, 'Leading with Purpose', complemented by the provision of several online webinars covering a range of leadership and diversity topics.

All employees are encouraged to undertake regular training and we have set a target for all employees to receive at least one week's training annually by 2023. In 2022 our employees collectively undertook over 145,000 hours of training, translating to an average of 26.1 hours per employee (2021: 14.5 (excluding PTIC)).

* Leadership Development Group

For more Board and Group diversity data
See page 95

Scan this QR code to watch more on the Accelerated Leadership Programme which launched in 2022.

Retaining talent is important to us and we track voluntary employee turnover on a quarterly basis. Our voluntary employee turnover rate for 2022 was 8.5% (2021: 8.2%). We are comfortable that our continued focus on Purpose and culture will support our ambition to be an employer of choice, and that this will be reflected in below average voluntary turnover figures.

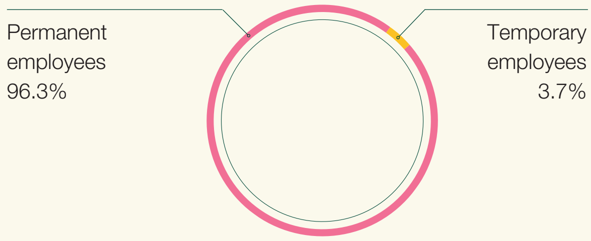
Behavioural safety

Ensuring the safety of our people is of the utmost importance and despite the lack of progress in our Total Recordable Injury Rate during 2022, we are committed to improvements. In the second quarter of 2022, our senior leadership conference focused on safety, aiming to drive cultural change and a values-driven approach to health and safety, with all leaders signing up to personal safety development objectives which will form part of the senior annual Bonus Plan in 2023. A Safety Culture Survey was conducted in 2022 at over 40 Croda sites, with engagement levels of over 85%, enabling us to identify sites and processes for particular focus as we continue to improve our health and safety performance.

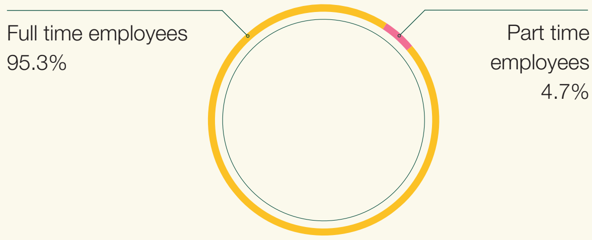
The 'Human Performance Programme' developed in 2021 was rolled out to six sites, creating opportunities for meaningful conversations about how work is carried out, the real risks people face, and empowering all employees to take ownership of safety and suggest improvements. In 2022, more than 100 improvements were identified across these six sites and resources are being allocated to enable a roll out to all sites over the next three years.

Key people metrics

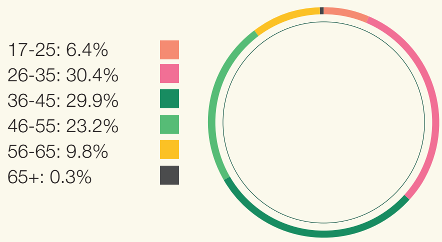
Employee employment status



Employee contract type



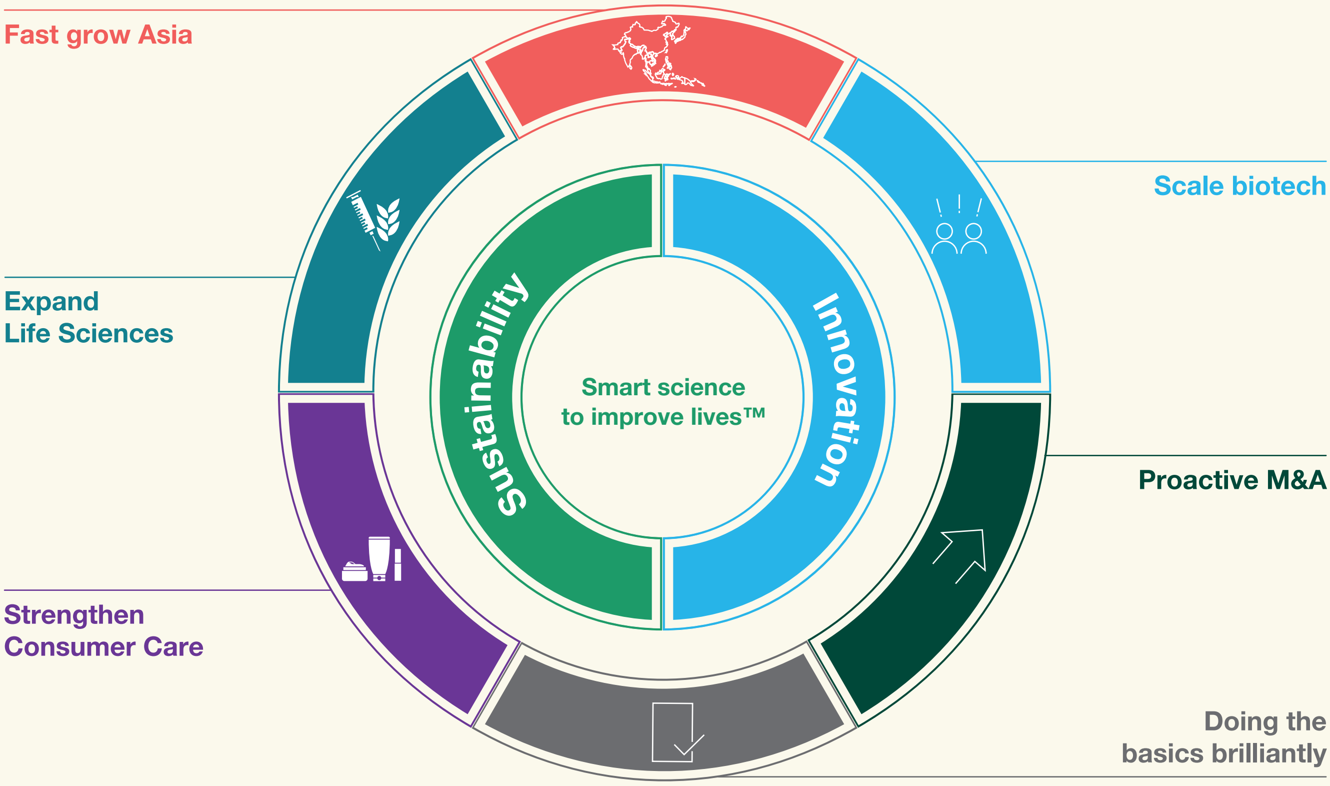
Employee age category



Strategy
Sustainability + Innovation = Growth

Our strategy

Our strategy is to combine leadership in sustainability with market-leading innovation to deliver consistent top and bottom-line growth, with profit growing ahead of sales, ahead of volume. This enables us to help to meet global challenges and capture new opportunities.



Sustainability

Consumers globally are looking to play their part in living more sustainably through the products that they buy. We enable customers to meet their sustainability goals through the sustainable benefits in use of our innovation and by improving the impact of our operations and supply chains. This includes removing fossil based ingredients, reducing emissions, restoring biodiversity and ensuring transparency through our supply chains. Our restorative sustainability strategy is built on 23 UN SDG targets, grouped around the themes of climate, nature and society, hence our commitment to be Climate, Land and People Positive by 2030 (see page 15).

Innovation

We grow by creating new market and technology niches, so our success is dependent on our ability to deliver innovative solutions to customers. The foundation of our innovation model is internal R&D investment, applying the expertise of our scientists to meet customer needs. This is complemented by our open innovation network, providing access to over 500 universities and SMEs to help develop new intellectual property. In addition, we look to acquire technologies with disruptive potential that can be scaled through organic investment, further bolstering our innovation pipeline.

Group strategy

Sustainability

Strategic progress in 2022:

- Completed externally validated decarbonisation roadmaps for every Croda location, enabling us to prioritise key projects that will deliver our 1.5°C aligned Science Based Target
- 88% of our greenhouse gas emissions are embedded in our upstream supply chain. We therefore continued to engage upstream and key suppliers representing 24% of our raw material volumes are publicly committed to SBTi carbon reduction targets
- Our Internal Carbon Price (ICP) increased from £55/TCO_2e to £124/TCO_2e further aligning our investment decisions with our sustainability ambitions
- Building on our Land Positive commitment, we announced our aspiration to be Net Nature Positive by 2030
- We met our 2030 target to protect 60 million lives from the damaging effects of the sun, seven years ahead of schedule

Priorities in 2023:

- Maintain alignment with our Science Based Target trajectory, by investing in the key decarbonisation projects arising from the roadmaps in place for all sites
- Achieve limited assurance of our climate-related data in non-financial reporting
- Conclude our work understanding our impacts and dependencies on nature and biodiversity
- Initiate work on a 'Sustainability Academy' to ensure we have identified and can train employees in the skills and competencies necessary throughout the business to deliver on our sustainability commitments

Innovation

Strategic progress in 2022:

- Focused on big bet projects harnessing the potential of biotechnology, alongside our traditional chemical technologies
- Driven greater collaboration between biotechnology laboratories, leveraging cross sector expertise to advance innovation
- Continued work to develop new products with a high bio-based content, while also increasing the bio-based content of existing products
- Enabled customers to understand and improve the biodegradability profile of new and existing products through investment in technical capability
- Launched formulation academies to share our expertise with customers, reinforcing our position as an innovation leader

Priorities in 2023:

- Continue to strengthen our innovation capability across core technology platforms including sustainable surfactants
- Broaden ongoing activity within open innovation programmes, accelerating the discovery of new technology platforms
- Build on the successful technical engagement in 2022, collaborating with customers to deepen our technical relationship
- Invest in our innovation infrastructure at strategic locations, particularly in Asia

Sector strategies

Strengthen Consumer Care:

- Innovate for sustainable ingredients
- Expand our full formulation capabilities
- Deliver on Iberchem sales synergies

Expand Life Sciences:

- Expand range of technologies in Pharma
- Scale up operations across Pharma platforms
- Accelerate the development of biopesticides in Crop

Strategic priorities

Fast grow Asia:

- Solus Biotech integration
- Investing in technical capability
- Expanding local sales teams

Proactive M&A:

- 'Chief Scouts' appointed
- Targeting knowledge-rich businesses
- For subsequent geographic expansion and scale-up

Scale Biotech:

- Leveraging recent acquisitions for early stage research
- New application laboratories for scale-up
- Focused investment on niche innovation

Doing the basics brilliantly:

- Improving the customer experience through insight
- More digital connectivity
- Self-serve data for customers

Megatrends

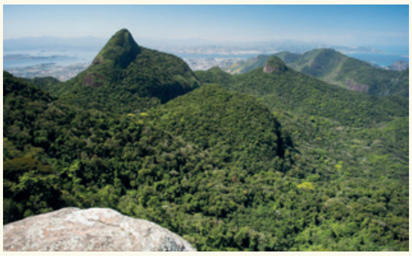
Meeting global challenges

Of the trends affecting our markets and supply chains, we have identified three key global challenges that our strategy helps to address. Our Commitment to be Climate, Land and People Positive by 2030 is founded on the UN SDGs, ensuring Croda delivers a positive impact.

The following section details the global challenges we face, the technology trends affecting our markets and the opportunities for Croda

Global challenges ▶ **Technology trends** ▶ **Our opportunities**

The global challenges:



Living sustainably within our planetary boundaries

Population growth and increasing consumption, fuelled by the expansion of the middle class with increased disposable income in the developing world, are putting pressure on planetary systems, such as water, climate, biodiversity, and scarce natural resources. Addressing this challenge requires transformational new approaches to consumption and circularity. For example, not only does society need to transition to carbon net zero, it needs to do so by embracing the role nature plays in mitigating and adapting to climate change, and by addressing social inequalities. Consumers in developed markets, and increasingly in China and around the world, are supporting businesses they believe act responsibly. This includes understanding societal challenges, protecting and restoring nature, and providing solutions to mitigate the causes and adapt to the impacts of a changing climate.

World population of

10bn

projected by 2050[1] (2022: 8bn)

Global demand for health and wellbeing

The pandemic has laid bare public health challenges around the world and accelerated the demand for health care, already growing due to higher global population, rising malnutrition and an ageing population in developed countries. Following two years of lockdowns, consumers are much more conscious of their own physical and mental wellbeing, and the importance of healthier communities more broadly. This has increased the focus on the efficacy of products, with increased demand for ingredients that are underpinned by science, and that support physical and mental health.

Increase in food output of

70%

required by 2050[2]

Feeding a growing population and restoring nature

The world population passed eight billion in 2022 and is expected to reach nearly ten billion by 2050[1] with the majority of the increase coming in south and east Asia, and Africa. Feeding this growing population will require a 70% increase in agricultural output by 2050[2], and the challenge is achieving this in a sustainable, regenerative way. Agriculture has undergone yield-enhancing shifts in the past but yields of important crops such as rice and wheat have now stopped rising in some intensively farmed parts of the world. Agricultural soils have been over-used and over-exposed to chemical fertilisers, destroying their vitality and threatening the food security of 3.2 billion people[3], especially smallholder farmers and poor rural communities. Since most suitable land is already farmed, most of this growth will come from higher yields and more resilient crops in less suitable land, supported by restoring degraded ecosystems.

For more information on the trends in our markets as a result of these challenges
See page 26

The enabler:

Digitalisation facilitating faster, more connected supply chains

Digital is changing expectations about transparency, with consumers demanding businesses take responsibility for their own operations, their supply chains and their products at end of life.

Digital is also increasing the speed at which new trends are adopted, enabling businesses to deliver transformative solutions from wherever they are conceived. Successful products are those which are innovative, highly effective, low impact, sustainably sourced, and clearly labelled.

1. United Nations, World Population Prospects 2022
2. Food and Agriculture Organization of the United Nations, Global agriculture towards 2050
3. The Global Environment Facility, Land Degradation

Megatrends continued

The technology trends affecting our markets

1. Move to sustainable ingredients

Consumers want to live more sustainably and this is impacting their decisions when it comes to the products that they buy. Generational shifts are accelerating these trends with an increasing number of consumers willing to pay more for purpose-led brands that meet their specific values. Sustainability will be the biggest single driver of consumer markets over the next decade and beyond.

Consumer-facing companies need to enhance consumer trust in their brands, so are looking for ingredients that enable them to deliver products with proven, substantiated claims and transparent, assured information on their social and environmental footprints. Sustainable ingredients must have a low footprint in terms of the carbon, water and resources used in their manufacture, and should also contribute to enabling consumers to live more sustainably.

Growing consumer demand for sustainable ingredients is driving increased regulation by industry and national authorities. For example, there are now very few countries in the world without cosmetic legislation and an increasing number of countries also have chemical regulations in place, with many more set to adopt chemical legislation in the coming years. Increasingly widespread and thorough legislation is providing a higher threshold for approval for new ingredients while increasing consumer confidence about the footprint and sustainability benefits of the products they buy.

The move to sustainable ingredients is not confined to consumer markets. Not only do crop science companies want biodegradable ingredients with a low carbon footprint, they also need innovative ingredients that make a positive contribution to improving yields, soil health and biodiversity.

Alongside more sustainable chemistry, biotechnology can be a highly sustainable route for creating new and existing molecules that have applications in high growth markets of today and the future. Designed correctly, biotechnology will enable ongoing performance innovation, facilitate ingredient footprint reduction, and support the transformation to bio-based ingredients.

2. Move to biologics

In Life Sciences, the 20th century was the era of the small molecule, relatively simple compounds made by chemical synthesis. The 21st century is the era of biologics, much larger molecules manufactured inside animal cells or micro-organisms, that are already transforming medicine and will transform agriculture over the next decade.

Biologic drugs mimic closely our body's biology and are much better at treating disease in a targeted way with fewer side effects. But they are complex molecules that are hard to make, difficult to keep stable, and need sophisticated delivery systems. They are also difficult to administer and are normally injected because otherwise they would be destroyed by stomach acid when swallowed.

The nucleic acid revolution that we are now witnessing, best illustrated by the global roll out of mRNA vaccines for COVID-19, is the next phase in the move to biologics. It is creating an incredible number of opportunities because nucleic acids teach the body to create its own medicine. This is a fundamental shift in the complexity of new drugs and in their value – both in terms of patient outcomes and commercial opportunities for pharmaceutical companies.

Although crop science is some years behind, it is also experiencing a transformation to biologically active ingredients. For example, naturally occurring microbes act as fertilisers for plants but have yet to be exploited systematically to raise crop yields. The nucleic acid revolution is also making new approaches possible in agriculture. For example, RNA interference could be used as a precisely targeted, environmentally friendly pesticide, by preventing the production of a critical molecule in the body of a specific pest.

The ability for these biologics to target specific elements in the host offers a significant opportunity to reduce negative impacts on the planet and society. Increased targeting means reduced overall dosage, fewer unintended side effects and the need for fewer resources to produce the same benefits. Novel performance means new approaches such as improved vaccination to both prevent and cure diseases, and regenerative agriculture that leverages the power of nature.

Capturing new opportunities

Through the divestment of most of our industrials business, and the acquisitions we have made in recent years, Croda has significantly repositioned to be more closely aligned with the powerful megatrends that are reshaping our markets. We are becoming a pure play company, focused on high value niches in consumer care and life science markets.

We are positively impacting everyday life in Consumer Care, developing ingredients which help promote consumers' wellbeing, confidence and self esteem.

Having refocused our Pharma portfolio, we are pioneering the future of health care by focusing on segments with the highest development needs.

With the crop care market at a pivotal point in its development, we are innovating for sustainable agriculture, helping to address the sustainability challenges of today, and developing new systems for the delivery of the biopesticides of tomorrow.

For more information on our businesses
See pages 34-42

Our new business structure

Consumer Care

Beauty Actives
- 16,300 combinations[1]
- 100 countries; >40% EM[2]

Fragrances and Flavours (F&F)
- 73,000 combinations
- 124 countries; >80% EM

Beauty Care
- 23,250 combinations
- 100 countries; >40% EM

Home Care
- 2,500 combinations
- >70 countries; >40% EM

Life Sciences

Pharma
- Drug delivery systems
- Empowering biologics delivery
- >5,000 customers across multiple applications

Crop Care

Crop Protection
- Leader in sustainable delivery

Seed Enhancement
- Improving seed germination and growth

Supported by

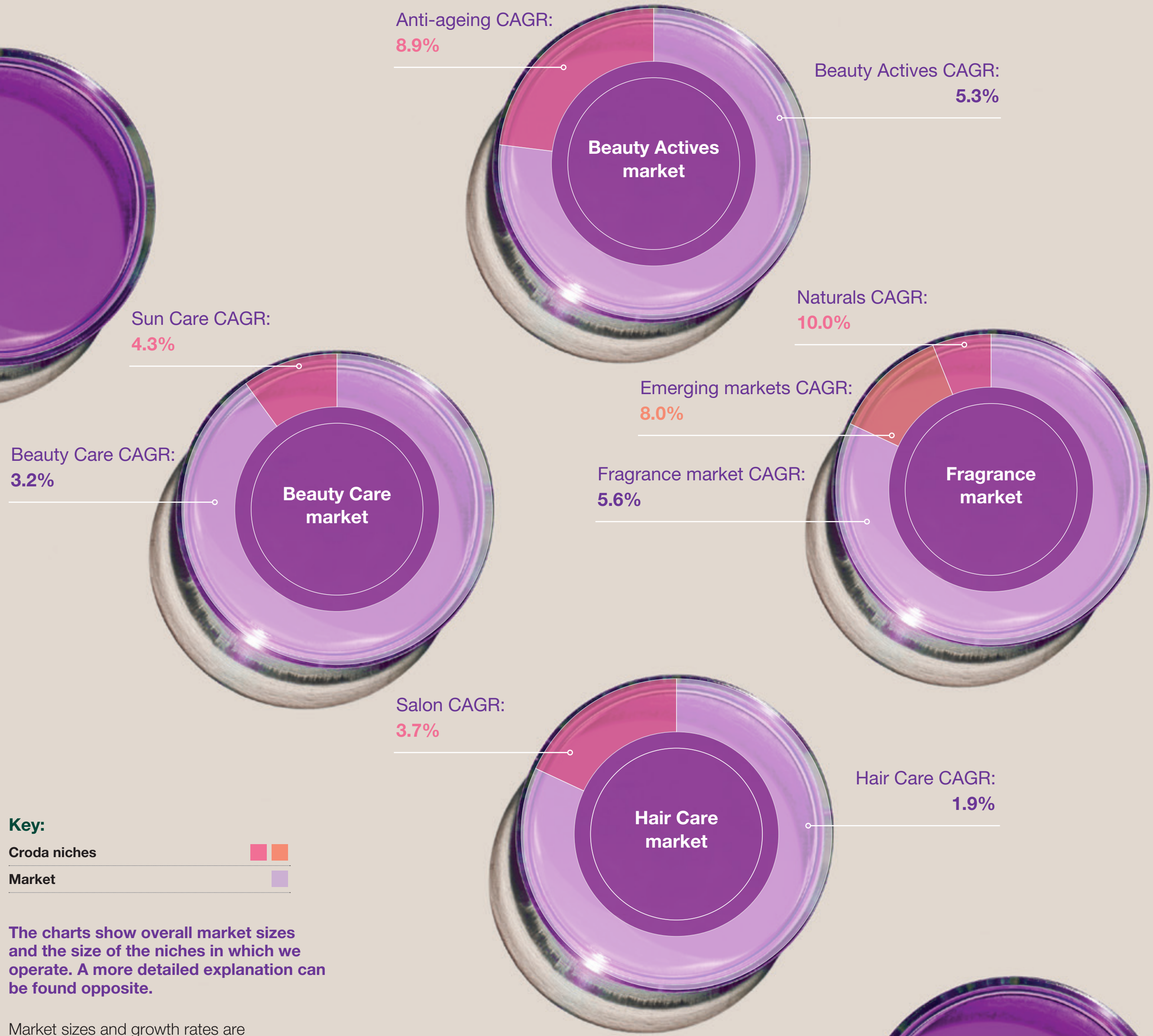
Industrial Specialties

- Key role in our integrated manufacturing model
- Supports our sectors on shared sites
- Operates supply contract to Cargill

1. Customer and product combinations
2. Emerging Markets

Consumer Care
Capturing new opportunities

Positively impacting everyday life



The charts show overall market sizes and the size of the niches in which we operate. A more detailed explanation can be found opposite.

Market sizes and growth rates are company estimates informed by a range of third party sources.
CAGR = Compound Annual Growth Rate

Croda is the name behind the high-performance technologies in some of the world's biggest brands, creating, making and selling speciality ingredients that are relied on by consumers everywhere. Long-term trends such as an ageing population and an expanding middle class are driving consumption, with increased penetration of consumer care products across all cultures of the world. Beauty, in particular, is becoming synonymous with wellbeing, confidence and self-esteem at every stage in life.

Economic growth in the developing world is outstripping established markets with Asia, the Middle East, and Africa representing particularly significant sources of growth over the next decade. With current economic headwinds, consumer demand is likely to vary by region, and Croda's global footprint should help underpin a resilient performance. We are implementing a strategic objective to achieve fast growth in Asia and are already well established there. We are also positioned to serve the growing indie market in Asia by adopting the successful model we have in North America.

Across consumer markets, we are focused on high growth niches which value our innovation through higher margins. Whilst skin care is already a fast-growth segment, the anti-ageing niche that we target is growing faster still. In Beauty Care, we have created new franchises focused on mineral sunscreens and professional hair care which are growing twice as fast as the broader categories. Our Home Care business is focused on two sustainability-driven niches, and our heritage in Fragrances and Flavours is in serving smaller customers in emerging markets, the segment that is widely seen as higher growth.

Consumers are always on the look-out for improved performance and will pay a premium for higher quality products and new trends. We are positioned as the leading innovator in consumer care markets, delivering cutting-edge technology and new ideas with proven substantiated claims. Consumers are also thinking more carefully about the products they buy and prefer those that are good for them and the planet, as well as highly effective. We are complementing our sector-leading range of sustainable ingredients with assured information about their impacts and an R&D programme focused on improving the sustainability of our ingredients and delivering sustainability benefits in use to our customers.

Buying products online has never been simpler and digital is increasing the speed at which new trends are adopted, leading to continued fragmentation of consumer markets. Proximity to our customers is now more important than ever and our ability to facilitate fast innovation and minimise customer time-to-market is creating significant opportunities.

We supply key ingredients, with on trend formulations, as well as broader support in areas like regulatory expertise helping to ensure that all-important element – speed. For our customers speed is the new IP.

Science and sustainability are driving consumers and our customers, with customers also wanting more intimate relationships with key suppliers to reduce time to market. Our portfolio remains the foundation of our success and is constantly evolving. The breadth of our portfolio of speciality and active ingredients is unrivalled in consumer care markets. In all we have more than 40,000 different product/customer combinations across Beauty Actives, Beauty Care and Home Care, augmented by over 70,000 combinations in F&F. In future, our broad portfolio, customer insights, and formulation expertise will enable us to become the complete provider of sustainable solutions to the premium end of consumer care markets.

For more information on our Consumer Care businesses
See pages 34-37

Sustainability without compromise – ChromaPur

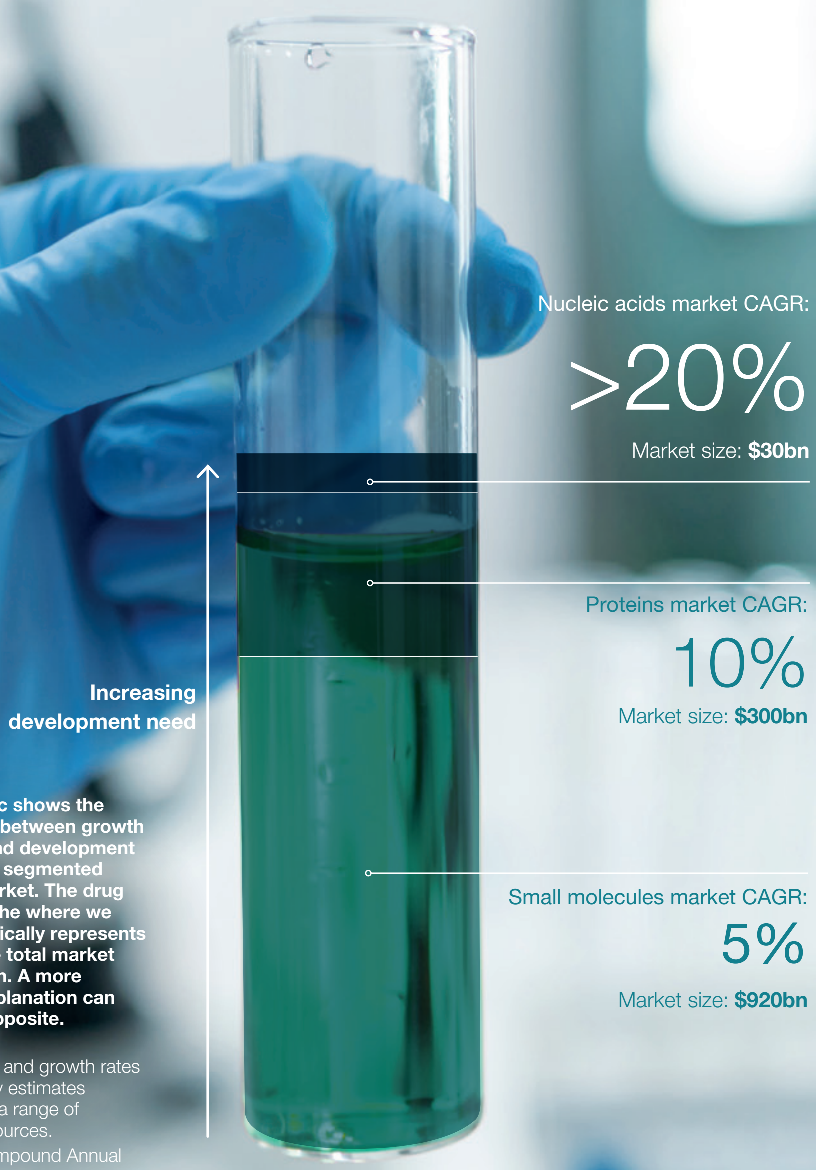
Small, manufactured plastic particles, known as microbeads, are used in a wide range of cosmetic and personal care products, with research suggesting that 87% of products from the ten best-selling cosmetics brands contain these microplastics[1]. Often not visible to the eye, plastic microbeads provide functionality such as exfoliation, sensory enhancement or adding texture to cosmetic formulations. However, they often end up in oceans, with a potentially negative impact on marine life.

Using patented technology Croda has developed ChromaPur as an alternative. These cellulose powders provide exceptional sensory and optical benefits, including optically blurring the skin surface, reducing the appearance of pores and fine lines, and providing enhanced coverage and colour intensity in colour cosmetics. These alternatives to plastic microbeads are 100% natural, fully biodegradable, utilise a sustainable manufacturing process, and deliver equivalent performance to existing solutions.

1. www.plasticsoupfoundation.com

Pharma
Capturing new opportunities

Pioneering the future of Pharma



This graphic shows the correlation between growth potential and development need of the segmented pharma market. The drug delivery niche where we operate typically represents 1-3% of the total market sizes shown. A more detailed explanation can be found opposite.

Market sizes and growth rates are company estimates informed by a range of third party sources.
CAGR = Compound Annual Growth Rate

The pharmaceutical market is large, valued at over $1.2 trillion a year and growing at over 6% CAGR. It is also a resilient market, largely independent of the macro-economic environment.

The chart opposite shows the pharma market segmented by growth potential and development need. At the bottom is the mature small molecules segment, very big and still growing middle single digit, but without the need for significant development. Above it is the protein segment, including monoclonal antibodies. Protein drugs have been developed over the last few decades and represented the first phase of the move to biologics. They account for the majority of the top ten selling drugs today and can cost thousands of dollars per treatment. Although this segment is relatively large already, it is still growing double digit. At the top is the nucleic acid segment which is the next phase of the move to biologics. Whilst it is currently a small segment, it is growing extremely fast and is widely regarded as the next blockbuster drug class. This is because nucleic acids can address the root cause of a disease. They have the potential to change the way that patients with cancer or genetic diseases are treated, and in some cases even provide a cure.

Very few drug formulations comprise the Active Pharmaceutical Ingredient (API) alone. Croda focuses on providing the components and systems for delivering the API. We are empowering biologics delivery by developing systems that deliver the API to the target site in the body, maintain its stability and improve its efficacy. For protein delivery we provide a range of speciality excipients for challenging formulations including injectables. By focusing on high value niches, we are the largest excipient supplier by value. In adjuvant systems, we are the only independent supplier with a full component portfolio and the ability to put those vaccine adjuvants together to power the therapeutic vaccines of the future. We are the leading innovator of components for nucleic acid delivery, capable of both developing new systems and scaling them up to support commercial roll out. We leverage more than 50 years' experience acquired with Avanti and the co-investments we are making with governments in the US and UK.

In total we have over 5,000 customers across the whole lifecycle of a drug, from research to commercial manufacturing. Our approach is to develop delivery systems for candidate drugs in early-stage research, generating revenue during clinical development and then as the principal supplier of the delivery system if the drug is commercialised. Our broad base means that we are not dependent on a single customer, and instead are exposed to a wide range of customers, drugs and applications.

Supplying delivery systems to help prevent cardiovascular disease

Nucleic acid-based therapies are the next big blockbuster drug class opening up exciting applications such as gene editing, where a patient's genetic material can be modified to correct a disorder. Nucleic acid-based therapeutics require sophisticated technologies to deliver the active and overcome challenges such as instability.

Croda is the leader in non-viral delivery systems for nucleic acid. We are working on many gene therapy applications including a phase III trial with Verve Therapeutics to cure genetically induced high cholesterol, a condition affecting 31 million people worldwide that can lead to accelerated heart disease and early death. Verve Therapeutics recently dosed the world's first patient with a gene editing medicine to correct the disorder, using lipids supplied by Croda as the delivery system. In preclinical studies, a single dose of the drug to silence the problematic gene resulted in a 60% reduction in LDL-cholesterol, persisting for 20 months.

Scan this QR code to read more

We are pioneering the future of health care by focusing on segments with a high development need. Our key differentiator is innovation, creating new ingredients from sustainable sources that have a unique quality. By combining these ingredients into systems tailored for specific applications we can price our products based on the value of the outcome, thereby creating value for shareholders as well as contributing to new treatments for patients.

For more information on our Pharma businesses
See pages 38-41

Crop Care
Capturing new opportunities

Innovating for sustainable agriculture

A more detailed explanation can be found opposite.

Market sizes and growth rates are company estimates informed by a range of third party sources.

CAGR = Compound Annual Growth Rate

We are at a pivotal moment for the agriculture industry which is facing the dual imperatives of delivering higher yields to feed a growing population and reducing chemical use to support sustainable food production[1]. Through our deep understanding of plant science, we can contribute to increasing food production without the need to use more land, thereby helping to improve global food security. We are also innovating to accelerate sustainable and regenerative agriculture in line with our aspiration to become Net Nature Positive by 2030.

The conventional crop care market is large, valued at $60bn, and growing at 3% a year. The market for biopesticides is much smaller at $5bn but is growing at 8% CAGR. While agriculture has traditionally relied on chemical fertilisers and pesticides, the industry is moving to biologics which are more specific and have a lower impact on biodiversity.

Through our expertise in delivery systems, we are enabling our customers to make the move to biologic actives. Today, predators are used to control insects in greenhouses. Next, micro-organisms will be used more widely as pesticides, stimulants or fertilisers, and we are developing next generation delivery systems for these new microbial actives. In the future, nucleic acid will be used to target a specific pest, avoiding unintended impacts on pollinators, or to teach a plant to make its own medicine to inactivate a disease, and we are innovating to enable this approach. The move to biologics is a significant opportunity for Croda as biopesticides, biostimulants and biofertilisers all need new systems to ensure their effective delivery.

Our expertise in seed enhancement supports this move to biologics as microbials can be applied via treated seeds to stimulate growth thereby delivering higher yields and reducing the need for the crop to be sprayed. We are also helping solve the problems the industry is facing, for example being first to market with a microplastic-free seed coating many years before new regulation, and by ensuring seeds germinate in the more challenging conditions created by climate change.

With the agriculture sector a major contributor to global GHG emissions, we recognise we must both create solutions for the future and help address the challenges of today. We create biostimulants to enable farming of less suitable land and mitigations for abiotic stress that promote plant growth in the increasingly harsh weather conditions. We offer drift reduction technologies to target spraying of crops, a key enabler to new farming practices such as drone application, and to reduce pesticide use and run-off. Our low carbon and bio-based delivery systems are enabling the move to sustainable ingredients, and our expertise in biodegradability is promoting soil health.

Microplastic-free seed coatings

Seed coatings and treatments provide vital protection against pests and diseases, reducing the need to spray chemical plant protection products and fertilisers. Many seed coating products contain polymer-based binders which have poor biodegradability profiles and leave small plastic particles in the soil.

Agricultural activity accounts for about 10% of the total microplastic release and while seed treatment accounts for a small proportion of this, we can still play a critical role in reducing the environmental impact of microplastics. Our range of microplastic-free seed coatings launched in 2021 have been applied to crop and vegetable seeds covering over 100,000 hectares of land. We expect this to grow as European customers adopt our microplastic-free alternatives ahead of legislation banning microplastics in seed coatings from 2028, and other regions also adopt similar legislation.

Scan this QR code to read more

With our focus on delivery systems, Croda is positioned as innovation partner to the major crop science companies. Innovation is becoming more collaborative as delivery systems become more specific to the active. Our relationships with smaller companies are also growing as we expand in Asia and the industry is disrupted by the move to biologics, allowing us to make a bigger contribution to global food security.

For more information on our Crop Care businesses
See pages 38-41

1. The European Union's Farm to Fork strategy, announced in 2020

Sector reviews
Consumer Care strategy:
The most responsive, innovative and sustainable solution provider

"Proximity to our customers is now more important than ever – our ability to facilitate fast innovation and minimise customer time-to-market is creating significant opportunities. We supply the ingredients, and on-trend formulations, as well as broader support in areas like regulatory expertise to deliver that all-important element – speed. For our customers speed is the new IP."

David Shannon, President Consumer Care

Business units

Beauty Actives
(c.15% of sector sales)

Beauty Actives operates in the highest premium part of the market, offering customers scientific expertise for unparalleled product efficacy. Croda leads the market with the largest actives portfolio, through three brands: Sederma, for differentiated skin actives derived from peptides and biotech; Alban Muller, for natural botanical actives; and Crodarom, for botanical extracts. The strategy is to be the 'go to' provider for performance claims, reinforcing our leadership by expanding our footprint, accessing sustainable technologies, leveraging the recent Alban Muller acquisition and targeting new acquisitions in adjacent technologies, such as the recently announced Solus acquisition.

Beauty Care
(c.55% of sector sales)

Beauty Care delivers differentiated ingredients across skin, hair and solar care, with a heritage portfolio which is the second largest in the industry. The strategy is to strengthen Beauty Care through a focus on growth and agility in the target market segments, innovate in sustainable effect ingredients, deliver a full service formulation capability for customers and differentiate our products through a rich data set which customers can leverage to meet their specific market needs.

Fragrances and Flavours (F&F)
(c.25% of sector sales)

F&F is the preeminent emerging market provider, with near-global reach and innovative technologies that meet smaller customers' needs. This is delivered through two fragrance brands: Iberchem, differentiated by its customer intimacy and responsiveness; and Parfex, with its excellent reputation in prestige markets for fine and natural fragrances, as well as Scentium in Flavours. The strategy is to develop the business as a leader in sustainable fragrances, unlocking the potential of F&F through organic growth and driving synergies with Croda's ingredient customer base.

Home Care
(c.5% of sector sales)

Home Care is focused on bringing Croda's ingredients to selective premium home care markets. This is delivered through two technology platforms which deliver improved efficacy and sustainability: fabric care, with proteins that increase the lifetime of clothes; and household care, with sustainable alternatives to fossil-based surfactants.

Consumer Care SDG alignment:
Contributes to 19 SDG targets

Total number of Consumer Care customers:
6,100
up from 4,300 in 2014

Presence in
>120
countries, up from 54 in 2014

For more information on Consumer Care, see the investor seminar hosted in March 2022.

Strengthening Consumer Care to be more responsive, innovative and sustainable

Croda has the broadest range of critical Consumer Care ingredients in the industry, speciality products that are both sustainable and underpinned by performance. Our business model helps us to win; operating in over 120 countries, Croda supports customers large and small globally.

The Consumer Care strategy reflects the megatrends that shape consumer behaviour and drive our customers' needs. Consumers want performance and will pay a premium for high quality, innovative formulations and substantiated product claims. They also want to live their lives more sustainably and this is impacting their decisions when it comes to the products to buy.

Our ambition is to be the world's most sustainable, innovative and responsive solution provider. Already recognised as a market-leading innovator, our strategy is to continue to strengthen Consumer Care in fast growth niches, by accelerating innovation, expanding our sustainable product portfolio and enhancing our customer intimacy. Leadership requires us to deliver sustainable ingredients with the best performance and data to support customer claims. We will also lead in formulation science and application technologies.

Our innovation is improving the sustainability of our ingredients and finding high performance replacements for fossil-based products. New Formulation Academies enable us to showcase our ingredients, educate customers on their use and develop finished formulations for customers, incorporating both our performance-based ingredients and emotion-driven fragrances and botanicals to deliver complete solutions. This is particularly attractive to smaller companies, who can partner with Croda to launch products to the market at pace.

With the personal care market in Asia developing rapidly, we have a 'fast grow' programme to expand our technical and sales presence. This is being supported by selective expansion in manufacturing and a focus on acquisition opportunities, targeting adjacent active technologies and natural ingredients. We have reached agreement to acquire Solus Biotech, consolidating Croda's position across three critical technology platforms of peptides, ceramides and retinol, while adding a North Asia manufacturing facility and biotech innovation hub.

Consumer Care targets annual organic sales growth of at least 5%, supplemented by synergies from integrating the recent F&F acquisitions, with a return on sales at or above 25%, over the medium-term. Its key target markets are skin care, hair care, solar protection, fabric and surface care, and fragrances.

Croda Purpose

Smart science to improve lives™

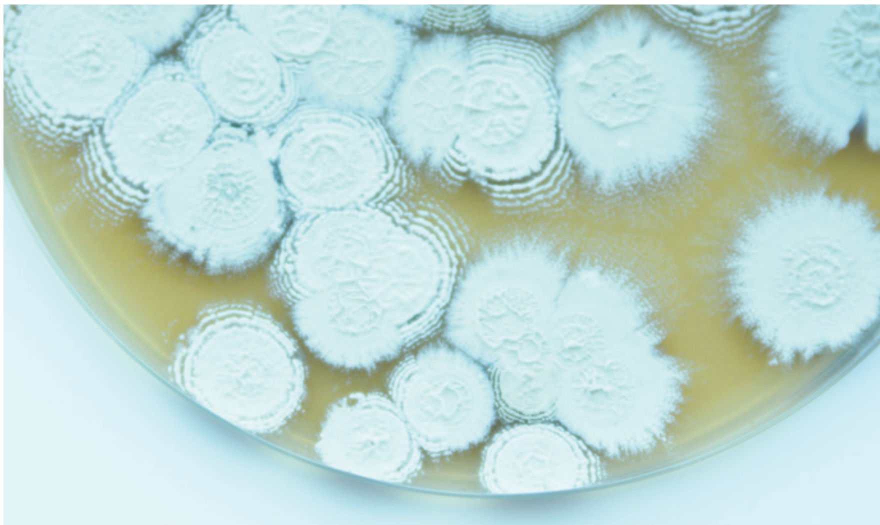
Consumer Care vision

To be the world's most responsive, innovative and sustainable solution provider in consumer care markets

Strategy to Strengthen to Grow Consumer Care

Responsive	Innovative	Sustainable
• Enhance customer intimacy • Full formulation capability	• Drive innovation in premium markets • Scale biotechnology	• Develop more sustainable ingredients • Support with greater transparency

Fast grow Asia



Leveraging Group-wide capabilities to accelerate the development of natural active ingredients

The move in cosmetics towards replacing synthetic ingredients with sustainable alternatives is increasing demand for naturally sourced actives. In anticipation of this trend, Croda acquired Nautilus, a leading marine biotechnology company based in Nova Scotia, Canada, subsequently creating the Croda Centre of Innovation for Marine Biotechnology.

Leveraging the extensive expertise of Nautilus in sourcing and evaluating potential marine molecules, with Sederma then selecting and scaling up promising natural actives for testing, we have been able to accelerate the development of natural actives. We expect to launch two patented products based on marine micro-organisms in 2023, one for skin care and one for hair care. This follows both in-vitro and in-vivo trials, along with positive customer feedback during previews.

Sector reviews continued
Consumer Care performance review
A solid performance demonstrates increased resilience

"Consumer care products are increasingly synonymous with wellbeing and self-esteem, with consumers willing to pay a premium for new trends and high quality/low impact products that are good for them and good for the planet."

Sales
£897.8m
(2021: £763.0m)

Adjusted operating profit
£204.7m
(2021: £188.5m)

Consumer Care delivered a solid performance in 2022, with record sales and profit but a more constrained second half year performance. Sales were up 18% and adjusted operating profit 9% higher. Across the four businesses, Beauty Care and F&F saw the strongest growth. Beauty Care developed well in the higher value niches driven by demand for sustainable ingredients, such as mineral sunscreens. Within F&F, sales in fragrances recovered after a challenging 2021, as emerging market conditions improved, alongside developing Croda sales synergies and benefits from integration of the recent Parfex acquisition. Beauty Actives had a quieter year, with destocking impacting performance but good progress integrating the recent Alban Muller acquisition. Home Care grew with the roll out of high value protein ingredients.

Sales grew to £897.8m (2021: £763.0m). Price/mix was up 22% as significant input cost inflation was successfully recovered. Volume was 12% lower than 2021, driven by two components. Firstly, excess stocks across our customers and the retail supply chain, following strong demand in 2021 to meet the post-pandemic recovery, led to destocking by customers in the second half of 2022, particularly in North America. Secondly, volume was lower due to selective demarketing of lower margin products due to capacity constraints in some Croda sites, together with the closure of our Russia office. It is estimated that customer destocking has accounted for five percentage points of the volume decline, with five points from demarketing and the balance from Russia and other impacts. Previous acquisitions added 2% to overall sales growth (in their first 12 months of ownership) and currency translation added 6%.

Adjusted operating profit increased to £204.7m (2021: £188.5m). Return on sales reduced to 22.8% (2021: 24.7%), with second half year margin lower due to the gearing effect of lower volume and the impact of the adverse business mix, as Beauty Care and F&F grew faster than the higher margin Beauty Actives business. IFRS operating profit declined to £144.5m (2021: £168.0m), including an impairment charge of £34.6m to the carrying value of the Flavours business, where lower forecast sales and margin have reduced the future value projection.

Delivery of our Strengthen to Grow strategy is progressing well, positioning Consumer Care as a more resilient growth platform. Consumer care products are increasingly synonymous with wellbeing and self-esteem, with consumers willing to pay a premium for new trends and high quality/low impact products that are good for them and good for the planet. Croda is positioned as the leading innovator, developing cutting edge products with substantiated claims and fully assured impact data for customers to develop their new products. In 2022, we published product information dossiers on our products and are developing life cycle assessments and associated carbon footprint data that include the scope 3 carbon emission data for our products. Driving fast innovation and minimising customers' time to market, we have launched Formulation Academies, promoting our full service formulation capability and giving smaller customers greater access to market-leading formulations. With over 70,000 customer/product combinations in F&F and 40,000 across the remainder of Consumer Care, the Academies are benefitting all our businesses, but particularly Beauty Care and F&F.

We are expanding in Asia, with rising regional consumption increasing penetration of consumer care products and Croda's sales now matching those in North America. China is likely to be the fastest growing market, with Croda already well established and serving the domestic market through imports and local production, achieving high single digit percentage sales growth in 2022 despite local COVID lockdowns. With our 'fast grow Asia' strategic initiative, investment in China is increasing innovation and sales resource, replicating our US model to serve a growing customer base of 'Indie' brands and acquiring a site to expand our fragrance and botanical production. More broadly, investment in Consumer Care is focused on expanding sustainable technologies, including biotech. We continue to explore targeted acquisition of adjacent knowledge-rich technologies, building on the agreement to acquire Solus Biotech, with its rich IP and proprietary know-how in biotech-derived beauty actives.

Skin care is a growth market, with the anti-ageing niche we target growing even faster. Beauty Actives has the largest active ingredient portfolio. Underlying sales were flat in 2022 against a strong prior year which had seen sales grow close to 30%, and the business experienced customer destocking in the third quarter but recovering somewhat as the year finished. Beauty Actives increased its customer base and innovation pipeline. Croda is the recognised leader in peptide ingredients, an effective anti-ageing technology, and is expanding into two other critical technology platforms – retinol and ceramides. In retinol, 2022 saw the launch of Revitalide, which is differentiated through encapsulation, leveraging expertise from our Brazil encapsulation centre of excellence, which improves skin penetration ninefold and doubles its lasting effect. We are entering the ceramides market through the agreement to acquire Solus.

Beauty Care saw success from new teams focused on mineral sunscreens and professional hair care, segments growing twice as fast as broader categories. Strong double digit percentage sales growth saw record solar protection sales, driven by consumer preference for mineral-only sunscreens and greater use of UV filters in daily wear products, with sales particularly strong in Asia. We achieved our People Positive commitment of protecting 60 million lives globally through sun care solutions, seven years ahead of schedule. Alongside this success, the consumer shift to sustainable ingredients saw Croda expand its bio-based and milder surfactant portfolio, while Personal Care sales of ECO bio-based surfactants tripled in the year, supporting our ambition to eliminate petrochemical derived surfactants globally. New product launches included ChromaPur, a natural alternative to microbeads that contain microplastics and are currently used in a wide range of personal care products.

F&F is focused on serving local customers in emerging markets, which are seeing the highest growth in fragrances. Sales grew by over 20%, with strong price recovery of raw material inflation. Innovation included bio-based fragrances and the launch of VernovaCaps, only the second biodegradable fragrance capsule on the market. The technology opens up encapsulated fragrances to customers beyond major global brands and has already been selected for fabric conditioners. The recent acquisition of Parfex has increased our presence in fine fragrances and our position in France. We have expanded our teams in Indonesia and South Africa, and launched a new F&F operation in Brazil, leveraging Croda's existing personal care strength. We are investing in China, already a significant fragrance market for Croda.

Following some COVID-imposed delays, we are now driving integration synergies which will deliver nearly €50m of annual sales through combination with Croda's formulation capability. Home Care secured a new contract which will underpin growth in its core protein fabric technology and launched a microbial cleaning technology creating a new sustainable niche.

Biodegradable fragrance encapsulation

Fragrance encapsulation involves advanced delivery systems that allow the timed release of fragrances, critical in various applications such as laundry, fabric softeners and deodorants. After several years of innovation, in May 2022 our F&F business launched its new biodegradable fragrance capsules, known as VernovaCaps.

Iberchem's VernovaCaps are the second biodegradable fragrance encapsulation technology on the market and the only one with a biodegradability profile corresponding to the OECD's standards of 'readily biodegradable'. The new fragrance technology not only offers a high level of biodegradability but is also predominantly bio-based, marking a significant milestone in the sustainability development of our F&F business.

Scan this QR code to read more

Sector reviews continued
Life Sciences strategy: Empowering biologics delivery

"In the last ten years something incredible has happened. With the genome revolution, we are no longer giving medicine to the body, we are telling the body to create its own medicine. This is opening an incredible number of possibilities that will change the pharma sector in the next ten years."

Daniele Piergentili, President Life Sciences

Business units

Pharma
(c.60% of sector sales)

Pharma targets leadership in biologics drug delivery, delivering drug and vaccine systems through synthesis, system formulation and application technology know-how, and comprises three platforms:

Protein/Small Molecule Delivery has an established record of providing excipients (delivery systems) for complex protein drugs. These large, sensitive molecules are typically injected. Our differentiated range delivers the highest purity excipients to customers, including 'Big Pharma'. Our strategy is to support established small molecule drugs and develop excipients for complex protein and monoclonal antibody (mAb) applications.

Adjuvant Systems was created by our 2018 acquisition of Biosector, creating the best invested third party supplier of adjuvants (immune response boosters) for vaccines. Our strategy is to accelerate use of innovative adjuvant systems, comprising multiple building blocks, supporting WHO vaccine programmes and the development of future preventative and therapeutic vaccines.

Nucleic Acid Delivery was created by our 2020 acquisition of Avanti and delivered the world's first commercial lipid system for mRNA vaccines for COVID-19. Nucleic acid therapeutic drugs and vaccines will be increasingly commercialised from 2025. Avanti brought an unmatched portfolio of R&D customer relationships, with over 3,000 customers and a diverse range of lipids and similar components. Our strategy is to be a global leader in nucleic acid delivery systems by expanding our portfolio of technologies and ingredients.

Crop Care

Crop Protection
(c.30% of sector sales)

Crop Protection has leading relationships with the major crop science companies, offering ingredients that improve performance and delivery of crop formulations. Our strategy is to deliver sustainable solutions using technology platforms and expertise in complex crop formulation systems, improving yields, accelerating the transition to biologics and contributing to food security.

Seed Enhancement
(c.10% of sector sales)

Seed Enhancement leverages our leadership in seed coating systems to improve germination, stimulate healthy development of seeds and increase crop yield. Our strategy is to be the leader in sustainable solutions for field and vegetable crops.

Life Sciences SDG alignment:
Contributes to 18 SDG targets

Total number of Pharma customers:
>5,000

Partner to major crop science companies and growing number of small and medium sized customers

For more information on Pharma, see the investor seminar hosted in October 2022. A Crop Care investor day is to be held in 2023.

Expanding Life Sciences to empower biologics delivery

In Life Sciences, Croda focuses on providing delivery systems for active pharmaceutical and crop ingredients. Our technologies deliver the active, improve its efficacy and solve challenges of stability and sustainability in customer formulations. Our 'buy and build' approach to new technology platforms has made Life Sciences as important to Croda as Consumer Care.

Our global footprint gives us presence in the major crop regions and access to leading pharma R&D. Our strength in North America and Western Europe is now leveraged through expansion in Asia and Latin America. Working as an innovation partner to the major crop science companies, we have also expanded with medium and smaller sized customers, especially local customers in Latin America, India and China. Our acquisition of research-focused Avanti in 2020 expanded our pharma customer base to span drug and vaccine discovery and clinical trial stages, alongside our established commercialisation business. These relationships extend beyond global brands to academia, start-ups and biotech, where significant breakthrough discovery happens.

Our strategy is to expand Life Sciences to empower biologics delivery, enabling the move from small chemically synthesised molecules to large and complex biologics, a megatrend which is transforming the pharmaceutical market and which will transform agriculture. In Pharma, we focus on segments with the strongest growth and highest innovation needs, leveraging our delivery systems and technology platforms to create new solutions for customers. In Crop Care, we are reinforcing our leadership with sustainable solutions and leveraging our expertise to accelerate the transition to biologics, which will enable greater targeting of actives and reduced biodiversity impact.

To deliver this strategy, we are investing in innovation, knowledge and capacity. Our R&D investment is creating an extensive innovation pipeline. We are increasing our knowledge base in innovation, sales and manufacturing, co-investing with national governments who recognise the importance of biologics in the 21st century. We are supplementing organic growth with acquisition of new technology platforms, building on the successful growth of our vaccine adjuvant platform, acquired in 2018 and already doubled in sales, and our lipid systems platform, acquired in 2020 and the first to deliver a commercial COVID-19 mRNA delivery system.

Life Sciences targets high single digit percentage annual sales growth, with a return on sales over 30% over the medium-term.

Purpose:

Smart science to improve lives™

Life Sciences vision:

To empower biologics delivery

Strategy to Expand to Grow Life Sciences

Pharma

- Focus on delivery system niches with high development needs
- Transition from ingredients supplier to systems provider

Crop Care

- Reinforce leadership in sustainable delivery systems
- Enable the transition to biopesticides

Invest in innovation pipeline, knowledge and capacity

Investing in organic expansion in Crop Care

Atlox 4913™ is valued by customers for creating stable dispersions in complex crop formulations, ensuring consistent distribution of actives and preventing formulation breakdown. Market demand for this product has increased significantly in recent years, particularly in 2022 with high crop prices incentivising farmers to invest in yield improvements. Despite high input costs, growers are seeking new crop protection solutions as they try and secure the highest possible yields. We have invested in expanding our capacity to meet the needs of our customers and in 2022 created additional capacity for the manufacture of Atlox 4913™ at our Campinas site in Brazil. Our customers value local access to this key dispersant and further investment is mapped for the next five years to expand capacity in other key regions such as Asia.

Sector reviews continued
Life Sciences performance review
Building on an exceptional prior year

"Our strategy is to expand Life Sciences to empower biologics delivery, enabling the move from small chemically synthesised molecules to large and complex biologics which is transforming pharmaceuticals and which will transform agriculture."

Sales

£682.3m

(2021: £572.3m)

Adjusted operating profit

£229.4m

(2021: £208.5m)

Following an outstanding year for Life Sciences in 2021, with the rapid expansion of Pharma following the Avanti acquisition and exceptional demand for COVID-19 vaccines, 2022 saw further strong progress. Sales increased by 19% and adjusted operating profit by 10%. Across the three businesses, Crop Protection led the way, with exceptional growth driven by double-digit percentage volume and price/mix increases. Seed Enhancement, with its innovative microplastic-free product innovation, also grew sales by double-digit percentage. Croda Pharma consolidated on its stellar growth in 2021, with continued expansion in delivery systems in Protein/Small Molecule Delivery and for non-COVID nucleic acid applications.

Sector sales grew by 19% to £682.3m (2021: £572.3m) with performance strengthening in the second half of the year. Price/mix grew by 6%, while volume was 8% higher. Currency translation added 5% to overall sales growth. Adjusted operating profit increased by 10% to £229.4m (2021: £208.5.m), with IFRS operating profit also up 10% to £220.3m (2021: £201.0m). 2022's performance was achieved despite an anticipated near 40% decline in sales of lipid systems to our principal COVID-19 vaccine customers. With Crop Protection a larger proportion of the sales mix and normalising lipid systems margin, return on sales reduced to 33.6% (2021: 36.4%).

Crop Protection was the standout business, delivering strong double digit percentage sales growth, with a combination of high global demand and significant commodity price inflation supporting value added crop treatments. Working in partnership with crop science customers and collaboratively to solve sustainability challenges and improve yields, our aspiration is to be Net Nature Positive by 2030. A particular area of focus is biodegradability to promote soil health, with a number of new biodegradable ingredients coming to market. Syngenta awarded Croda its 'Reduction in Carbon' supplier award, recognising the carbon benefits in use of Croda's products and the customer benefits from our sustainability strategy. We are investing to develop systems for next generation biopesticide delivery that use microbials and RNA, a market which is currently much smaller than conventional pesticides but is growing fast. Biologic actives are more complex and specific, meaning land treatment can be at a much lower level than conventional chemical pesticides.

Seed Enhancement also delivered a double-digit percentage sales increase. As an innovation partner to leading seed companies, our range of microplastic-free seed coatings have been proven in field trials across a variety of vegetable and field crops, with all major customers and in all major regions. This is creating significant growth opportunities, with commercial sales in multiple field crops and vegetables already secured. The business delivered the first successful field trials in the Americas for drought-resistant seed coatings, helping farmers to reduce the negative impact from abiotic stress. It also developed a tailored treatment for potato seeds which have multiple sustainability benefits over potato tubers that farmers have traditionally used.

In 2022, our Health Care business was repositioned as 'Croda Pharma' to focus on segments with complex development requirements. The relaunch was accompanied by a new brand, organisational structure and governance for its exciting project and innovation pipelines. Protein/Small Molecule Delivery grew strongly, providing delivery systems for both mature small molecule drugs and higher growth protein and mAb applications. With 1,400 direct customers, the business is working on over a thousand customer projects across both clinical development and commercial supply. These include projects in several therapeutic areas, such as osteoporosis, hypertension, diabetes and cancer, particularly in Asia, North America and Europe. Strong demand in India will be supported by a new Pharma innovation centre opening soon in Hyderabad.

Within Pharma, the Adjuvant Systems business saw reduced demand from COVID systems in 2022 but has grown to over 100 commercial customers for prophylactic vaccines that prevent disease. It is also supporting many hundreds of pre-clinical and clinical projects, including new prophylactic vaccines driven by the WHO's immunisation agenda and novel therapeutic vaccines that fight already contracted disease. These include a respiratory syncytial virus (RSV) vaccine in phase III trials, a personalised cancer vaccine in clinical phase II development and a new vaccine for Ebola. The innovation pipeline is focused on the development of adjuvant systems to power the therapeutic vaccines of the future, leveraging expertise added with the Avanti acquisition and a new applications laboratory in Denmark.

With mRNA vaccines for COVID-19 having proven the viability of our Nucleic Acid Delivery business, the market for new drug and vaccine applications is developing fast, both for mRNA-based drugs and gene editing applications, which modify a patient's genetic material to correct a disorder. 2022 sales were approximately US$170m (2021: $230m), a little ahead of expectations. Sales outside the principal COVID-19 vaccine customers now represent almost 40% of business sales and are expected to be the majority of the $120m sales expected in 2023, as COVID-19 sales continue to decline. Supporting close to 100 nucleic acid drugs currently in development, including manufacturing materials for a phase III trial of a flu vaccine, combination vaccines, cancer immunotherapies and the world's first human trial of a gene therapy application, the pipeline for this business is strong.

We are investing in innovation, knowledge and capacity to broaden our footprint and capabilities in drug delivery, including new application laboratories aligned to each business. We have a £175m capital programme for the period 2021-24 to expand our Pharma capability, including the expansion of the US Avanti site into a full GMP facility, the expansion of our UK lipid scale up facility and the creation of a second US GMP scale up plant in Pennsylvania. Our investment is supported by up to an additional £75m from the UK and US governments, in recognition of the importance of our delivery systems to future drug development and their pandemic preparedness plans.

Supporting the next generation of therapeutic vaccines

Vaccine adjuvants are used to enhance immune response to an antigen, improving the overall efficacy of the vaccine and increasing protection against the target disease. Croda is the leading independent supplier of vaccine adjuvants with unrivalled breadth across aluminium, saponin and lipid based adjuvants.

In addition to traditional prophylactic (preventative) vaccines, our technology is enabling the next generation of therapeutic vaccines, used to combat an already contracted disease. These are typically higher value, requiring more advanced adjuvant systems. One of Croda's adjuvant systems is included in a personalised immunotherapy drug candidate, currently in phase II clinical trials. The vaccine, in combination with an inhibitor treatment, targets metastatic melanoma, a disease occurring when cancerous cells from the primary tumour spread, starting a new tumour elsewhere in the body.

Sector reviews continued
Industrial Specialties performance review

Sales

£509.2m

Adjusted operating profit

£81.0m

Industrial Specialties established

The Performance Technologies and Industrial Chemicals (PTIC) business performed well in the first half of 2022, with recovery of material input cost inflation, as volume declined as industrial markets destocked and were impacted by emerging macroeconomic recession. Industrial Chemicals benefitted from the strong commodity pricing environment.

Croda divested the majority of the PTIC business on 30 June 2022. From 1 July 2022, the part of PTIC retained by Croda became Industrial Specialties (IS), including the Sipo joint venture in China. IS plays a critical role in our shared manufacturing model, supporting the efficiency of the Consumer Care and Life Sciences sectors. In addition to supplying ingredients for water treatment, fibres and fabrics, emulsion technologies, low emission coatings, display technologies and electronics, it also generates revenue from a new supply agreement with the acquirer.

IS revenue totalled £509.2m in 2022 (2021: £554.3m) and adjusted operating profit increased to £81.0m (2021: £71.6m), despite the lack of the divested business in the second half year. IFRS profit was £79.9m (2021: £69.2m).

Industrial Specialties established to support Consumer Care and Life Sciences sectors

The Industrial Specialties (IS) business has been established with a lean operating model to support our Consumer Care and Life Sciences sectors, where we see exciting growth opportunities and are focusing investment. Alongside the supply agreement to Cargill, whereby Croda supplies products needed by the acquirer to meet customer requirements, the remaining industrials business also generates revenue by leveraging core Croda chemistries to support the overall efficiency of our operations.

For example, some IS sales are generated from products produced on shared manufacturing plants, or utilise by-products from other processes as raw materials, such as our Pharma operations in Leek, UK, where profitability is maximised by finding valuable industrial applications for products produced using by-products from Pharma manufacturing. Another example of this in practice is at Rawcliffe Bridge, UK, a core Croda site producing both Consumer Care and Life Sciences products, where industrial applications for products produced using co-streams from lanolin production improve overall efficiency and increase plant utilisation levels, creating additional value from lanolin production.

Investor proposition

Croda is becoming a pure play company, focused on high value niches in consumer care and life science markets. This is creating a stronger margin, higher return, more knowledge intensive and lower carbon intensive business. This will translate into consistent top line growth and increased margins, delivering superior returns in the years ahead.

A differentiated business…

Focused on high growth niches

We prioritise value over volume and focus on high growth niches. Operating with flexible manufacturing we can be responsive to demand.

Underpinned by innovation

Intellectual property and know-how underpin our success. Direct selling, unrivalled customer intimacy and local R&D facilities fuel our innovation engine.

With a Purpose-led culture

A culture built on customer intimacy, innovation, and entrepreneurial spirit, guided by our Purpose. This supports a decentralised operating model with decisions made 'close to customers'.

Leading sustainability Commitment

Sustainability is a core pillar of our strategy. Not only is it the right thing to do, it will also drive growth in our business as consumers demand sustainable ingredients.

And a diversified customer base

With diversified exposure across markets, customers, and technology platforms we are not reliant on any single customer.

…with attractive financial characteristics

Attractive operating margins

A focus on small niches, where our innovation is valued by customers, means we achieve an attractive return on sales.

With high returns on capital

Our capital light and cash generative operations support high returns on capital, with a target of at least two times out cost of capital.

A clear capital allocation policy

We have a clear capital allocation policy prioritising organic investment in sustainability and innovation for growth.

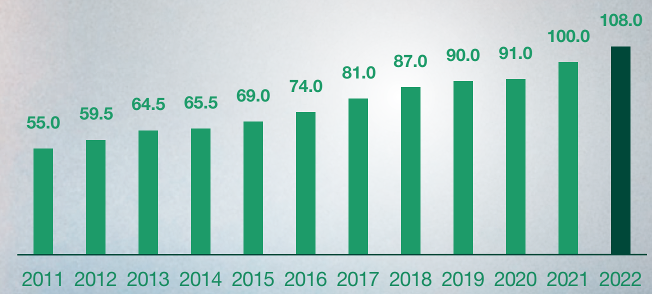
And strong balance sheet

With net debt to EBITDA of 0.5x our balance sheet strength supports the execution of our strategy and potential inorganic investment.

Delivering attractive shareholder returns

A track record of delivering attractive returns to shareholders with consistent dividend progression for more than 30 years.

Full year ordinary dividend per share (pence), 2011-2022



For more information, see our Finance review
See pages 44-47

Finance review
Consistent execution

Jez Maiden, Group Finance Director

"With our powerful business model, broad portfolio, global footprint and flexible operations, we delivered an 11% increase in both sales and adjusted profit before tax in 2022"

Consistent execution delivers record performance

With our powerful business model, broad portfolio, global footprint and flexible operations, we delivered an 11% increase in both sales and adjusted profit before tax in 2022, managing a challenging environment across global markets. On an IFRS basis, profit before tax grew by 90%, which includes a significant gain on the business divestment.

Currency translation

Sterling weakened against the US Dollar to US$1.237 (2021: US$1.375) but was broadly flat against the Euro (€1.174 (2021: €1.164)). Currency translation benefitted sales by £100.6m and adjusted operating profit by £19.6m. Transactional currency impact is correlated with translation, given that the UK and EU are meaningful centres of production for the Group, with the weakness of both Sterling and the Euro against the US Dollar having a net positive impact.

Impact of PTIC divestment

The Group received cash consideration of £651.0m, net of customary deductions, from the divestment of the majority of its PTIC business. The divestment generated a pre-tax gain on disposal of £356.0m which has been separately recognised in the Income Statement, within the Adjustments column. The divested business did not meet the requirements to be classified as a discontinued operation as Croda did not exit a geographical area of operation and it retained a proportion of the PTIC business, now reported as Industrial Specialties. In 2022, the revenue of Industrial Specialties was £509.2m and adjusted operating profit £81.0m (with the prior period restated to combine the PT and IC segments, which were previously reported separately). Taking account of the sales and profit retained by Croda under supply agreements for products manufactured at Croda retained sites and supplied to the acquirer, together with dis-synergy costs remaining with Croda which were previously allocated to the divested business, the estimated impact of the divestment on these results, had disposal occurred on 1 January 2022, would have been to reduce revenue by £191m and adjusted operating profit by £39m. Following the divestment, associated dis-synergy costs have been allocated across the Consumer Care and Life Sciences sectors. This reduced second half year return on sales in these two sectors by just under one percentage point compared with the prior year comparator period.

Strong sales from organic growth

Group sales grew by 10.6% to £2,089.3m (2021: £1,889.6m), comprising underlying growth of 4.6%, currency translation of 5.4% and acquisition impact of 0.6%. Within underlying growth, sales/price mix improved by 24.2%, reflecting the successful recovery of cost inflation and improved mix. By contrast, volume reduced by 19.6%, with an estimated 13 percentage points of the decline driven by the PTIC divestment, which resulted in lower sales in Industrial Specialties in the second half year.

Consumer Care sales increased by 17.7%, with underlying sales 9.7% higher. Sales/price mix was strong, partly offset by volume which reduced due to a strong comparator period, de-marketing of lower margin products in light of capacity constraints and customer destocking in the second half of 2022. Life Sciences sales increased by 19.2%, with underlying sales 13.9% higher, supported by both price/mix and volume growth. Second half year growth accelerated in Life Sciences, with a good performance in Seed Enhancement complementing continued Crop Protection growth.

2022 sales growth	First half %	Second half %	Full year %
Consumer Care	**24.0**	**11.8**	**17.7**
Life Sciences	**13.5**	**25.1**	**19.2**
Industrial Specialties	**23.9**	**(40.0)**	**(8.1)**
Group	**20.7**	**0.7**	**10.6**

Sales growth	**Full year ended 31 December**						
	2022 £m	Price/mix	Volume	Acquisition	Currency	Change	Restated 2021 £m
Consumer Care	**897.8**	22.0%	(12.3)%	1.5%	6.5%	17.7%	763.0
Life Sciences	**682.3**	5.7%	8.2%	0.0%	5.3%	19.2%	572.3
Industrial Specialties	**509.2**	19.9%	(31.7)%	0.0%	3.7%	(8.1)%	554.3
Group	**2,089.3**	24.2%	(19.6)%	0.6%	5.4%	10.6%	1,889.6

Record Group profit delivery despite continued inflation

2022 saw a second consecutive year of raw material inflation driven by global commodity prices and geopolitical events, with prices of the top 75% of raw materials up by 23%, in addition to the 17% rise seen in 2021. Raw material costs peaked in the third quarter of 2022 and have seen modest declines since. Operating costs were impacted by increasing inflation during 2022, most notably in energy and labour costs. Croda's powerful business model enabled overall inflation recovery, protecting absolute profit. Operating costs also benefitted from a lower variable remuneration charge, reflecting the impact of a lower share price on share scheme costs.

IFRS operating profit was £444.7m (2021: £438.2m), the gain on the PTIC disposal was £356.0m and interest charge £20.7m, giving a profit before tax of £780.0m (2021: £411.5m). Operating costs included a charge for other adjusting items of £70.4m (2021: £30.4m), reflecting an unchanged charge for amortisation of intangible assets arising on acquisition of £34.3m (2021: £34.3m) and a charge for exceptional items of £36.1m (2021: £3.9m credit). In common with many companies, Croda separately identifies such items which require separate disclosure by virtue of their size or incidence. The charge for exceptional items comprised a gain on contingent consideration on a previous acquisition of £6.1m and an impairment charge of £42.2m, reflecting a £34.6m write-down of goodwill in the Flavours cash generating unit, where forecast sales and margin are behind the acquisition case, reducing the future value projection, and a £7.6m write-off of unusable manufacturing equipment in Japan. The adjusting charge within net interest relates to unwind of the discount on contingent consideration of £1.7m (2021: £3.3m).

Adjusted operating profit, measured excluding the adjusting items above, increased by 9.9% to £515.1m (2021: £468.6m), reflecting the higher sales. Return on sales was broadly unchanged at 24.7% (2021: 24.8%), with an improved margin mix from the reduced share of industrial sales and the lower variable remuneration charge offset by normalisation of the Life Sciences margin, after an exceptional 2021, and a lower Consumer Care margin due to the operating gearing effect of lower volume and a weaker product mix. Adjusted profit before tax increased by 11.4% to £496.1m (2021: £445.2m)

The effective tax rate on adjusted profit was 22.8% (2021: 21.2%), the prior year having benefitted from a one-off benefit from settlement of a previously uncertain tax position. The effective tax rate on IFRS profit was 16.2% (2021: 21.6%), the lower rate reflecting corporate tax exemptions available on the PTIC divestment. There were no significant adjustments between the Group's expected and reported tax charge based on its accounting profit. IFRS basic earnings per share (EPS) more than doubled to 465.8p (2021: 230.0p), while adjusted basic EPS increased by 8.8% to 272.0p (2021: 250.0p).

Growing sector profits

Consumer Care adjusted operating profit grew by 8.6%, driven by higher sales but at a lower margin, reflecting lower volume and an adverse business mix. Life Sciences adjusted operating profit grew by 10.0%, despite the prior year being buoyed by exceptional demand for COVID-19 vaccines, with sales growing in the rest of the Pharma business and in Crop Care. Industrial Specialties profit grew by 13.1%, a strong result given the business was significantly smaller, following the divestment of the majority of the business in June 2022 (with the second half of 2021 estimated to have benefitted from £27m of adjusted operating profit from the divested business (compared to £nil in the second half of 2022)). Group profit growth reflected underlying growth and currency translation benefit across all sectors, with no material impact from acquisitions (covering the first 12 months of ownership).

Sales and profit

	2022			2021		
	IFRS £m	**Adjustments £m**	**Adjusted £m**	IFRS £m	Adjustments £m	Adjusted £m
Sales	**2,089.3**	**–**	**2,089.3**	1,889.6	–	1,889.6
Cost of sales	**(1,103.7)**	**–**	**(1,103.7)**	(950.7)	–	(950.7)
Gross profit	**985.6**	**–**	**985.6**	938.9	–	938.9
Operating costs	**(540.9)**	**(70.4)**	**(470.5)**	(500.7)	(30.4)	(470.3)
Operating profit	**444.7**	**(70.4)**	**515.1**	438.2	(30.4)	468.6
Gain on business disposal	**356.0**	**356.0**	**–**	–	–	–
Net interest charge	**(20.7)**	**(1.7)**	**(19.0)**	(26.7)	(3.3)	(23.4)
Profit before tax	**780.0**	**283.9**	**496.1**	411.5	(33.7)	445.2
Tax	**(126.7)**	**(13.8)**	**(112.9)**	(88.7)	5.7	(94.4)
Profit after tax	**653.3**	**270.1**	**383.2**	322.8	(28.0)	350.8

Operating profit

	2022			2021 restated		
	IFRS £m	**Adjustments £m**	**Adjusted £m**	IFRS £m	Adjustments £m	Adjusted £m
Consumer Care	**144.5**	**(60.2)**	**204.7**	168.0	(20.5)	188.5
Life Sciences	**220.3**	**(9.1)**	**229.4**	201.0	(7.5)	208.5
Industrial Specialties	**79.9**	**(1.1)**	**81.0**	69.2	(2.4)	71.6
Group	**444.7**	**(70.4)**	**515.1**	438.2	(30.4)	468.6

Adjusted profit

	Full year ended 31 December					
	2022 £m	Underlying growth £m	Acquisition impact £m	Currency impact £m	Restated 2021 £m	Change
Consumer Care	**204.7**	8.8	0.7	6.7	188.5	8.6%
Life Sciences	**229.4**	9.8	0.0	11.1	208.5	10.0%
Industrial Specialties	**81.0**	7.6	0.0	1.8	71.6	13.1%
Operating profit	**515.1**	26.2	0.7	19.6	468.6	9.9%
Net interest	**(19.0)**				(23.4)	(18.9)%
Profit before tax	**496.1**				445.2	11.4%

Finance review continued

The phasing of return on sales between the first and second half years reflected normal seasonality, together with a lower margin in Consumer Care in the second half year due to the dilution effect of lower volume and business mix.

2022 return on sales	First half %	Second half %	Full year %
Consumer Care	**26.6**	**18.9**	**22.8**
Life Sciences	**36.0**	**31.4**	**33.6**
Industrial Specialties	**17.7**	**12.3**	**15.9**
Group	**26.6**	**22.3**	**24.7**

Improving free cashflow

Free cash flow was £167.4m (2021: £153.6m), with working capital improving, as expected, in the second half year as raw material inflation peaked, resulting in a reduction in inventory and receivables values. Nevertheless, average values remained elevated at year end; of the £133.8m increase in working capital during the year, approximately £82m reflected the impact of inflation at a 'constant days cover'. The remaining £52m reflected investment for growth, primarily higher receivables. Net capital expenditure was £138.5m (2021: £158.5m), driving future growth opportunities and supported by government funding grants in the Pharma business. Investment was behind expectation, with some supply chain challenges, but is expected to recover the shortfall in 2023, in line with our plans.

Closing net debt was £295.2m (2021: £823.2m), benefitting from disposal proceeds. The leverage ratio reduced to 0.5x EBITDA (2021: 1.4x). As at 31 December 2022, the Group had committed funding in place of £1,122.5m, with undrawn committed facilities of £579.3m and £320.6m in cash.

Assessing evolving risks

The Group conducts scenario modelling as part of its viability and going concern evaluation, to evaluate the impact of uncertainties, continually reassessing evolving risks and their impact on the Group's strategy. These scenarios highlighted the resilience of the Group and its ability to withstand unexpected shocks.

Effective capital allocation

The divestment has released capital to be reinvested in faster growth markets, further developing our sustainability leadership in consumer care and crop care markets, whilst increasing our presence in pharmaceutical delivery systems. We are prioritising organic capital investment to create new technology platforms and expand capacity for future growth. This will be complemented with inorganic investment, where we can acquire complementary businesses and organically invest in them to grow, in line with our 'buy and build' model.

These elements are reflected in the Group's capital allocation policy, to:

1. Reinvest for growth – investment in organic capital expenditure to drive shareholder value creation through new capacity, product innovation and expansion in attractive geographic markets to drive sales and profit growth;
2. Provide regular returns to shareholders – pay a regular dividend to shareholders, representing 40 to 50% of adjusted earnings over the business cycle. The full year dividend has been raised by 8% to 108.0p (2021: 100.0p);
3. Acquire disruptive technologies – to supplement organic growth, we are targeting a number of exciting technology acquisitions in existing and adjacent markets, with a focus on strengthening our Consumer Care business and expanding in Life Sciences; and
4. Maintain an appropriate balance sheet and return excess capital – maintain an appropriate balance sheet to meet future investment and trading requirements, targeting a leverage ratio of 1 to 2x over the medium-term cycle. We consider returning excess capital to shareholders when leverage falls below our target range and sufficient capital is available to meet our investment opportunities.

Retirement benefits

The post-tax asset on retirement benefit plans at 31 December 2022, measured on an accounting valuation basis under IAS19, was £75.2m (2021: £5.8m), with the surplus primarily reflecting higher discount rates. Cash funding of the various plans is driven by the schemes' ongoing actuarial valuations. The triennial actuarial valuation of the largest pension plan, the UK Croda Pension Scheme, was performed as at 30 September 2020 and indicated that the scheme was 101% funded on a technical provisions basis. Consequently, no deficit recovery plan is required. Although the UK scheme utilises a Liability Driven Investment (LDI) structure, its gearing level is modest and no solvency issues were encountered during the UK gilt 'crisis' during September 2022.

Post balance sheet events

On 3 February 2023, we agreed to acquire Solus Biotech, a global leader in premium, biotechnology-derived beauty actives, from Solus Advanced Materials for a total consideration of KRW350bn (approximately £232m) on a debt-free, cash-free basis. Employing 95 people in South Korea, Solus expands Croda's Asian manufacturing capability and will create a new biotechnology R&D hub in the region. The business generated approximately KRW43bn (c.£28m) of sales in 2022. The pending acquisition will provide access to Solus' existing biotech-derived ceramide and phospholipid technologies, and its emerging capabilities in natural retinol, and will enhance and complement Beauty Actives portfolio and increase our exposure to targeted prestige segments. The acquisition is subject to regulatory approval and will be funded from cash and debt facilities.

Cash flow

	Full year ended 31 December 2022 £m	2021 £m
Adjusted operating profit	**515.1**	468.6
Depreciation and amortisation	**86.4**	79.0
EBITDA	**601.5**	547.6
Working capital	**(133.8)**	(102.5)
Net capital expenditure	**(138.5)**	(158.5)
Payment of lease liabilities	**(17.4)**	(14.4)
Non-cash pension expense	**4.5**	11.2
Interest & tax	**(148.9)**	(129.8)
Free cash flow	**167.4**	153.6
Dividends	**(144.4)**	(132.5)
Acquisitions	**(21.2)**	(58.8)
Business disposal net of cash in disposed businesses	**579.0**	–
Other cash movements	**(18.5)**	19.0
Net cash flow	**562.3**	(18.7)
Net movement in borrowings	**(381.8)**	37.6
Net movement in cash and cash equivalents	**180.5**	18.9

Alternative Performance Measures (APMs)

We use a number of APMs to assist in presenting information in this report in an easily analysable and comparable form. We use such measures consistently at the half year and full year, and reconcile them as appropriate. Whilst the Board believes the APMs used provide a meaningful basis upon which to analyse the Group's financial performance and position, which is helpful to the reader, it notes that APMs have certain limitations, including the exclusion of significant recurring items, and may not be directly comparable with similarly titled measures presented by other companies.

The measures used in this report include:

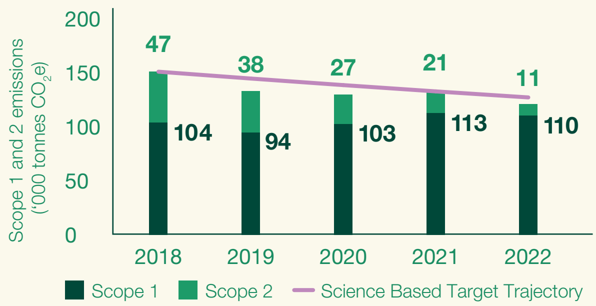
- **Constant currency results:** these reflect current year performance for existing business translated at the prior year's average exchange rates and include the impact of acquisitions. Constant currency results are the primary measure used by management to monitor the performance of overseas business units, since they remove the impact of currency translation into Sterling, the Group's reporting currency, over which those overseas units have no control. Constant currency results are similarly useful to shareholders in understanding the performance of the Group excluding the impact of movements in currency translation over which the Group has no control. Constant currency results are reconciled to reported results in the Finance Review. The APMs are calculated as follows:
    - For constant currency profit, translation is performed using the entity reporting currency;
    - For constant currency sales, local currency sales are translated into the most relevant functional currency of the destination country of sale (for example, sales in Latin America are primarily made in US dollars, which is therefore used as the functional currency). Sales in functional currency are then translated into Sterling using the prior year's average rates for the corresponding period;
- **Underlying results:** these reflect constant currency values adjusted to exclude acquisitions in the first year of impact. They are used by management to measure the performance of each sector before the benefit of acquisitions are included, in order to assess the organic performance of the sector, thereby providing a consistent basis on which to make year-on-year comparisons. They are seen as similarly useful to shareholders in assessing the performance of the business. Underlying results are reconciled to reported results in the Finance Review;
- **Adjusted results:** these are stated before exceptional items and amortisation of intangible assets arising on acquisition, and tax thereon. Exceptional items are those items that in the Directors' view are required to be separately disclosed by virtue of their size or incidence. Movements in contingent consideration have been presented as exceptional as they are not directly representative of the underlying business performance in the period and therefore this presentation provides a meaningful basis to make comparisons between reporting periods. The gain on business disposal and impairment charges have been presented as exceptional due to their size and one-off nature. The Board believes that the adjusted presentation (and the columnar format adopted for the Group income statement) assists shareholders by providing a basis upon which to analyse business performance and make year-on-year comparisons. The same measures are used by management for planning, budgeting and reporting purposes and for the internal assessment of operating performance across the Group. The adjusted presentation is adopted on a consistent basis for each half year and full year results;
- **Return on sales:** this is adjusted operating profit divided by sales, at reported currency. Management uses the measure to assess the profitability of each sector and the Group, as part of its drive to grow profit by more than sales value, in turn by more than sales volume, as set out in the Group Performance Review;
- **Return on invested capital (ROIC):** this is adjusted operating profit after tax divided by the average adjusted invested capital. Adjusted invested capital represents net assets adjusted for net debt, earlier goodwill written off to reserves and accumulated amortisation of acquired intangible assets. Calculations and reconciliations are provided in the five year record of the Group's Annual Report. The Board believes that ROIC is a key measure of efficient capital allocation, in line with its policy set out in the Finance Review, with its aim being to maintain a ROIC of two to three times the cost of capital over the cycle, and that it is useful to shareholders in assessing the returns delivered by the Group and the impact of deploying more capital to grow future returns faster;
- **Net debt:** comprises cash and cash equivalents (including bank overdrafts), current and non-current borrowings and lease liabilities. Management uses this measure to monitor debt funding levels and compliance with the Group's funding covenants which also use this measure. It believes that net debt is a helpful additional measure for shareholders in assessing the risk to equity holders and the capacity to invest more capital in the business;
- **Leverage ratio:** this is the ratio of net debt to Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) adjusted to include EBITDA from acquisitions or disposals in the last 12 month period calculated in line with the banking covenant definition. EBITDA is adjusted operating profit plus depreciation and amortisation. Calculations and reconciliations are provided in the five year record of the Group's Annual Report. The Board monitors the leverage ratio against the Group's debt funding covenants and overall appetite for funding risk, in approving capital expenditure and acquisitions. It believes that the APM is a helpful additional measure for shareholders in assessing the risk to equity holders and the capacity to invest more capital in the business;
- **Free cash flow:** comprises EBITDA less movements in working capital, net capital expenditure, payment of lease liabilities, non-cash pension expense, and interest and tax payments. The Board uses free cash flow to monitor the Group's overall cash generation capability, to assess the ability of the Company to pay dividends and to finance future expansion, and, as such, it believes this is useful to shareholders in their assessment of the Group's performance;
- **New and Protected Products (NPP)**: these are products which are protected by virtue of being either newly launched, protected by intellectual property or by unique quality characteristics. NPP is used by management to measure and assess the level of innovation across the Group.

Key performance indicators

The top half of the page shows our key performance indicators which are reviewed regularly by the Board and executive leadership to monitor Group performance, and are linked to executive remuneration. Other metrics relevant to the implementation of our strategy, including our sustainability strategy, are shown across the bottom.

Sustainability

Scope 1 & 2 emissions[1]



Definition:
Our operational greenhouse gas (GHG) emissions (associated with burning fuels onsite and purchased electricity) in absolute terms.

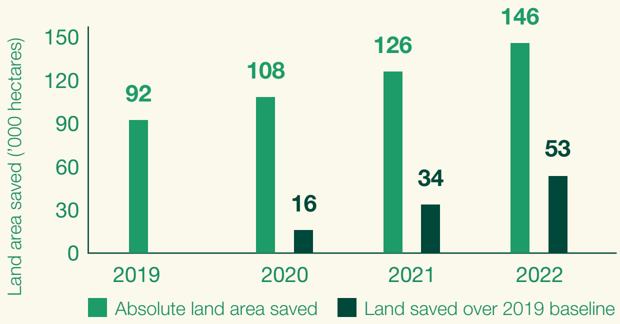
Target:
By 2030, we will have achieved our Science Based Target, reducing scope 1 and 2 emissions by 46.2% from a 2018 baseline.

Performance:
Since 2018, our baseline year, our total scope 1 and 2 GHG emissions have reduced by 19.8%. Within this, scope 1 emissions have increased by 6% and we have seen a 77% reduction in scope 2 emissions. This has been driven by a switch to renewable electricity across our manufacturing sites. We remain on track to achieve our Science Based Target, reducing our emissions in line with limiting the global temperature rise to 1.5°C above pre-industrial levels. For more detail see pages 23-25 of our Sustainability Report.

R

1. We have restated our historical scope 1 & 2 carbon emissions, removing the divested PTIC operations. Our carbon reduction targets have been re-baselined to ensure our level of ambition remains unchanged. Read more on page 40 of our Sustainability Report.

Land area saved[2]



Definition:
Land area saved through the application of our crop protection and seed enhancement technologies, using 2019 as our baseline year.

Target:
Throughout this decade, the land saved through the application of our technologies will exceed any increase in land used to grow our raw materials by at least a factor of two, and by 2030 we will save a minimum 200,000 hectares per year more than in 2019.

Performance:
In 2022 the use of our agricultural ingredients and new technologies saved 53,486 hectares of land compared to our 2019 baseline of 92,223 hectares, translating to a total land saving of 145,709 hectares in 2022. We remain on track to hit our 2024 intermediate milestone of saving at least 80,000 hectares per year more than in 2019, and our 2030 target of saving 200,000 hectares per year more than in 2019. Read more on page 29 of our Sustainability Report.

R

2. PSP target for 2021-23. Read more on page 90 of the 2020 Annual Report.

Progress against our Commitment in 2022

Climate Positive

We continue to deliver absolute scope 1 and 2 emission reductions in line with the trajectory of our Science Based Target (SBT) and have seen the first scope 1 reductions in 2022 arising from new decarbonisation investment. However, our Climate Positive ambition goes beyond decarbonising our own operations and supply chain, aiming for our products to help customers and consumers avoid four times the carbon emissions (scope 1, 2 & upstream scope 3) associated with our business (our Carbon Cover ratio) by 2030. In 2022, 687,926 tonnes CO_2e were avoided through the use of our ingredients, giving a carbon cover ratio of 0.66:1. Additionally, by 2030, over 75% of our raw materials by weight will be bio-based, absorbing carbon from the atmosphere as they grow. On an ongoing basis (adjusting for the divestment of PTIC) our bio-based raw materials as a proportion of total volumes increased from 57% to 59% in 2022.

Land Positive

Compared to our 2019 baseline we have saved 53,486 hectares of land through the application of our technologies. In addition to the land saved target we aim to bring an average of two crop technological breakthroughs to market each year until 2030.
In 2022, we brought two such innovations to market which protect biodiversity and mitigate the impact of changing climate and land degradation, bringing our total launched since 2020 to four.
We acknowledge that our business activities have impacts on nature and are committed to addressing them, announcing in 2022 our aspiration to be Net Nature Positive by 2030. As a member of the Science Based Target Network corporate engagement programme, we have worked in 2022 to better understand how each of our major manufacturing sites, key bio-based raw materials and crop and seed technologies positively or negatively impact biodiversity and nature.

Key

R Links to bonus remuneration

R Links to PSP remuneration

Purpose and Sustainability Commitment (PSC) Score

68%

In 2022 we started to measure employees' engagement with our Purpose and Sustainability Commitment (PSC), leading to the creation of the PSC score. This is used internally to understand employee sentiment and how we can make Croda a better place to work, and will be reported as a non-financial KPI in future years. Further detail on the implementation of the PSC score can be found on page 20.

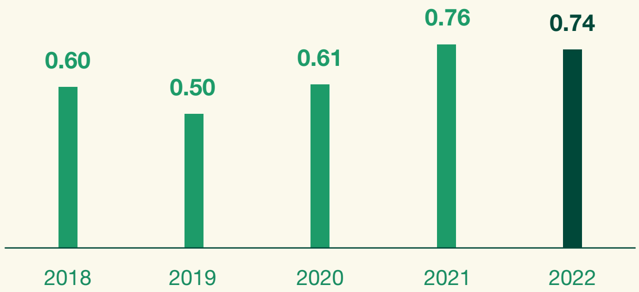
Definition:
The PSC score is a gauge of employee satisfaction measured through employee surveys and expressed as a percentage.

Target:
Improve the PSC score by 8 percentage points against the 2022 baseline by 2025.

Performance:
Our baseline score for 2022 is 68%, with a participation rate of nearly 80%. The overall score is 'good' with encouraging scores in areas such as employees enjoying their work and those who would recommend Croda as a great place to work. There are areas that require improvement, including colleagues feeling their workload is manageable and ensuring we learn from mistakes without placing blame.

R

Total recordable injury rate



Definition:
The number of incidents per 200,000 hours worked where a person has sustained an injury, including all lost time, restricted work and medical treatment cases (excludes COVID-19 cases).

Target:
Achieve TRIR of 0.3 by the end of 2024.

Performance:
The headline TRIR decreased marginally to 0.74 (2021: 0.76 restated). Injury rates at the sites of recently acquired businesses are typically higher than established Croda sites and the underlying TRIR excluding sites acquired less than three years ago is 0.63. Reducing injury rates at both existing Croda sites and newly acquired sites is a top priority.
Read more about performance and safety initiatives on page 21.

R

People Positive

Our People Positive commitment impacts both our employees and wider society. In 2022, through the use of our solar protection ingredients, Croda contributed to protecting more than 61 million people from potentially developing skin cancer caused by harmful UV rays. This is seven years earlier than our 2030 target to protect at least 60 million people annually. We are also moving closer to our target of contributing to the successful development and commercialisation of 25% of WHO-listed pipeline vaccines and have achieved our 2024 milestone of ten clinical phase III trials two years ahead of schedule. Having established Croda Foundation in 2021 to help sustainably improve one million lives, by the end of 2022, 300,000 lives had been sustainably improved with 14.9 million lives benefitting in some way from Croda Foundation projects.

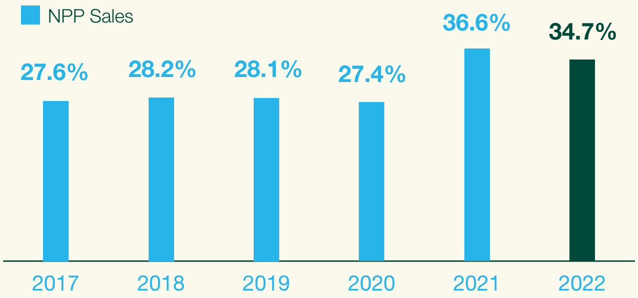
Fundamentals

The Fundamentals element of our Commitment represents the social licence required for a multinational company such as Croda to operate in 2030. Across the nine Fundamental objectives, we have identified some notable activities and progress in 2022. To enable us to meet our personal safety targets, we focused attention on the theme of 'Safety is a Value' with leadership teams across Croda. In a year where cost-of-living dominated public discussion around the globe, we confirmed that all employees globally receive the Living Wage in their country as a minimum and began the process of ensuring all our regular contractors are paid a Living Wage to meet our 2024 milestone. We updated our Supplier Code of Conduct and introduced Supplier Scorecards to raise the profile of environmental integrity and social accountability in our upstream supply chains, and are working with several supply chain consortia to increase transparency and drive action to improve environmental and social outcomes particularly for farmers in our crop-based supply chains.

Key performance indicators continued

Innovation

New and Protected Products sales %



Definition:
New and Protected Products (NPP) are sales protected by virtue of being newly launched, protected by intellectual property or by unique quality characteristics. Measuring NPP is our established KPI for innovation. Historically the KPI has been defined as sales from NPP as a proportion of total sales in constant currency.

The list of New and Protected Products is reviewed annually, in line with the Group's policy. This process is overseen by a non-Executive Director before approval by the Remuneration Committee.

Target:
We seek to drive NPP sales growth at least as fast as total sales over the cycle, targeted at mid to high single digit percentage growth.

Performance:
The proportion of sales from NPP has grown over the last decade from 20.5% in 2012. There was a significant increase in 2021 to 36.6% following the Avanti and Iberchem acquisitions, and strong sales of lipid systems for COVID-19 applications. The small reduction to 34.7% in 2022 reflects lower lipid systems sales and strong growth in Crop Protection which has a lower proportion of NPP.

NPP is a KPI that is used for remuneration. Going forwards, the NPP measure will focus on growth in NPP over the performance period, rather than growth relative to non-NPP sales. As well as simplifying the measure, the new approach reflects the importance of our non-NPP sales, especially those relating to sustainable products. In 2022, NPP sales grew at 2.6% in constant currency, adjusting for the impact of the PTIC divestment.

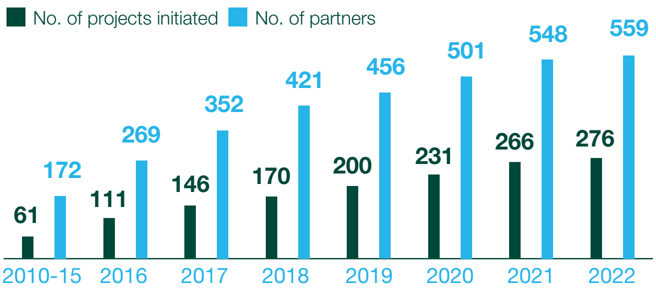
Read more about the important role that innovation plays in creating new market and technology niches on pages 22 and 23.

R

Delivering innovation in 2022

Our innovation partners are a core part of our innovation ecosystem and our collaboration with universities and SMEs helps drive innovation and grow NPP sales. We continue to build our Open Innovation network, particularly in priority areas such as Pharma, and in 2022 added 11 innovation partners and initiated 10 innovation projects. Our Open Innovation network is global, with new innovation partners in Brazil, South Africa and India, as well as a growing network in the United States, enabling us to leverage the ideas, expertise and resources that exist in all regions.

Open innovation partners and initiated projects



Innovation priorities include investing in biotechnology and sustainable chemistry, and accelerating the delivery of platform technologies in areas such as synthetic biology, biocatalysis, and downstream processing. Biotech innovation is led by five specialist biotechnology facilities, with increasing expertise and better collaboration from across the Group leading to the launch of novel ingredients that are derived from plant and marine sources. As we pursue more sustainable manufacturing processes, while continuing to meet performance expectations, in 2022 we acquired intellectual property that will help us transition to manufacturing key Beauty Actives ingredients using more sustainable techniques.

For more information, see the Finance review
Pages 44-47

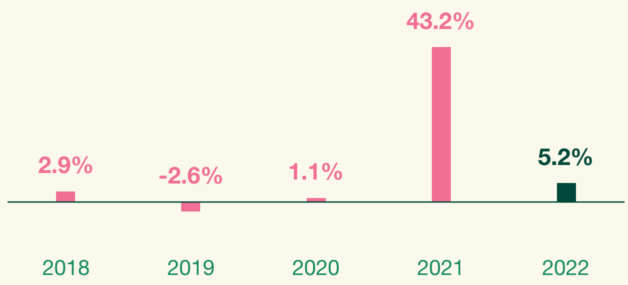
Key

R Links to bonus remuneration

R Links to PSP remuneration

Delivering consistent outperformance

Sales growth (%)

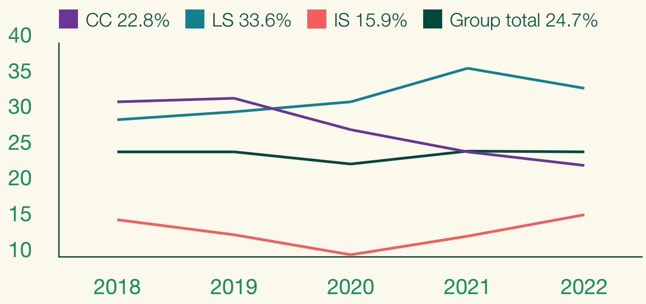


Definition:
Total sales growth measured at constant currency.

Target:
Mid-single digit percentage growth in Consumer Care and high-single digit percentage growth in Life Sciences.

Performance:
Sales growth in 2022 was 5.2%, comprising underlying growth of 4.6% and acquisition impact of 0.6%. Underlying growth was principally driven by price/mix, with successful recovery of input cost inflation more than offsetting volume declines that were principally driven by the PTIC divestment. Underlying sales growth was 9.7% in Consumer Care and 13.9% in Life Sciences.

Return on sales (%)



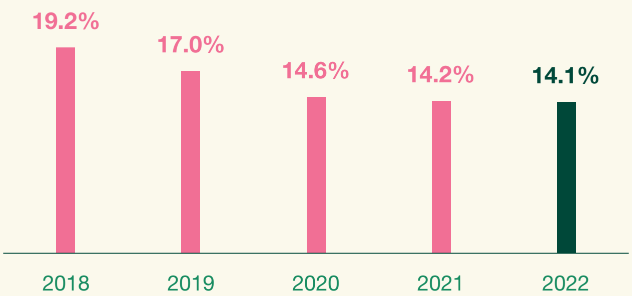
Definition:
Adjusted operating profit as a percentage of sales.

Target:
Return on sales over the medium term at or above 25% in Consumer Care and over 30% in Life Sciences.

Performance:
Group return on sales was broadly flat at 24.7% (2021: 24.8%). This reflects an improved margin mix from the reduced share of industrial sales and a lower variable remuneration charge offset by normalisation of the Life Sciences margin, after an exceptional 2021, and a lower Consumer Care margin due to the gearing effect of lower volume and a weaker product mix.

R

Return on invested capital (ROIC) (%)



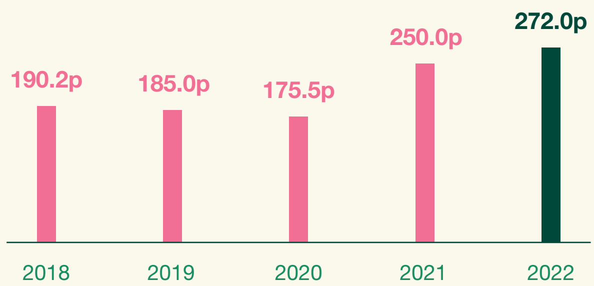
Definition:
Adjusted operating profit after tax divided by the average adjusted invested capital. Adjusted invested capital represents net assets adjusted for net debt, earlier goodwill written off to reserves and accumulated amortisation of acquired intangible assets.

Target:
ROIC of at least twice two times cost of capital.

Performance:
The post-tax return on invested capital (ROIC) was broadly flat at 14.1% (2021: 14.2%), with good profit growth offsetting an increase in average invested capital, partially due to the inclusion of a post-tax asset on retirement benefits plan of £75m.

R

Adjusted basic earnings per share (pence)



Definition:
Adjusted profit after tax divided by the average number of shares in issue.

Target:
At least mid-single digit percentage EPS growth per annum.

Performance:
Adjusted earnings per share increased by 8.8% to 272.0p. This growth was driven by good profit growth across all sectors, partially offset by a marginal increase in the tax rate on adjusted profit to 22.8% (2021: 21.2%)

R

Risk
Managing risks

Risk strategy
Effective risk management enables the business to protect and create value, helping us to identify opportunities and minimise threats to the delivery of our strategy and to build resilience within our business model.

Risk governance
Our Board owns and oversees our risk management programme, with overall responsibility for ensuring that our risks are aligned with our goals and strategic objectives. The Audit Committee assists the Board in monitoring the effectiveness of our risk management and internal control policies, procedures and systems.

Risk monitoring
Global visibility of risks identified by regions, sites and sectors is obtained through bottom-up risk registers that are continuously updated in our risk and control system. Using our global risk management framework (page 53), bottom-up risks are combined with top-down risks, the latter being identified and owned by a member of the Executive Committee, in our Executive Risk Register.

Movements to the Executive Risk Register are reviewed by the Risk Committee during quarterly meetings, that also have standing agenda items to review and monitor internal and external emerging risks; IT and cyber risks; internal audit and safety, health, environmental (SHE) and quality (SHEQ) assurance. The Committee also provides the Board with visibility of the principal risks facing the organisation through quarterly reports.

Risk management
While our Board owns and oversees our risk management programme, risk management accountability is embedded throughout our organisation:

- Our first line of defence, our employees, have a responsibility to manage day-to-day risk in their own areas guided by Group policies, procedures, control frameworks and risk appetite. Local management, and ultimately the Executive, ensure that risks are managed and actioned according to these frameworks
- The second line of defence is provided by management team review of each risk register, culminating in review by the Risk Committee
- The third line of defence is through assurance over the effectiveness of mitigating controls, which is provided through internal audits, supplemented by reports from external assurance providers
- Our Global Crisis Management Plan is in place to manage significant risk events, is owned by the Executive Committee, and is tested at least annually using risk scenarios.
- Croda's Group Fraud Policy, Group Code of Conduct, Group Code of Ethics and Group Whistleblowing Policy in addition to our controls framework are in place to prevent and detect fraud. Annually the Audit Committee reviews the adequacy and effectiveness of Company's anti-fraud procedures

Risk appetite

Our risk appetite is the level of risk that Croda is willing to accept in the pursuit of a specific objective or strategy. We define a risk appetite score for each risk subcategory, using a one ('risk averse') to six ('risk open') scale. The risk subcategory for SHE sits at the lower end of the scale, meaning that we are not willing to accept risks of this nature and these must be reduced to a level as low as reasonably practical. At the other end of the scale sits the subcategory for innovation, an area where we are willing to accept risks to seize significant opportunities. Assessing risks against our risk appetite allows us to review and challenge the level of risk that we are taking for each of our key risks, to identify areas where additional controls may be needed, or where the level of control may be too onerous.

Our risk appetite statements are compiled based on our Company values, strategy and capacity to absorb risk. We use our risk appetite statements as an effective tool to communicate the Company's appetite towards each type of risk, providing a consistent guidance for decision-making throughout the organisation.

For more information on our risk management framework
See page 53

For information on our approach to managing climate-related risks
See page 62

Emerging risks
We consider emerging risks and opportunities as part of our risk landscape and define them as those whose effects have not yet been substantially realised and which evolution is highly uncertain.

The Risk Committee reviews emerging risks and opportunities from internal and external sources on its quarterly meetings and consider whether they should be included in our risk register.

Emerging risks can be slow moving, when they have potential to materialise in more than a year, as well as rapid velocity, those that may materialise within the next year. The later are closely monitored and actively managed (see Energy crisis case study on page 54).

Our risk framework

What we monitor

Executive risk register
Summary of the principal risks facing us prepared by combining risks identified through the local bottom-up registers with top-down risks identified and owned by the Executive Committee.

Our risk landscape
Current risks

Risks we are managing now that could stop us achieving our strategic objectives.

Emerging risks

Risks with a future impact from external or internal opportunities or threats. These can be slow moving, as well as rapid velocity.

What we assess
- **Risk ownership:** each risk has a named owner
- **Likelihood and impact:** globally applied 6x6 scoring scale
- **Gross risk:** before mitigating controls
- **Mitigating controls:** subject to internal audit review and monitoring
- **Net risk:** after mitigating controls are applied
- **Risk appetite:** defined at risk subcategory level
- **Actions:** identify further mitigation if required

Risk categories we assess
Six categories, 17 subcategories, over 60 generic risks, one framework:

- Strategic
- People and culture
- Process
- External environment
- Business systems and security
- Financial

Our bottom-up registers
The core of our risk assessment. Owned by market sectors, regions, manufacturing sites and functions, they identify local risks and mitigating controls arising from day-to-day operations globally.

How we monitor

Board
- Responsible for the risk framework and definition of risk appetite
- Reviews key risks with an opportunity for in-depth discussion of specific key risks and mitigating controls annually
- Approves the viability statement

Audit Committee
- Reviews the effectiveness of the Group risk management process
- Reviews assurance over mitigating controls, directing internal audit to undertake assurance reviews for selected key risks
- Reviews viability scenario assessments

Risk Committee
Chaired by Group Finance Director
- Meets quarterly to monitor and review risks (other than SHEQ, Ethics and Sustainability, which are delegated to other committees)
- Standing agenda items to monitor emerging risks, IT systems and cyber risks
- Receives an in-depth presentation of specific key risks and mitigating controls from risk owners
- Considers the results of internal audit work

Sustainability Committee
Chaired by Chief Sustainability Officer
- Meets quarterly to oversee the development, measurement and delivery of our sustainability strategy and the significance of climate related risks and opportunities
- Monitors against stretching targets and agreed KPIs

SHEQ Steering Committee
Chaired by President of Global Operations
- Meets quarterly to review SHEQ risks
- Monitors against stretching targets and agreed KPIs
- Considers the results of assurance audits over SHEQ controls

Ethics Committee
Chaired by Group General Counsel and Company Secretary
- Meets quarterly to review ethics and compliance risks
- Monitors against agreed KPIs
- Considers the results of assurance audits over ethics controls

Risk continued

Principal risks

We consider principal risks to be those risks, or combination of risks, that, were they to arise and not be effectively mitigated, would cause serious disruption to our business model, threatening future performance, solvency, liquidity or our ability to deliver our strategy. Risks at this level are recorded in our Executive Risk Register with a high pre-control score.

The Group's principal risks, as reported in the financial statements for the year ended 31 December 2021, were revenue generation; product and technology innovation and protection; digital technology innovation; delivering sustainable solutions – Climate and Land Positive; management of business change; our people – culture, wellbeing, talent development and retention; product quality; loss of significant manufacturing site; ethics and compliance; and security of business information and networks. During our periodic risk reviews, we confirmed that all principal risks reported in 2021 remain relevant and no new principal risks were identified. The following principal risks were identified as heightened relative to 2021:

- Revenue generation: This risk has increased in likelihood and impact as greater geopolitical instability, rising inflation and slowing economic growth increased uncertainty. Our powerful business model has allowed us to continue to manage this risk effectively by recovering the significant inflation that persisted throughout 2022. After a period of strong market growth, there are some signs of macroeconomic slowdown in some regions facing a cost of living squeeze, which could impact our ability to deliver short-term growth in consumer-facing markets. More detail on this can be read in the case study on the right of this page.
- Security of business information and networks: The conflict in Ukraine highlights the increased risk of geopolitical disputes. One impact of this can be an increase in state-sponsored cyber-attacks, increasing risk to computer networks and systems.
- Our people – culture, wellbeing, talent development and retention: Competitive labour markets and the cost-of-living crisis in some regions increase the risk of not attracting and retaining necessary talent. To successfully control that risk, we are investing in talent development, enhanced benefits according to regional needs and providing financial support to counter the increase in employees' cost of living.

The following principal risk was identified as having reduced relative to 2021:

- Loss of significant manufacturing site (major safety or environmental incident): This risk has decreased after the successful divestment of two of our large industrial sites in 2022, reducing the number of high hazard processes within the Company. In addition, capital investments in several sites in more sustainable and safer technologies, such as biofuel steam raising boilers which displace natural gas, and the introduction of continuous processes which are inherently safer and more efficient than old batch technologies, have also contributed.

Business model resilience in an inflationary economy

The COVID-19 pandemic, followed by the conflict in Ukraine, created an environment of geopolitical and macroeconomic uncertainty. Stressed supply chains, high inflation, slowing economic growth and increasing geopolitical tensions are a few of the resulting factors with the potential to impact the performance of businesses, including Croda.

Croda's revenue and profit across all sectors and regions in 2022 give us confidence in the resilience of our business model. During the year, we were able to recover increases in raw material, freight, energy and employee costs. This shows that, in most cases, we can protect our profitability in an inflationary environment as our business model doesn't rely on a small number of customers and products but on a broad range of technologies that serve multiple niche markets where our leadership in innovation and sustainability is more important than prices.

Energy crisis

Uncertainty concerning the gas supply to Europe has led to high energy prices with risk of gas and the threat of energy rationing in several European countries. We evaluated the risk for a scenario of limited gas supply and periods of energy blackout during winter months considering:

- The operation of our potentially affected manufacturing sites, IT systems and offices
- Our raw material security, considering location of key suppliers
- Rising energy cost impacts on our employees and potential disruption of social services (e.g. schools closing early).

We have also considered opportunities arising from competitors located in areas of higher likelihood of being affected.

Considering the impact and likelihood of this scenario, we did not classify it as a principal risk but as an emerging risk. A key risk indicator was defined and has been continuously monitored to determine the velocity of the risk. In case it achieves the defined threshold, it will trigger our Crisis Management Plan.

For more on principal risks
See pages 55-58

Strategic

Principal risks

Key

Link to our strategy (page 22)

- Sustainability
- Innovation
- Growth

Risk movement

- Risk increase
- No change
- Risk decrease
- V Included in viability statement (see page 59)

Link to our business model (page 14)

- E Engage
- C Create
- M Make
- S Sell

1. Revenue generation

V E S

President Regional Delivery and Sector Presidents

Why this matters to us

Our ambition is to deliver consistent top and bottom-line growth, with profit growing ahead of sales, ahead of volume. To grow, we need to innovate and also keep pace with our customers as they serve consumers globally in established markets and higher risk developing markets. Failure to manage these challenges and the consequences of geopolitical tensions will adversely impact delivery of our growth strategic objective. Acquisitions of adjacent technologies will dilute growth if they are not effectively integrated.

How we respond

Through our global sector sales, marketing and technology teams, we identify consumer trends and respond swiftly to satisfy customer needs through key technologies. Our direct selling model enhances customer intimacy. Our resilient business model and continued focus on growing profit ahead of sales ahead of volume mitigates profit impact in difficult trading conditions.

What we have done in 2022

- Commissioned a manufacturing facility in Brazil for F&F, one of the largest markets for fragrances globally
- Extended the geographical reach of recent acquisitions Alban Muller and Parfex, leveraging the wider Consumer Care sales network
- Educated our selling teams in the technologies that will deliver growth in our Pharma business over the coming years, developing a pipeline of projects across the globe
- Invested in capital expenditure for growth at our manufacturing sites, specifically in high value technologies

2. Product and technology innovation and protection

V E C

Nick Challoner
Group Chief Scientific Officer

Why this matters to us

Innovation is the lifeblood of our business. It plays a critical role across our operations; it differentiates us from the competition, protects sales and improves our margins. Failure to leverage our global innovation teams could lead to a reduction in New and Protected Products (NPP) impacting growth and margin.

Failure to protect our intellectual property (IP) in these products in existing and new markets could undermine our competitive advantage.

How we respond

Our technical research and development (R&D) teams, based in our customer innovation centres and application laboratories globally, focus innovation on customer and market needs and are embedded across our business. We invest in: R&D, Open Innovation and Smart Partnership programmes, developing premium niches and disruptive technology acquisitions. Our specialist IP team protects new products and technologies, defending our IP and challenging third-party IP where appropriate.

What we have done in 2022

- Developed our expertise in long-term innovation allowing the continued development of new technology platforms in sustainable polymers and novel actives, as well as identifying four specific big bet projects representing near-term opportunities underpinned by these platforms
- Invested in new technical resources, capabilities and locations supporting the development of our Pharma business in the areas of nucleic acid delivery, small molecule/protein delivery and vaccine adjuvants
- Further developed our approach to sustainable innovation leading to practical outcomes in market-led ingredient development with improved biodegradability, increased bio-based content and lower environmental impact

Strategic continued

Principal risks

3. Digital technology innovation

Jez Maiden
Group Finance Director

Why this matters to us

Digital technology is a significant disruptor, rapidly changing markets that we operate in, changing the way we interact with our external partners and each other. New and established customers expect a high level of online service, from researching ingredients to procurement, and failure to meet these needs ahead of competitors will impact growth, hinder R&D knowledge sharing and create inefficient processes.

How we respond

Our digital specialist teams focus on our business model areas of Create, Make and Sell and provide global leadership to take advantage of the fast-evolving digital world. They deliver an integrated market-facing environment that encompasses everything from product development through artificial intelligence-enabled manufacture, to delivering customer service. Digital pilot projects embedded in the organisation support agile, local trials of innovative ideas, which can grow into global roll outs.

What we have done in 2022

- Create: Successfully delivered the first phase of our digital platform for knowledge management in R&D
- Make: Global process owner in place for demand to supply, prioritising supply chain efficiency
- Sell: Successful pilot of customer self-serve ordering portal. Rollout to start in 2023

4. Delivering sustainable solutions – Climate and Land Positive

Nick Challoner
Group Chief Scientific Officer

Why this matters to us

We have made a bold Commitment to be Climate and Land Positive by 2030, aligning our smart science with United Nations Sustainable Development Goals (SDGs). We are committed to delivering improvements in line with the objective to limit global temperature rises to no more than 1.5°C above pre-industrial levels. Climate change, biodiversity loss and rising inequality are changing consumer demands, making sustainability as important to consumer choice as price.

Failure to remain ahead of our competitors and to deliver on our stretching 2030 targets will damage our reputation as a sustainability leader and compromise growth.

How we respond

Our sustainability team, led by our Chief Sustainability Officer, maintains the organisation's focus whilst the targets and accountability for delivery are embedded within the business. The Sustainability Committee, which meets quarterly, has representatives from all functions and sectors who work together to deliver our sustainability targets. We see more opportunity than risk in climate change.

What we have done in 2022

- Developed decarbonisation plans for our manufacturing sites and major office locations, which were externally validated, supporting the carbon reduction targets required to meet our 2030 commitments
- Elevated our engagement and impact on sustainability-led matters by being invited to join the World Business Council for Sustainable Development
- Built on the success against our Land Positive targets and developed early-stage plans for becoming Nature Positive, thus broadening our scope of activity in the area of biodiversity
- Built sustainability targets into our senior level long-term incentives

5. Management of business change

Steve Foots
Group Chief Executive

Why this matters to us

Delivery of our strategy requires significant business change globally, including acquisition of businesses and investment in our capital expenditure programme which is taking place in an environment of cost inflation and interruptions to availability of materials. Such transformational change has the potential to distract the organisation, resulting in failure to deliver expected results, or at worst destroy value.

Ineffective management of change could result in a failure to integrate new acquisitions effectively and impact the realisation of expected benefits.

How we respond

The Board and Executive have oversight of the strategic change programme and receive regular updates of status and progress. Skilled programme managers, supported by external consultants, lead our delivery of change programmes and our Capital Project Director monitors and oversees the capital investment programme.

What we have done in 2022

- Completed the sale of the majority of the PTIC business
- Progressed our integration of Iberchem, supporting growth synergy delivery
- Implemented dedicated structure to manage significant change programmes and appointed programme directors
- Ran leadership development programmes with focus on change management

People and culture

Process

Principal risks

6. Our people – culture, wellbeing, talent development and retention

Tracy Sheedy
Group Human Resources Director

Why this matters to us

Retaining and developing the experience and motivation of all our knowledgeable and diverse employees are critical to maintaining our ability to deliver our strategic priorities. Failing to maintain our distinctive Croda culture within which people thrive and which attracts new and diverse talent to join the Company would significantly damage our ability to innovate.

How we respond

A clear Purpose, strong development culture, excellent learning opportunities and competitive reward programmes support the retention, engagement and career development of the high-quality teams we need. Global graduate and management development programmes include stretching and high-profile assignments and provide a pipeline of internal talent.

Our bi-annual global talent review process considers resources and succession plans for critical roles, with actions monitored by the Executive Committee and the Board.

What we have done in 2022

- Implemented improved global talent management process
- Full range of leadership development programmes updated and rolled out in 2022
- Enhanced regional benefits to compensate employees for increasing cost of living
- Review of global reward programmes following the implementation of the Free Share Plan to further share reward across the organisation
- Established a global Diversity & Inclusion Steering Committee and a number of regional and country committees designed to discuss and promote diversity & inclusion

7. Product quality

Mark Robinson
President Global Operations

Why this matters to us

We sell into a number of highly regulated applications and the transition to a focused Consumer Care and Life Sciences business increases our exposure to this environment. Weak product quality control leading to non-compliance with our customers' stringent product quality requirements and global and local regulation could expose us to liability claims, significant reputational damage and compromise our ability to deliver growth.

How we respond

Monitored by our Group SHEQ Steering Committee, our sites and products are certified to demanding external quality standards highly valued by our customers (including ISO 9001, GMP and Excipact). Our global network of quality professionals enforce compliance with the Group Quality manual, assured through internal audits delivered by our specialist Group Quality audit team and external certification audits. We work proactively with relevant trade associations to shape future regulation.

What we have done in 2022

- Independent confirmation that Life Sciences manufacturing sites are operating to the correct standards
- Our progress to the 2030 target of 99.5% right first time in manufacturing is on target
- Increased the use of our maturity assessment audits which will enhance the effectiveness of our quality management systems

8. Loss of significant manufacturing site (major safety or environmental incident)

Mark Robinson
President Global Operations

Why this matters to us

We rely on the continued sustainable operation of our manufacturing sites around the world, including newly acquired sites.

Climate change directly impacting the location of a site or availability of utilities used, or a major event causing loss of production and violating safety, health or environmental regulations, could limit our operations. This could also expose the Group to liability, cost and reputational damage, especially in light of our commitment to sustainability and customer service.

How we respond

Monitored by our Group SHEQ Steering Committee, our global network of site-based safety professionals enforce compliance with global policies and procedures defined in the Group SHE manual. Assurance is provided by the specialist Group SHE internal audit team, whilst external auditors certify our compliance with international safety standards. Our sites are certified to ISO 14001 standards.

Risks specific to each site are identified in 'bottom-up' risk registers and local emergency response plans are in place which are regularly tested.

What we have done in 2022

- Sale of the majority of PTIC business reduced our high hazard processes by 21%
- Introducing biofuel steam-raising boilers on several sites displacing natural gas
- Introducing continuous processes in several plant areas which are more inherently safe than old batch technology
- Process Risk Review peer review programme has yielded a greater understanding of risk dominating scenarios and enabled action to implement further risk reduction measures
- Several sites are reaching higher process safety maturity and using leading metrics to drive down risk
- Senior Leadership Team commitment to improving SHE performance (more detail on this can be read on page 21).

Risk continued

External environment

Principal risks

9. Ethics and compliance

— V E C M S

Tom Brophy
Group General Counsel

We are subject to UK ethics legislation which is far-reaching in terms of global scope and often more rigorous than local legislation (for example, the UK Bribery Act).

Our increased presence in emerging economies and increasing introduction of new regulation create an elevated compliance and reputational risk.

Our Group Ethics Committee meets quarterly to consider new legislation requirements and to promote the importance of ethics and compliance across our business and stakeholder ecosystem.

Compliance training and education programmes are rolled out globally, with results monitored by the Committee.

Our Audit Committee reviews the effectiveness of the Group's anti-bribery and fraud procedures on an annual basis.

- Continued with the ethics integration of newly acquired companies, with particular focus on those in emerging markets with associated higher ethical risks
- Added newly acquired businesses into our ethics KPIs and improved the quality of information that feeds into the KPI dashboard
- Iberchem appointed a dedicated Compliance Manager to help integrate Iberchem within the Croda ethics framework
- Published a booklet summarising our approach to responsible and ethical business conduct. This is available on the Croda website to aid our stakeholders in understanding our ethics programme
- Undertook over 16,000 third-party reputational screenings
- Reported to the Board on the ethical compliance programme

10. Security of business information and networks

V E C M S

Jez Maiden
Group Finance Director

Why this matters to us

Society and business are subject to more numerous and increasingly sophisticated threats to security, including hackers, viruses and ransomware attacks, while keeping our data safe is subject to increasingly stringent regulatory requirements globally. Our business model relies heavily on the availability of IT networks and systems; an extended interruption of these services may result in an inability to operate.

How we respond

We run our key applications in distributed computing environments with regular failover testing and penetration testing being undertaken. Our information security specialists monitor our IT services and networks, oversee cyber protection solutions and provide cyber awareness education globally, whilst internal and external auditors review and report on the operation of cyber and system controls annually.

What we have done in 2022

- Responded to an increase in risk from the threat of cyberattacks to all business and organisations
- We further strengthened our control environment and invested to build internal capability within our dedicated information security team
- Information Security programme performance has been good with no major cyber security incidents recorded

Long-term viability statement

Confirmation of viability

Based on their assessment of prospects and viability, the Directors confirm that they have an expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the next three years to 31 December 2025. The Directors also considered it appropriate to prepare the financial statements on a going concern basis, as explained in the Group accounting policies (page 164).

Assessment of viability

We assess viability through two lenses; a 'top-down' test which quantifies the magnitude of profit or loss required to endanger liquidity and our bank covenants and a 'bottom-up' assessment that makes use of downside scenario models, which reflect the key risks facing the Group, to test against the Group's financial headroom and leverage over the viability period.

In 2021, we adopted a new strategy to become a 'pure play' Consumer Care and Life Sciences company. With the intent to have a stable goal, we adopted 2026 as a fixed horizon for our annual strategic plan, with rolling three year detailed financial modelling being prepared. We chose to use a three year period for the viability assessment because, given the inherent uncertainty of long-term planning, we believe this is the horizon that provides the most appropriate balance between accuracy and long-term visibility.

Our strategic plan is built from a bottom-up sector view considering different macroeconomic scenarios and near-term risk factors, including weaker demand, energy inflation, raw material price changes and ongoing pandemic restrictions. The base case model and downside scenarios are used to assess the impact for both the viability statement and the going concern assessments. For more on going concern see page 164.

Top-down liquidity headroom

We assess our overall capacity to withstand catastrophic events by stress testing the EBITDA reduction required to trigger a default under our funding covenants, and liquidity headroom available from committed debt facilities, including any which mature within the viability period:

- Bank leverage covenant: the leverage ratio at the end of 2022 of 0.5x remains substantially below the maximum covenant level under the Group's debt facilities of 3.5x. Based on 2022 results, stress testing assesses that EBIT would need to fall by 99% to trigger an event of default. In the event that breaching the maximum covenant level was possible, we would also take additional unmodelled action to conserve cash and improve the covenant position (we also test the impact on our interest covenant; however, with a high level of fixed rate debt, there is no plausible scenario which endangers compliance with this covenant);
- Unused committed liquidity headroom: as at 31 December 2022 over 95% of current committed debt facilities of £1,122.5m mature after the end of the viability period, with current committed unused headroom of £579.3m (see financial review on page 44 for more details).
  The Company therefore expects to have the necessary liquidity headroom available to cope with unexpected risk events during the viability period.

Bottom-up risk scenario headroom

Using the 'base case' model, individual downside scenario events were identified and modelled. In addition, five severe but plausible combinations of these individual scenario events were tested to assess the potential combined downside impact on the liquidity and covenant headroom of the Group over the three-year viability period. None of the individual scenario or scenario combinations was found to endanger the liquidity or covenant requirements over the viability period.
The key scenarios tested were as follows:

Scenario	Key assumptions	Principal risks	Scenario combination				
New entrants or enhanced competition in our market space make significant inroads into our business.	Loss of business in Consumer Care, Life Sciences and Industrial Specialties.	1	●				●
Regulatory or reputational issues affecting individual products or product groups.	Loss of contribution from significant products.	1	●				
Disruptive production or digital customer interaction technologies are brought to the market by competitors and we lose competitiveness.	Loss of business in a major technology platform and competitive attrition within Customer Care and Life Sciences customers.	2 3	●	●			
Regional geopolitical upheaval results in the global economy moving into recession, with significant business loss.	Lower sales, with greater impact in Consumer Care than in Life Sciences reflecting the different levels of exposure to discretionary income.	1				●	
Failure to secure supply of key raw materials.	Loss of contribution from products affected by lack of constrained raw materials.	1		●		●	
Catastrophic incident leading to complete loss of a manufacturing site.	Uninsured loss of major manufacturing site resulting in lost margin for an extended period.	8					●
Major ethics and compliance breach leading to government investigation and fine.	Loss of business due to reputational damage, in addition to cost of fines and legal expenses.	9					
Loss of main ERP system for prolonged time.	Loss of contribution margin during the ERP outage, mitigated by business continuity actions.	10			●		
Cyber attack.	A significant cyber attack damages reputation and results in disruption of processes, in addition to costs of data recovery.	10			●	●	
Fail to demonstrate delivery against sustainability commitments.	Reputational damage, leading to loss of business in all sectors.	4					
Product quality failure leading to a product recall.	Financial impact from damages and legal costs in addition to loss of business due to reputational damage. Greater impact in Life Sciences due to nature of product applications.	7					●
Fail to deliver expected benefits from acquisitions.	Commercial synergies from recent acquisitions (e.g. F&F) are not realised.	5					
Persistent inflation combined with failure to recover cost increases in the market.	Partially absorb increases in raw material and freight costs.	1					

The principal risks to which these scenarios relate are as follows:

Principal risks
1. Revenue generation; **2.** Product and technology innovation and protection; **3.** Digital technology innovation; **4.** Delivering sustainable solutions – Climate and Land Positive; **5.** Management of business change; **6.** Our people – culture, wellbeing, talent development and retention; **7.** Product quality; **8.** Loss of significant manufacturing site (major safety or environmental incident); **9.** Ethics and compliance; **10.** Security of business information and networks

Non-financial disclosure
Task Force on Climate-related Financial Disclosures (TCFD)

Croda has long recognised the scale of the climate emergency, which we believe creates both opportunities and risks to our future growth. We develop innovative products which help our customers to reduce their own carbon footprint and we set stretching climate related targets as part of our Climate Positive Commitment to 2030 (page 12).

On pages 60 to 68 of this report we summarise material climate related disclosures consistent with the four pillars and 11 disclosures proposed by the TCFD, including the 'Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures" released in October 2021. We also reference links to further information which can be found in our Annual Report, Sustainability Report (SR) and online factsheets to support compliance. We cross refer to our Sustainability Report throughout this TCFD section as that report offers us additional space to explain our strategic Climate Positive commitment, illustrate this through case studies (SR pages 22-27) and explain our targets, metrics and progress in more detail (SR pages 36-39). We continue to work to remain aligned with evolving climate and non-financial disclosure requirements as required by the Listing Rules.

Governance

	How we comply	What we have done in 2022	Next steps and timeframes supporting further improvement
a) Describe the Board's oversight of climate related risks and opportunities	As one of the three pillars of our Commitment (page 12), climate risks and opportunities are core to our overall strategy and as such the Board considers climate related issues as part of its annual review of the strategy described on page 81. The Board is accountable for all risks, including those relating to climate and reviews these annually. It receives a quarterly report from the Chief Sustainability Officer (page 78) which considers progress against climate targets, including the risks to delivering these in the highlights and lowlights sections of the report. The Board approves significant capital expenditure and acquisition proposals and has oversight of the innovation strategy, considering how these align with our climate and decarbonisation goals. The Remuneration Committee agrees climate related performance objectives which are incorporated into senior leadership remuneration (page 107). The Board guides the leadership values we look for in Croda to ensure we build future leadership capabilities to include sustainability and decarbonisation know-how.	Board considered sustainability strategy and targets including sustainability of innovation technology platforms (pages 75). As part of a focus in 2022 on sustainability (page 81) the Board undertook a review of corporate level risks and opportunities associated with climate, considered future compliance with rapidly changing reporting frameworks and progress towards delivering 2030 targets. Review of major capital expenditure considered the impact of new technology on our net zero carbon ambition (Dahej case study on page 81). The Audit Committee considered the results of the FRC's review covering TCFD disclosures and climate in the 2021 Annual Report (page 99).	Consider sustainability competence and experience as a criteria for Non-Executive Director appointments in 2023. Deliver climate education for the Board.
b) Describe management's role in assessing and managing climate related risks	The Board delegates responsibility for running the business to the Chief Executive, which includes responsibility for managing climate related issues. A sub-committee of the Executive, the Sustainability Committee, meets at least quarterly (page 87) chaired by the Chief Sustainability Officer, who is supported in this role by an internal centre of excellence, the Group Sustainability team. The Committee comprises senior leaders (including an executive sponsor for Climate Positive, the President of Global Operations, Mark Robinson) from across the business, each of whom has a responsibility to identify further strategic opportunities, understand the risks posed in delivery of the strategy, monitor progress towards declared targets and to develop and coordinate group wide engagement with our sustainability targets. Our global Sustainability Professionals Network and local sustainability champions facilitate best practice sharing throughout the organisation and are supported by the Group Sustainability team. Our organisation structure is included on page 17 of the Sustainability Report. Through our risk management framework (page 52) climate related risks are captured, assessed, mitigated and owned at the appropriate level of the organisation.	Created our global Sustainability Professionals Network, described on page 14 of our Sustainability Report. Sustainability champions supported the development of decarbonisation roadmaps for every Croda location. Invited all Croda employees to regional carbon summit webinars, presenting an update on our decarbonisation progress and initiatives and answering questions.	More completely define the role of sustainability champions in cascading communication on climate throughout the organisation. Review the terms of reference and composition of the Sustainability Committee in the light of Croda's strategy to become a pure play Consumer Care and Life Sciences company.

Strategy

	How we comply	What we have done in 2022	Next steps and timeframes supporting further improvement
a) Describe the climate related risks and opportunities the organisation has identified over the short, medium and long term	Our definition of short, medium and long-term time horizons is included on page 63 and are aligned with our strategic commitments to 2030, with milestones for delivery set for 2024. Climate related, physical and transitional risks and opportunities are assessed using our global risk framework, described on page 53 of this report. They include increased raw material costs, carbon pricing, emerging regulation and the effects on our people and working environment. The four most impactful climate related risks, and how these were selected, are described in more detail on page 66 of this report, together with a summary of other less impactful risk themes identified from our bottom-up risk registers.	The Sustainability Committee reviewed all climate related risks identified from our bottom-up risk registers, and engaged the global operations team in discussion of these risks, identifying actions for further improvement and clarity.	Using the bottom-up risk themes identified in 2022, we will undertake a detailed review of all risk assessments with the risk owners to align assessments globally and to challenge the mitigating controls identified at local level.
b) Describe the impact of climate related risks and opportunities on the organisation's businesses, strategy and financial planning	Delivery of climate related commitments identified in our Climate Positive strategy form a core part of our overall business strategy and as such the impact of not delivering our climate related objectives is significant. We reflect this in our principal business risks on page 56. The financial impact of the four highest risks in our register is described in more detail on pages 66 to 68 of this report. We include a GHG emissions metric in a revolving credit facility (RCF), with carbon emission targets in the seven year agreement aligning with our 2030 Climate positive commitments (SR page 24). Savings are reinvested into the decarbonisation capital expenditure programme. Since 2020 we have applied an internal shadow carbon price to capital investment to help to prioritise projects that will reduce scope 1 and 2 emissions (SR page 24). All capital projects over £100k are required to complete a sustainability impact assessment. The impact of increased capital cost on impairment and useful economic life is considered on page 164. Since 2021 carbon budgets have been presented annually alongside the financial budgets at regional and sector level, which consider the impact of the short and long-term site decarbonisation plans.	A full review of the impact of climate change on fixed asset useful economic lives was completed in 2022, which concluded no material changes were required (page 164). All sites have now defined a 'decarbonisation roadmap' (see page 24 of the Sustainability Report for more details) which will be used to direct future capital and development plans. Shadow carbon price was increased from £55/tonne to £124/tonne in line with the UK Government's Green Book, highlighting the increasing importance of taking action to avoid exposure to the cost of carbon (see page 24 of the Sustainability Report for more details).	Sector teams will finalise 2030 decarbonisation roadmaps to include scope 3 emissions, enabling the sectors to make portfolio management decisions incorporating carbon footprint data, which will inform the development of the next generation of low carbon products.
c) Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios	Supported by external consultants, Accenture, we undertake detailed climate scenario analysis (CSA) of the most impactful climate related risks identified against three future climate related scenarios to assess our resilience to these risks. Under each scenario we consider impact across six, five year time periods, which is significantly in excess of our strategic planning horizon but is in line with our commitment to be net zero and our SBT targets. Our methodology is described in more detail on page 63.	In 2022 the Sustainability Committee reviewed the climate related risks to confirm those with the highest impact, for which scenario analysis was repeated (page 66). Baseline assessments and all scenarios were updated to reflect the divestment of the PTIC business. Although some changes were identified we concluded these would not materially impact our Climate Positive strategy.	Begin developing net zero roadmaps based on technology platforms, in addition to the individual site level roadmaps, to support the transformation and future preparedness of our business to grow.

Task Force on Climate-related Financial Disclosures (TCFD) continued

Risk management

	How we comply	What we have done in 2022	Next steps and timeframes supporting further improvement
a) Describe the organisation's processes for identifying and assessing climate related risks	The process for identifying climate related risks, assessing both their impact and likelihood, is fully embedded as part of our global risk management process which is described on page 53. New and emerging risks and opportunities can be identified at a local level (mainly physical risks) or by the Sustainability Committee (emerging risks requiring action to be driven globally, or requiring more granular analysis). We have used the TCFD framework to support our assessment of climate related risks. Impact and likelihood scoring for all risks uses the 6 point scoring methodology defined in the Group risk framework. Emerging risks and opportunities include those resulting from the rapidly evolving climate and sustainability regulation. In both cases a business owner is identified, and the risk is assessed for both impact and likelihood using the global risk framework. As the impact of emerging risks on specific sites or regions is understood, local business owners are identified, and the risks are moved to local risk ownership to drive mitigating actions.	Regulations are changing rapidly at present and we have worked with external consultants to identify those which are relevant to Croda to enable us to assess the opportunities and risks relating to the changes.	Consider the implications of the International Sustainability Standards Board (ISSB) and the EU Corporate Sustainability Reporting Directive (EU) 2022/2464 (CSRD) on our reporting requirements, and whether these offer future opportunities and risks. Complete a gap analysis of our global footprint against emerging and current climate regulation to identify emerging risks.
b) and c) Describe the organisation's processes for identifying and managing climate related risks, and how these are integrated into the organisation's overall risk management	Our group risk framework, described on page 53, includes risk/opportunity areas across six categories and 17 subcategories, against which risk owners identify local interpretations. Sub-categories most relevant to climate include growth (organic and inorganic), innovation, production, sourcing, supply chain, and external environment, which incorporate the risks and opportunities referred to in appendix 1 of Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures June 2017. Whole Group transitional and emerging risks and opportunities are currently identified by the Sustainability Committee through the 'sustainability risk register'. When fully defined, these risks are migrated into the appropriate local risk register and transferred to local ownership. This includes risks identified through scenario analysis. Local physical climate related risks (both acute and chronic) are already embedded and managed in local risk registers with local owners and mitigation actions defined.	During 2022 the Risk Committee (page 53) received a presentation from the Chief Sustainability Officer on management of climate related risks as part of a focus review of sustainability risks. In addition, the Sustainability Committee undertook a full review of the local climate related risks, identifying some regional inconsistencies which will be addressed in 2023. We recruited a Group ESG Reporting Manager (SR page 19) to work with the pillar owners and sites to further embed risks, mitigating actions and controls.	Work with most material sites to ensure that mitigating actions are embedded in site plans. Address regional inconsistencies in local risk registers relating to physical climate risks. Ensure that risks to the delivery of site level carbon roadmaps are identified in the local risk registers where they are owned and managed.

Climate scenario analysis (CSA) methodology

The CSA was conducted using a standard methodology in line with the TCFD's guidance. Climate scenarios defined primarily by the Network for Greening the Financial Systems (NGFS) and supplemented with comparable Shared Socioeconomic Pathways (SSP) and Orbitas Finance scenarios, were used to model the potential climate related risks and opportunities that Croda may be exposed to, which were identified through our risk assessment process described in more detail on pages 62 and 66 of this report.

Three climate scenarios

	Orderly	Disorderly	Hot House World
Description	Assumes climate policies are introduced early and become gradually more stringent. There is increased international coordination and commitment to achieving development goals that reduce inequality across and within countries. Consumption is generally oriented toward low material growth as well as lower resource and energy intensity.	Assumes uneven commitment to climate policies with some countries making relatively good progress while others fall short of expectations. Disorderly scenarios exhibit higher transition risks due to coordinated policies being delayed to latter half of the century and medium-term and immediate progress being divergent across countries and sectors.	Assumes the drive for economic and social development is coupled with increased emissions due to continued consumption of fossil fuels and the adoption of resource and energy intensive lifestyles around the world. Climate policies are implemented in some jurisdictions, but global efforts are insufficient to halt significant warming.
NGFS scenarios	Net Zero 2050	Delayed Transition, Divergent Net Zero	Current Policies
SSP scenarios	SSP 1-2.6	SSP 2-4.5	SSP 5-8.5
Orbitas scenarios	Co-ordinated Projects	-	BAU Projections
Estimated 2100 warming	1.5-2°C	2-3°C	3°C+

Three time horizons:

Short-term: to end 2025, this is aligned with our time horizon used in our viability assessment (page 59) with our interim sustainability milestones focused on delivery by or ahead of this date.

Medium-term: to end 2030, this is aligned to our Commitment to be Climate, Land and People Positive by 2030.

Long-term: to end 2050, this is aligned to our Commitment to be net zero by 2050.

Six time points:

The assessment considered six time points, each five years apart, from 2025 to 2050, with 2030 reflecting our medium-term timeframe.

Defining financial impact materiality:

Risk impact is assessed using the same six point financial impact scale used in our group risk framework and is colour coded as follows:

Risk impact score	Financial impact
1-2	Opportunity – Minor Impact
3-4	Low – Moderate Impact
5-6	High – Critical Impact

Building the scenarios:

The 2021 CSA model was used as a starting point with several steps taken to refine and refresh the analysis. The starting basis was updated to use actual financial and process data for 2021, re-baselined to remove the contribution of the majority Performance Technologies and Industrial Chemicals business divested in June 2022 and include the climate footprint of businesses acquired in 2021. Multi-disciplinary workshop groups were convened to review the assumptions for forecasting our growth (using financial assumptions used in our strategic forecasting process), and our demands for each of raw materials, energy and people. The baseline for our energy estimates and site water use are taken from our non-financial reporting system, Sphera, which is fed with quarterly actual data from all our sites globally.

Modelled in conjunction with external scenario data from the NGFS, Orbitas Finance and SSP to forecast and quantify the potential levels of climate related financial risk in line with Croda's risk matrix, the results of our 2022 assessment are shared on pages 67 and 68.

For each transitional risk we also considered the impact under the assumption that Croda continues to operate as today (business as usual) and secondly that currently planned mitigating actions to meet our verified science based targets are successfully implemented. This clearly illustrates the significance of the mitigating steps Croda is taking.

Croda climate scenario analysis has been conducted at an organisational level, however regions or sites that have material contributions to the overall risks have been identified, affording the opportunity to account for any dominant locations in the assumptions used.

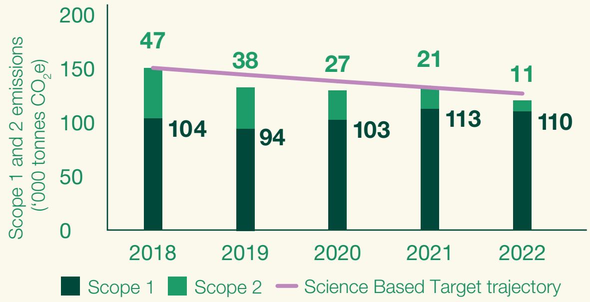
Task Force on Climate-related Financial Disclosures (TCFD) continued

Metrics and targets

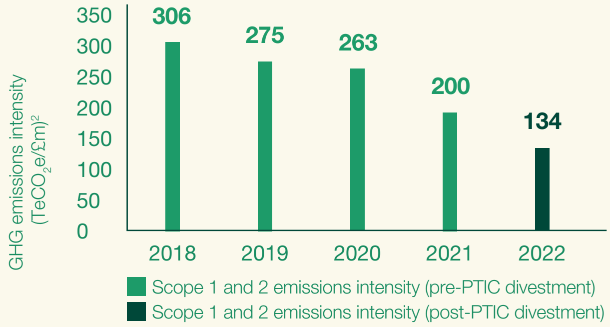
	How we comply	What we have done in 2022	Next steps and timeframes supporting further improvement
a) Disclose the metrics used by the organisation to assess climate related risks and opportunities in line with its strategy and risk management process	Our sustainability strategy (page 22) defines strategic targets and milestones for 2030, progress towards which is reported quarterly to the Executive and Board. The metrics used to assess progress, and a description of the targets are presented in more detail in our Sustainability Report on pages 36, 39 and 40, and cover the following: • Reducing emissions • Carbon cover • Sustainable innovation • Sustainable sourcing and supplier partnerships • Environmental Stewardship • Responsible Business • Quality Assurance Emissions metrics are recorded in our Sphera system by all Croda locations globally and this is the single source of data for reporting of these metrics. We include the 'reducing emissions' metric in our key metrics on page 48 and these are externally verified by Avieco (part of Accenture). The Remuneration Committee includes sustainability targets in the Performance Share Plan for senior executives currently relating to 10% of the award. In 2022 the targets selected related to reduction of scope 1 and 2 emissions, aligned with our external commitment to achieve a SBT in line with a 1.5°C pathway and the development of decarbonisation roadmaps (page 107).	A detailed description of the targets and our performance against these in 2022 is included in our Sustainability Report on pages 36, 39 and 40. As part of our due diligence around the divestment of the majority of the Performance Technologies and Industrial Chemicals business in June 2022 we rebaselined all relevant sustainability metrics back to our baseline year of 2018 and reviewed our 2030 targets (see case study in our Sustainability Report page 40). In every case we decided to maintain or increase the level our target ambition. Increased the shadow carbon price applied to capital expenditure proposals from £55/tonne to £124/tonne in line with UK Government recommendation.	Develop dashboards to next level of detail to make metrics and targets more transparent at regional and sector levels in addition to Board and Executive level reports. Complete detailed assessment of our current metrics against TCFD and emerging ISSB recommendations.
b) Disclose scope 1, scope 2 and, if appropriate, scope 3 greenhouse gas emissions and the related risks	Scope 1, 2 and 3 greenhouse gas emissions and our calculation methodology are disclosed on page 65. These are verified by Avieco (part of Accenture). Their formal independent verification statement is available at www.croda.com/carbonverification, which includes a summary of the calculation methodologies used. Our chosen calculation of carbon intensity is not industry standard and uses 'value add' as a measure of profit. This allows us to demonstrate how we are decoupling economic growth from environmental impact.	Developed corporate scope 3 dashboards to increase transparency of emissions data. Initiated carbon accounting to provide sectors with product carbon footprint data for the majority of our product portfolio.	Develop net zero roadmaps based on technology platforms rather than individual site level to support the transformation and future preparedness of our business.
c) Describe the targets used by the organisation to manage climate related risks and opportunities and performance against targets	We have set strategic targets and milestones for 2030 as described in section a) above. Progress towards meeting these targets is reported quarterly to the Executive and Board. All targets are absolute and are described in more detail on pages 36, 39 and 40 of our Sustainability Report.	A detailed description of the targets and our progress towards these in 2022 is included in our Sustainability Report pages 36, 39 and 40. A full non-financial data pack has been developed and is available on our website at www.croda.com/sustainability.	All non-financial metrics to be captured in Sphera in time for 2023 annual reporting, and to be fully linked to TCFD Appendices A1 and A2. Develop drill down reporting dashboards to ensure target delivery status is transparent across the Group. Achieve limited assurance of Climate Positive KPI's for 2023.

Greenhouse gas emissions and intensity charts

GHG emissions[1]



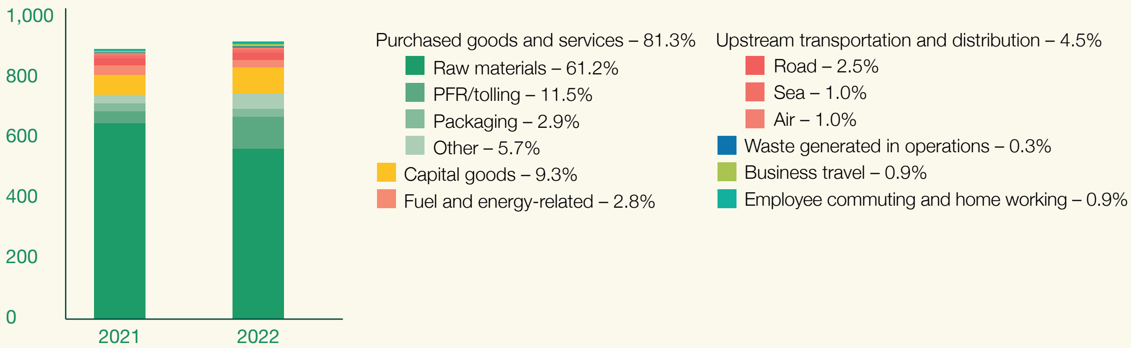
GHG emissions intensity ($TeCO_2e$/£m)[2]



Emissions and energy usage

	2022			2021		
	UK	**Rest of world**	**Total**	UK	Rest of world	Total
Scope 1/tonnes CO_2e	**16,993**	**93,493**	**110,487**	17,077	95,826	112,903
Scope 2/tonnes CO_2e	**278**	**10,328**	**10,606**	90	20,906	20,996
Total scope 1 and 2/tonnes CO_2e	**17,271**	**103,822**	**121,093**	17,168	116,732	133,899
Scope 1 energy use/kWh	**90,562,665**	**584,713,998**	**675,276,663**	91,857,495	567,545,663	659,403,157
Scope 2 energy use/kWh	**22,428,163**	**177,840,733**	**200,268,896**	21,468,075	183,808,298	205,276,373
Total energy use/kWh	**112,990,828**	**762,554,731**	**875,545,559**	113,325,570	751,353,961	864,679,531

2022 scope 3 emissions[3] by category ('000 tonnes of CO_2e)



We have restated our historical scope 1, 2 and 3 carbon emissions, removing the divested PTIC operations. Our carbon reduction targets have been re-baselined to ensure our level of ambition remains unchanged (see non-financial data pack for details). Since 2018, our baseline year, our total scope 1 and 2 greenhouse gas (GHG) emissions have reduced by 19.8%. Within this, scope 1 emissions increased by 6% and we have seen a greater than 77% reduction in scope 2 emissions. This has been driven by a switch to renewable electricity across our manufacturing sites.

Scope 1 and 2 GHG emissions from our UK operations were 17,271 $TeCO_2e$ in 2022 (2021: 17,168 $TeCO_2e$) representing approximately 14% of our global GHG emissions.

In 2022, scope 3 emissions increased by 3% (see page 24 of our Sustainability Report for more detail).

Emissions verification

Our scope 1, 2 and 3 GHG emissions are verified by Avieco, part of Accenture.

Emissions intensity

Our chosen measure of GHG emission intensity divides our GHG emissions (market-based scope 2 emissions) by value added[2], a measure of our business activity. The GHG emission intensity for 2022 has been calculated using verified scope 1 and scope 2 emissions data and estimated value added if the PTIC divestment had completed on 1 January 2022. Results for 2018-2021 use actual value added and scope 1 and scope 2 emissions inclusive of the divested locations. On this basis, our GHG emissions intensity has improved by 56% since 2018, illustrating how we are decoupling growth from our environmental impact.

Energy consumption and efficiency improvements

In 2022 we consumed 875,545,599 kWh (2021: 864,679,531 kWh) of energy across our global operations. This included 112,990,828 kWh (2021: 113,325,570 kWh) consumed by UK operations.

As part of our strategy to improve the efficiency of energy consumption, 26 projects were implemented globally, realising 17,180,619 kWh of annualised efficiency improvements, equivalent to 2,767 $TeCO_2e$ avoided emissions.

1. Our GHG inventory has been completed in accordance with the Greenhouse Gas Protocol, Corporate Accounting and Reporting Standard (Revised Edition) using the operational controls approach. Scope 1 emissions are calculated using UK Government emission conversion factors for greenhouse gas company reporting. Scope 2 emissions are market-based.
2. Value added is defined as operating profit before depreciation and employee costs at reported currency.
3. Our scope 3 emissions are calculated in accordance with The GHG Protocol Corporate Value Chain Scope 3 standard and cover all relevant upstream categories. Scope 3 emissions are calculated using primarily LCA data, and where this is not available, an Extended Environmental Input-Output (EEIO) model method – using spend data, to quantify the emissions associated with a sector of the economy in a given geography.

Non-financial disclosure continued
Task Force on Climate-related Financial Disclosures (TCFD) continued

Identifying our highest impact climate risks and opportunities

Climate related risks and opportunities are identified at all levels of our organisation and are assessed for both impact and likelihood using our global risk framework (page 53). Based on these bottom-up assessments, the Sustainability Committee complete an annual review and selected the four risks with the highest financial impact to investigate in more detail using scenario analysis. Based on the 2021 scenario analysis, the impact of climate on labour productivity was reduced, and this was not modelled in 2022. Following more detailed assessment undertaken throughout 2022, the impact of water usage was assessed as increased and therefore we have included water usage as a new scenario for assessment. We consider the geographical impact of these key risks below.

Transitional risks

Climate risk	Description of risk/opportunity	Geographical impact
Impact of carbon pricing on our emissions	Rising carbon emissions from our sites may impact profits through increased direct costs if emissions are taxed. Evolving local regulation in key markets and regions, such as the EU carbon border tax, will add further pressure.	Atlas Point is our largest contributor to scope 1 & 2 emissions and when viewed with our other manufacturing sites in North America this region is the most material, accounting for c.50% of our scope 1 & 2 emissions.
Impact of carbon pricing on the cost of utilities, particularly natural gas	The increasing cost of natural gas resulting from geopolitical issues in 2022 may increase further as a result of carbon pricing. Natural gas is a key utility used in our manufacturing process, accounting for 64% of our energy consumption.	Atlas Point is currently our largest consumer of natural gas and when viewed with our other manufacturing sites in North America this region is the most material, accounting for more than 50% of our natural gas consumption.

Physical risks

Climate risk	Description of risk/opportunity	Geographical impact
Climate change impact on the availability of natural raw materials	Potential changes in mean global temperatures are likely to affect the location, yield and type of crops grown around the world, with a resulting impact on raw material availability and cost. In 2022 palm oil derivatives formed a significant volume of our raw materials and this trend is expected to continue. As such the future change in the price of palm derivatives will have a direct effect on the cost of palm-based products/ingredients.	The use of palm oil derivatised raw materials is fairly evenly spread across our operations in Asia, North America and Western Europe with each using 25 – 40% of our total purchased palm oil derivatives.
Water usage	Changes in global climate can significantly increase/decrease precipitation at a given location over time. Potential changes in precipitation and reduced rainfall over extended periods are likely to affect water stressed locations by causing droughts. This can impact regional water supply and have financial implications for local industry.	Changes in global climate have varied localised effects and therefore periods of both high and low precipitation levels will become increasingly extreme and prolonged. Sites located in water stressed areas across Southern Europe, Northern Africa and Latin America are expected to face increasingly arid conditions.

Other climate related risks/opportunities identified

Other climate related risks currently assessed to have a lower impact are identified in our risk registers across products and services, distribution and supply chain, suppliers, R&D, operations and acquisitions and divestments. These were considered by the Sustainability Committee and confirmed as lower impact in 2022.

The tables below set out the assumptions used, the risk profile generated and our planned mitigations for each of the four key climate risks selected. Our analysis shows that the financial risks they present to Croda could be managed by currently planned mitigating actions meaning that we would not have to materially change our strategy or business model.

Impact of carbon pricing on our emissions

Driver for assumptions

Using Croda revenue and GHG emissions projections, the potential cost impact of increased carbon prices associated with Croda emissions (scope 1 and 2) was calculated. Predicted emissions were reviewed for assumptions of both no climate action (pro-rata for 2021 performance) and achievement of our net zero strategy, considering our validated SBT trajectory to 2030. The cost was modelled across the future climate related scenarios using carbon price models at an organisational level from the NGFS database.

Risk profile and financial impact

In a Hot House World scenario, the additional cost of carbon tax increases is limited, resulting in a minor level of financial risk to the business out to 2050.

In both the Disorderly and Orderly transition scenarios the additional costs due to higher levels of carbon taxation and restrictive measures are forecast to expose Croda to high levels of financial risk beyond 2035 and 2040 respectively assuming a business-as-usual emissions trajectory.

2025 2030 2050

(Worst case of Disorderly transition)

This is mitigated when following the planned emissions reduction trajectory in line with Croda's current verified science based targets.

2025 2030 2050

(Disorderly transition after incorporating decarbonisation strategy)

Planned mitigations

Croda has a verified 1.5°C 2030 Science Based Target. Every location, including non-manufacturing sites, has a decarbonisation road map towards achieving a 50% reduction in scope 1 and 2 emissions by the end of 2029. The quality assessment process for these has been externally validated by Avieco, part of Accenture.

Whilst a high proportion of the reduction is based on alternative energy sources, assuring a high confidence level, our plans also cover reducing energy consumption and increasing energy efficiency. For example, our manufacturing site in Spain is investing in recovering waste energy to produce hot water, our site in Chocques, France, receives steam, vital for process heating, from a local municipal waste incinerator verified as having zero impact on the site's scope 2 emissions and several UK collaborative funding opportunities have been applied for to further accelerate the decarbonisation of our heat. For further details see page 23-24 of our Sustainability Report.

We apply a shadow carbon price to capital expenditure projects, aiding prioritisation of those that result in reduced scope 1 and 2 emissions. During 2022 we have increased this price from £55/tonne to £124/tonne in line with the UK Government Green Guide.

Impact of carbon pricing on utilities, particularly natural gas

Driver for assumptions

Using Croda revenue and natural gas usage projections, this scenario assessed the possible cost to Croda of increased natural gas prices. Predicted natural gas usage was reviewed for assumptions of both no climate action (pro-rata for 2021 performance) and achievement of our decarbonisation strategy. The cost was modelled across the future climate related scenarios using natural gas price models at an organisational level from the NGFS database.

Risk profile and financial impact

In a business-as-usual energy usage trajectory, the Hot House World scenario saw the lowest levels of financial risk, with a moderate risk level to 2050.

In both the Disorderly and Orderly transition scenarios the additional costs due to natural gas price increases are expected to expose Croda to high levels of financial risk from 2045 and 2050 respectively.

2025 2030 2050

(Worst case of Disorderly transition)

This is mitigated to low risk levels by implementing Croda's current decarbonisation strategy, resulting in reduced usage of natural gas:

2025 2030 2050

(Disorderly transition scenario after incorporating decarbonisation strategy)

Planned mitigations

The development of our decarbonisation road maps has enabled all locations to assess the opportunities for migrating to alternative energy sources, reducing energy consumption and increasing energy efficiency. Notable projects relating to natural gas substitution include the installation of a bioethanol boiler on our manufacturing site in Brazil and the in-progress upgrade of a boiler to enable the use of landfill gas (LFG) at our large manufacturing site in North America. As a material consumer, the latter will substantially reduce Croda's overall exposure to natural gas pricing. (For further details see SR page 23)

Risk impact score	Financial impact
1-2	Opportunity – Minor Impact
3-4	Low – Moderate Impact
5-6	High – Critical Impact

Non-financial disclosure continued
Task Force on Climate-related Financial Disclosures (TCFD) continued

Impact of climate change on raw material availability

Driver for assumptions

The potential changes in the cost of sales that Croda may be exposed to has been modelled using the future percentage increase of palm oil prices (Orbitas – Climate Transition Risk Analyst Brief: Indonesian Palm Oil) against the total volumes and price of palm oil derivatives purchased by Croda in 2021. Indonesia is the dominant origin of Croda's supply (see Sustainability Report page 20).

The cost of palm oil is forecast to expose Croda to varying levels of risk across the two different climate related scenarios – Current Policies and Net Zero 2050 – for which clear models are available.

Risk profile and financial impact

In the Hot House World scenario, the cost of palm oil increase is limited, resulting in a low level of financial risk to the business out to 2035, at which point the cost of palm oil is forecast to drop below the 2021 baseline cost resulting in a cost saving opportunity for the business, driven by continual efficiency improvement in farming technologies (partially supported by Croda crop innovation) driving prices down.

In an Orderly transition scenario, a predicted increase in the cost of palm oil (driven by increasing demand for palm oil as an alternative to fossil based oils for fuel) is expected to drive initially moderate impacts towards critical levels of financial risk by 2045.

2025 2030 2050

(Orderly transition)

Planned mitigations

Roundtable on Sustainable Palm Oil (RSPO) certified palm oil cultivation leads to increased yields due to more efficient farming practices, increasing availability of palm and palm kernel oil without further deforestation. Being a leading voice in industry and working with coalitions such as Action for Sustainable Derivatives (ASD) to drive further industry transition to RSPO helps to mitigate the risks associated with increased pricing due to lack of availability.

89.3% of our palm derivative purchases in 2022 were RSPO-certified and >95% of purchased volumes in 2021 were mapped back to either refineries, mills or plantations, working with ASD. For further details see page 20 of our Sustainability Report.

Our focus on high value niches and differentiated products with unique characteristics also helps to mitigate this risk by enabling us to pass on raw material cost increases to our customers.

Water usage

Driver for assumptions

An initial assessment to identify the nine most at-risk sites was conducted using the WRI Aqueduct tool for baseline water stress and site-level water use data.

Forecasted precipitation data was collected under three SSP scenarios and the 12-month Standard Precipitation Index (SPI) was calculated to determine the occurrence of extreme drought conditions at each Croda site. Extreme drought conditions are correlated with low water supply and replenishment, affecting local industry.

Extreme drought conditions were assumed to have financial implications on Croda's water-stressed sites.

Risk profile and financial impact

By following an orderly transition pathway, most costs associated with risk of water stress are mitigated and only minor financial implications are expected.

Hot House World and Disorderly Transition scenarios infer a similar level of warming by 2050 and this will have low financial implications for Croda from 2040 onwards.

2025 2030 2050

(Hot House World)

Planned mitigations

The outcome of this scenario analysis has demonstrated that there is no material financial risk associated with operating our sites in water stressed regions. However, as leaders in sustainability and as part of our social licence to operate, we plan to do more to support our local communities and the environment in which we operate. As part of our ambition to be Net Nature Positive by 2030 we are targeting a reduction in water use impact of 50%, focusing on sites in water stressed areas, including considering quality indicators and displacement effects. Our understanding of our water use impact both within our operations and upstream supply chain will present opportunities to support customers with their own nature targets and collaborate to ensure a greater positive impact for nature and society.

Risk impact score	Financial impact
1-2	Opportunity – Minor Impact
3-4	Low – Moderate Impact
5-6	High – Critical Impact

Non-financial information statement

Scan this QR code to read our Fundamentals factsheets

In accordance with the Non-Financial Reporting Directive the table below summarises where non-financial information relating to environmental, employee, social, respect for human rights, anti-corruption and anti-bribery matters can be found in our Annual Report (AR), Sustainability Report (SR) and online. Our Viability Statement on page 59 assesses the key risks and combinations of risks (including consideration of business relationships and products) which could adversely impact the Group.

Confirming environmental integrity and social accountability is an increasingly important prerequisite in our upstream supply chains. During 2022 we further revised our Supplier Code of Conduct and introduced our Supplier Scorecard to measure performance and help our suppliers understand any gaps that need to be addressed.

During 2022 there were no significant safety, health, environment or quality issues across our operations on which to report. Further information can be found in the Fundamentals factsheets on www.croda.com/sustainability/non-financialperformanceandreports.

Reporting requirement	Some of our relevant policies	Read more about our impact and metrics	Annual Report page	Sustainability Report (SR) page; Factsheet (FS) online	Principal risks
Environmental matters	Supplier Code of Conduct[2]	Process safety (TRIR)	Page 49	SR39; FS	Major safety or environmental incident (page 57)
	Group SHE policy[1]	Environmental stewardship		SR39; FS	
		Product stewardship		SR40; FS	
		Sustainable sourcing and supplier partnership		SR40; FS	Delivering sustainable solutions (page 56)
		Climate Positive	Page 48	SR36	
		Land Positive	Page 48	SR37	
Employee matters	Group Code of Ethics[2]	Culture	Pages 20 & 84		Our people (page 57)
	Code of Conduct[2]	Key people metrics	Page 21		Ethics and compliance (page 58)
	Group policy on Training and Development[2]	Purpose and Sustainability Commitment (Workforce Engagement)	Page 49		
	Equal Opportunities policy[1]	Gender balance	Page 95	SR38	
	Group SHE policy[1]	Health, Safety and Wellbeing		SR39; FS	
Respect for human rights	International Human Rights policy[2]	Fair income (Living Wage)	Page 127	SR39; FS	Our people (page 57)
	Group policy on Discrimination[2]				
	Code of Conduct[2]				
Social matters	Code of Conduct[2]	Diversity and inclusion	Page 71	SR34	Our people (page 57)
	Guidelines policy for Managing Diversity[2]		Pages 93-95		
	Group Transgender policy[2]		Page 127		
Anti-bribery and corruption issues	Code of Conduct[2]	Responsible business		SR39; FS	Ethics and compliance (page 58)
	Anti bribery and Corruption statement[2]				
	Ethics and Anti Corruption compliance programme[2]				
	Croda Modern Slavery Statement[2]				
	Whistleblowing Reporting procedure[2]				
	Competition Law policy[1]				
	Croda Fraud policy[1]				
Business model	Our Purpose[2]	Business model	P14		All key risks on pages 55 to 58
	Our Commitment[2]				

1. Available to employees via the Company intranet (Connect), not published externally.
2. Available to employees via the Company intranet (Connect) and published on www.croda.com.

Corporate governance
Chair's letter

Dame Anita Frew DBE, Chair

"Our success depends on our skilled and highly committed employees who are central in our decision-making process."

This report, together with the Directors' Remuneration Report, set out on pages 102 to 140, describes how the 2018 UK Corporate Governance Code principles have been applied by the Company. The Company has complied with the provisions of the Code for the period under review. The 2018 UK Corporate Governance Code is available at www.frc.org.uk

For more information on the Board's activity
See pages 74-77

For more details on the search for our new Chief Financial Officer
See page 94

Dear fellow shareholder

Board activity

The Board continued to oversee the delivery of the Group's five-year strategic plan, including taking part in two strategy sessions with the Executive Committee team. At its strategy session in June the Board focused on the foundational programmes that support the Group's strategy, including work on customer insights, business change, digital solutions and data and systems, what we call 'Doing the Basics Brilliantly'. The Board also reviewed the organic and inorganic investment opportunities in both our Consumer Care and Life Sciences sectors. Further details can be found on page 77.

Our success depends on our skilled and highly committed employees who are central in our decision-making process and throughout 2022 the Board met regularly with employees, through listening groups, Board presentations and site visits. Further details on how we engaged with our employees can be found on pages 84 and 85.

The Board remained focused on sustainability and achieving our ambition to be the most sustainable supplier of innovative ingredients, becoming Climate, Land and People Positive by 2030. The Board's involvement and oversight are described on page 81. With the increasing number and growing complexity of regulations in sustainability reporting, the Board is reviewing how it will continue to ensure that it has comfort that Croda is in compliance with relevant regulations and has assurance on the accuracy and reliability of climate-related and other sustainability disclosures, including oversight of the control environment in relation to information used in support of the disclosures. The Board is considering if this responsibility should remain with the Audit Committee or a separate Sustainability Oversight Committee should be established.

During the year the Board spent time reviewing innovation. This included biotechnology in our Beauty Actives business and a review of the innovation pipeline for each platform within our Croda Pharma business. Our Chief Scientific Officer presented the innovation strategy to the Board. Details are set out on page 76.

Further information on the Board's deliberations in other areas, and how we consider the interests of our key stakeholders, is set out on pages 78 to 81.

The Chair of our Remuneration Committee, Jacqui Ferguson, undertook a consultation process with our major shareholders in relation to our proposed Directors' Remuneration Policy, which requires shareholder approval at our April 2023 AGM. Further details on the Remuneration Policy and the consultation process can be found on pages 108 to 121.

Leadership and diversity

During the year the Nomination Committee undertook a search for a new Chief Financial Officer (CFO) to succeed Jez Maiden who will retire from the Board at the AGM in April 2023.

On 1 January 2023 Louisa Burdett joined Croda and the Board. Louisa will succeed Jez as CFO on 13 March 2023, and Jez will step down from the Board at the AGM on 26 April 2023 and retire from the Company on 31 May 2023. On behalf of the Board and all my Croda colleagues, I would like to thank Jez for his outstanding contribution over the last eight years. Louisa has an exceptional ten-year track record as a CFO of listed companies, with valuable experience both in speciality chemicals and the broader manufacturing sector.

The Board has also commenced a search for a new Non-Executive Director to replace Helena Ganczakowski, who has reached her nine year tenure and will retire from the Board at the 2023 AGM.

We consider that creating an inclusive Board is essential in attracting a diverse set of candidates for Board roles. The greater the diversity of our Directors, the more likely we can foster innovative thinking in the Boardroom. I am happy to report that the composition of the Board continues not only to meet, but exceed, the ambitions set out in the FTSE Women Leaders Review and the Parker Review for FTSE 100 companies. We are also comfortably in line with the recent recommendations from the FTSE Women Leaders Review that listed companies should have at least one woman in the Chair or Senior Independent Director role on the Board and/or one woman in the Chief Executive Officer or Finance Director role by the end of 2025. Croda currently has two of these positions held by women and with the appointment of Louisa Burdett as CFO on 13 March 2023, three of these positions will be held by women.

In preparation for Helena's retirement, Jacqui Ferguson took over as Chair of the Remuneration Committee with effect from 1 September 2022. This ensured Jacqui had a good period as Chair to prepare for the review of the Company's Remuneration Policy. Jacqui has been a member of the Remuneration Committee since 1 September 2018. Helena will remain a member of the Remuneration Committee and will continue in her role as the Senior Independent Director until her retirement at the 2023 AGM. Jacqui Ferguson will succeed Helena as Senior Independent Director from the date of the AGM in 2023. Jacqui has four years' experience on the Board, building excellent relationships with her fellow Non-Executive Directors and the executive management team and has a detailed understanding of Croda, making her entirely suitable for this role.

Our Group HR Director, Tracy Sheedy, will retire from the Executive Committee and the Company at the end of April after six years in the role. Tracy's successor, Michelle Lydon, was appointed as President Human Resources and a member of the Executive Committee on 1 January 2023 and will take over from Tracy in mid-March. Since joining Croda in 2016, Tracy has played an important role in our success and will leave a strong team of HR business partners and specialists, well equipped to support Croda's future needs. Michelle has wide-ranging experience as a HR Director gained at listed, global companies including most recently as Chief People Officer for British Airways and before that QinetiQ.

On the recommendation of the Nomination Committee, the Board agreed to extend my appointment for a further year. This extension is in line with our policy to review appointments annually once six years' tenure has been completed. John Ramsay completed his first three-year term and the Nomination Committee recommended to the Board that his appointment be extended for a further three years. Before making these recommendations to the Board, the Nomination Committee considered the contribution made to the Board and the Committees by the individuals and their time commitments. No Director being considered for re-appointment took part in any discussion relating to their own appointment. Further information about the tenure of other Board members can be found on page 95.

Board evaluation

I am pleased to report that the Board evaluation this year confirmed that we continue to operate as a very effective Board. Details of the Board's annual evaluation and future priorities for the Board are set out on pages 88 and 89. In accordance with the 2018 UK Corporate Governance Code, the next Board evaluation will be facilitated by an external party and details will be shared in the Annual Report and Accounts for 2023.

Annual General Meeting

We know our AGM provides investors with a valuable opportunity to communicate with us and this dialogue is very important to the Board. The AGM will be held on 26 April 2023 and once again we are offering shareholders a choice to attend the AGM in person or view the AGM remotely via a webcast. More details of this event are set out in the Notice of Meeting and I would be delighted to see you, whether in person or online, and answer any questions that you may have.

Finally, I would like to give thanks to my fellow Board members and all the people of Croda for their hard work, commitment and support during the year.

Dame Anita Frew DBE, Chair

Corporate governance continued
The Board's biographies

Dame Anita Frew DBE
Chair

N

Appointment: March 2015 and Chair since September 2015
Nationality: British

Anita has served on Plc boards in the chemical, resources, engineering, water and financial services industries for over 20 years. Prior to joining Croda, she was Chair of Victrex Plc and Senior Independent Director of Aberdeen Asset Management Plc, IMI Plc and was Deputy Chair of Lloyds Banking Group Plc. During her time as a Director, she has chaired main Boards, Remuneration, Responsible Business and Risk Committees. Currently she is also Chair of Rolls-Royce Holdings Plc. Anita brings extensive experience as Chair to the Croda Board as well as leadership in strategic management, mergers and acquisitions and risk experience from working internationally across many sectors. In January 2023, Anita was appointed as a Dame Commander of the Order of the British Empire in recognition of her services to business and the economy.

Steve Foots
Group Chief Executive

E F SHEQ

Appointment: July 2010 and Group Chief Executive since January 2012
Nationality: British

Steve joined Croda as a Graduate Trainee in 1990 and brings to the Board a business, strategic and operational background gained from a number of senior leadership roles across the Group. Having spent several years leading many different Croda businesses, he has gathered extensive insight into the markets served, the importance of customer focus and the power of an innovative culture. Outside of Croda, Steve's role as Industry co-Chair of the UK Chemistry Council enables him to work alongside Government Ministers and industry peers to bring wider industry knowledge into the Croda business.

Jez Maiden*
Group Finance Director

R E F

Appointment: January 2015 as Group Finance Director
Nationality: British

Jez is an experienced Group Finance Director, having served in this role on five UK listed company Boards. As a chartered management accountant, his expertise in all aspects of finance management, gained in speciality chemical, FMCG and other manufacturing environments, allows him to support the Board and Executive of Croda in managing the performance of the business, risk management and control, and in capital allocation and investment evaluation. Jez acts as business partner to the Group Chief Executive and leads the Finance, IT and Digital teams. He is also on the Board of the Centre for Process Innovation Ltd, an independent technology innovation organisation, and is a Non-Executive Director at Intertek Group plc, the FTSE 100 testing company.

Louisa Burdett
Chief Financial Officer Designate

E F R

Appointment: January 2023 as Chief Financial Officer Designate
Nationality: British

Louisa is an experienced Finance Director who has held senior financial positions in industrial, manufacturing, publishing and pharmaceutical companies. She brings financial, commercial, M&A and risk management experience to the Croda Board. Louisa was previously CFO of Meggitt Plc and before that CFO of Victrex Plc. She is currently a Non-Executive Director and Chair of the Audit Committee of RS Group Plc, a global distributor of industrial and electronic products.

Helena Ganczakowski
Non-Executive Director
(Senior Independent Director)

RM A N

Appointment: February 2014
Nationality: British

With 23 years of experience in marketing and corporate strategy at Unilever and a further eight as a strategic consultant for other multinational businesses, Helena brings marketing skills and an end-consumer perspective to the Croda Boardroom, as well as challenge and support to the CEO in strategy development. Her academic roots in engineering, with a PhD from Cambridge University, drive her passion and curiosity for both product and process innovation. Helena is also a Non-Executive Director and Remuneration Committee Chair of Greggs Plc.

John Ramsay
Non-Executive Director

A RM N

Appointment: January 2020
Nationality: British

John has over 30 years' broad-based international finance experience with Life Science businesses such as ICI, AstraZeneca and Syngenta. A large part of this experience was gained while working in Latin American and Asian countries. John brings extensive knowledge of business strategy to the Croda Board as well as a keen interest in building on Croda's strong culture to deliver superior business performance. He is a member of the Supervisory Board at Koninklijke DSM NV and a Non-Executive Director at RHI Magnesita NV and Babcock International Plc. He is also Audit Committee Chair at each of these companies.

* Louisa Burdett will succeed Jez Maiden as Chief Financial Officer on 13 March 2023. Jez Maiden will step down from the Board at the Annual General Meeting on 26 April 2023.

Key

Chair of the Committee	■	Nomination Committee	N	Group Executive Committee	E
Member of the Committee	■	Remuneration Committee	RM	Group Ethics Committee	ET
Secretary of the Committee	■	Audit Committee	A	Group Finance Committee	F
		Risk Management Committee	R	Group SHEQ Committee	SHEQ

Jacqui Ferguson
Non-Executive Director

RM A N

Appointment: September 2018
Nationality: British

Jacqui is an experienced CEO from the technology industry with general management and M&A experience in international and emerging markets. She has first-hand insight of transformational/disruptive digital, cyber security, technology and business process solutions. Jacqui spent three years in Silicon Valley as Chief of Staff at Hewlett Packard, focused on a new company strategy and turnaround. Away from Croda, she is a Non-Executive Director of John Wood Group Plc, interim Chair of Tesco Bank, a fellow of the IET, a Trustee of Engineering UK and a member of the Advisory Board of Engie UK.

Roberto Cirillo
Non-Executive Director

A RM N

Appointment: April 2018
Nationality: Swiss

With ten years' experience as Country and Group CEO in the service and health care industries, and many years spent as a strategy practitioner in Europe and Asia, Roberto brings knowledge of, and passion for, growth and operations to the Croda boardroom. He can also share lessons learned from large transformations and M&A. Roberto's engineering background enables him to link Croda's R&D and production competences with the evolving demands of its multinational markets. Alongside his role as Non-Executive Director for Croda, he is CEO of Swiss Post. He was previously the Group CEO at Optegra Eye Health Care Ltd, France CEO and Group COO at Sodexo SA and Associate Partner at McKinsey & Co.

Keith Layden
Non-Executive Director

N

Appointment: February 2012 and Non-Executive Director since May 2017
Nationality: British

Keith brings to the Croda Board 33 years' experience of working at Croda in a variety of positions, including most recently leading the Global Research, Development and Innovation function and as President of the Global Life Sciences business before his retirement from the business in 2017. He also has an interest and background in organisational culture and innovation which are key considerations in the decision making of the Board. In his roles as Honorary Professor of Chemistry and Industry at the University of Nottingham and a Fellow of the Royal Society of Chemistry, he widens his network of emerging technology companies and research institutes to spot new talent that will aid Croda's future success.

Julie Kim
Non-Executive Director

A RM N

Appointment: September 2021
Nationality: US

Julie brings nearly 30 years of experience in the health care industry, with more than 15 years in international leadership positions to the Croda Board. She is currently President, Plasma-Derived Therapies at Takeda Pharmaceutical, a global, values-based, R&D-driven biopharmaceutical leader headquartered in Japan. Her geographic experience in both global and regional roles, focused on Europe, Asia and Latin America means that she brings valuable strategic and operational insight to Board discussions. Previous executive positions include roles as Head of International Market Access and Global Franchise Head of multiple therapeutic areas at Shire, Baxalta and Baxter. Julie also sits on the industry board for the Plasma Protein Therapeutics Association.

Nawal Ouzren
Non-Executive Director

A RM N

Appointment: February 2022
Nationality: French

Nawal has 20 years of expertise across a wide range of international business roles, including clinical development, operational and strategic management roles within the pharmaceutical industry. Nawal currently serves as CEO at Sensorion, a Euronext listed biopharmaceutical company headquartered in France. Nawal brings to the Croda Board first hand experience in biologics and novel gene therapies. Her pharma experience and market insight provides a real advantage in driving the implementation of Croda's Pharma strategy.

Tom Brophy
Group General Counsel and Company Secretary

ET E A RM N R

Appointment: December 2012 as Board Secretary
Nationality: British

Tom is an experienced corporate lawyer, having worked at City law firm Hogan Lovells and FTSE 100 company Ferguson. His expertise in public and private acquisitions supports Croda's inorganic growth plans and his professional background and breadth of experience in insurance, risk and compliance enable him to Chair the Ethics Committee. In addition to his General Counsel and Company Secretary role, Tom has previously held other senior roles in Croda, including leading our Group HR function and acting as the Managing Director of the Western European Region.
Tom provides corporate governance know-how to the Board and Croda. Having spent many years leading global teams, Tom leads the Legal and Company Secretary team.

The Board's activity

Board meetings and structure in 2022

Board meetings are the main forum for the Directors to debate, review and challenge strategic, operational and governance matters concerning the Company, as required to ensure that the Directors discharge their duties including under Section 172(1) of the Companies Act 2006.

There were seven meetings of the Board during the year. Detailed planning is undertaken to create an annual Board agenda programme, which ensures important strategic, operational, financial, cultural and corporate governance items are discussed at the appropriate time during the year, with additional deep dives into key strategic areas.

An additional Board strategy day, attended by all members of the Executive Committee, is held during the year. The strategy day is held in the first half of the year, followed by a further truncated strategy update as part of consideration of the three year plan in the autumn, with the approval of the budget towards the end of the year.

Board agendas and activity in 2022

Each Board meeting agenda is set via a collaborative process between the Chair, Group Chief Executive and Company Secretary. The Chair ensures adequate time is allocated to allow effective discussion, with a typical agenda being structured to ensure a balance is maintained between reporting, approvals, strategy and governance.

Split of the Board's time

In addition to the matters summarised on pages 75 and 76, some further examples of the Board's 2022 activities and priorities are set out below, along with an estimate of the proportion of the time that the Board spent discussing each area.

Strategy (50%)

- Sustainability strategy and targets
- Product manufacturing strategies
- Responsible business activities
- Discussion of acquisition opportunities

People (15%)

- Croda's Purpose and culture
- Succession planning and organisational structure
- The Board's engagement with employees and the employee voice
- Extension of the term of office of Dame Anita Frew DBE and John Ramsay
- Diversity and inclusion of our workforce and gender pay gap reporting
- The health and safety of our employees and contractors

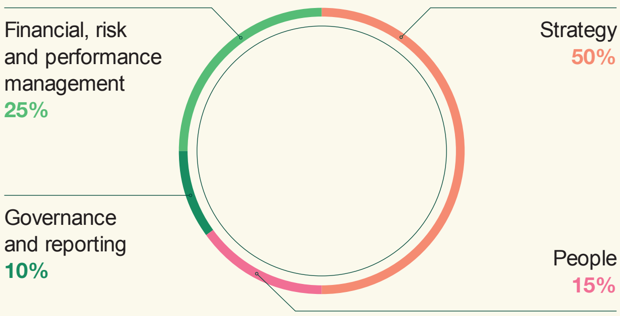
Governance and reporting (10%)

- Board and Committee effectiveness evaluation
- Review of the Annual Report and Accounts and other financial statements
- Governance compliance review
- Presentation from the Director of Investor Relations and Corporate Affairs

Financial, risk and performance management (25%)

- Review of key risks, internal and external assurance of each risk
- Review of risk appetite statements
- Dividend policy and dividend approvals
- Long-term viability statement
- Defence planning
- Review of the Company's tax strategy

Time allocation



For more information on how the Board protects Croda's culture
See pages 84 and 85

Board agendas and activity in 2022 continued

Reporting – backward looking

The Board receives reports from members of the Executive Committee as well as the Board Committees, with reports from the Group Chief Executive and Group Finance Director forming the main items for discussion at each meeting.

- The Group Chief Executive's report focuses on strategic and operational activities. Safety is always the first matter he reports on with a focus on both employee behavioural safety and process safety issues. He will also report on the performance of each business, including sales and regional activity as well as competitor insights and performance. Market trends and opportunities are considered and any material dialogue with major customers, suppliers and regulatory bodies are discussed.
- The Group Finance Director reports on monthly and year to date sales performance, profit, cash flow, cost base, capital expenditure and outlook for the year. He also reports during the year on performance against budget, dividends, treasury items, including liquidity, and keeps the Board abreast of investor discussions and feedback.
- Each quarter the Board receives comprehensive reports from members of the Executive Committee in relation to all aspects of the business, including market sectors, regional delivery, sustainability, operations, innovation, people, risk and functional updates. This is in addition to the deep dive sessions covered under the Board's annual programme of business.

Approvals – current issues

Approvals that form part of the matters reserved for the Board are sought from the Board in this part of the agenda.

This includes, for example, corporate transactions, capital expenditure, significant commercial contracts, the financial statements, dividends, the Group budget as well as a review of past capex and innovation performance. For example, during 2022 the Board:

- Approved capital investments in Lamar (Pennsylvania), Dahej (India), Singapore and a UK Pharma site, as well as funding and cooperation agreements with the UK and the US Governments.
- Discussed two acquisition opportunities including the acquisition of the Korean based Solus Biotech.
- Considered the Group's IT strategy, which included a focus on cyber risks with the Board challenging the robustness of the Group's capabilities to protect the business from exposure.

Strategy – forward looking

Each Board meeting agenda has strong links to the strategic objectives of the business.

These sessions ensure the Board understands the opportunities for the business in terms of new markets, technologies and disruptive innovation, as well as implications for talent. For example, during 2022 the Board undertook strategic deep dives into the following areas:

- Beauty Actives – the Board heard from members of the Consumer Care team about the five-year plan for the Beauty Actives business, which included insights on market trends for premium skin care actives and fast growing market demand for botanical ingredients. The talent and expertise needed to deliver the strategy was discussed, including in areas such as biotechnology, as well as the key customer partnerships required to increase the growth of the skin care market in Asia.
- Innovation strategy – the Chief Scientific Officer and members of his team updated the Board on R&D, open innovation and technology investments that were being used to increase differentiation and IP and to support growth in returns. The Board spent time discussing several technology platforms, including the sustainability of platforms to ensure the Group continued its ambitious journey of decarbonisation.
- Croda Pharma pipeline review – the Board received a presentation from the President of Life Sciences and team members on the Croda Pharma innovation pipeline for each of the Croda Pharma platforms (Protein Delivery, Adjuvant Systems and Nucleic Acid Delivery), including the peak sales innovation pipeline and weighted value by 2030. The M&A opportunities for each platform were also discussed.
- Talent – the Group HR Director facilitated an in-depth discussion on talent. This included the implications for talent in delivering the Group's strategic plans, such as attraction and retention of R&D skillsets, successful integration and understanding of talent within acquisitions and increased competition for talent within the industry. The Board noted the progress in improving inclusion and diversity and the development of a leadership values matrix assessing talent against Croda's core values of Together, Innovative and Responsible. An important element of the discussion centred around the succession pipeline for the Executive Director and the Executive Committee roles.

The Board's activity continued

Board agendas and activity in 2022 continued

Governance

This element of the agenda typically comprises Board procedural and governance matters.

- The Group General Counsel and Company Secretary updates the Board on changes to relevant laws, regulations and governance matters at each Board meeting.
- In addition, the Board receives reports on compliance and insurance matters. This includes items such as a review of policies and procedures on modern slavery, whistleblowing and ethics; the Group's insurance programme renewal and all employee sharesave grants.
- Items concerning the Board's agenda planning, Board effectiveness reviews, Committee membership and changes to Committees' terms of reference are reviewed and approved during the year.

Strategy review

The Board strategy day is attended by the Directors and all members of the Executive Committee. In 2022 the Board focused on the foundational programmes that are vital in supporting the Group's strategy.

This included an in-depth review of work on customer insights, business change, digital solutions and data and systems. The strategy day comprised a series of short round robin presentations, with the Board and the Executive Committee broken up into four smaller mixed groups and moving from room to room. This format promotes discussion and debate and an opportunity for the management teams to use the Directors' experiences to build upon and modify each of the enabling programmes. A larger plenary was held at the end of the sessions for feedback and further discussion.

The Board also spent time reviewing our innovation programmes, investments in our people, as well as capex and M&A opportunities in both the Consumer Care and Life Sciences sectors. A wrap up session at the end of the day ensures the Board and Executive team were able to provide their reflections on the sessions. These reflections are then captured with agreed actions being recorded and followed up, with further Board presentations arranged where required.

Progress of 2022 focus areas

The 2021 Board evaluation identified four areas of focus for the Board in 2022. The key actions and progress in meeting them are summarised below.

1. Continue our focus on Croda's strategic progress in transitioning to a pure play Consumer Care and Life Sciences company, including key innovation programmes.

What we did

- Oversight of the divestment of the majority of our PTIC business.
- Development of the Croda Pharma strategy.
- Strategy day sessions on innovation programmes, investments in our people, as well as capex and M&A opportunities in both Consumer Care and Life Sciences sectors.

Status:
Completed

2. Continue our oversight of Croda's progressive and proactive inorganic investments in support of our strategic focus on our Life Sciences and Consumer Care businesses.

What we did

- Business presentations included in-depth reviews of M&A pipelines and technology gaps that would be filled through acquisition.
- Approval of the acquisition of Korean based Solus Biotech, a global leader in premium biotechnology derived beauty actives.

Status:
Ongoing

3. Oversee our expanded organic capital investment programme, whilst ensuring we continue to prioritise safety leadership and performance.

What we did

- Approved capital investments at Croda sites in Lamar (Pennsylvania), Dahej (India), Singapore and a UK Pharma site, as well as funding and cooperation agreements with the UK and the US Governments.
- Board safety leadership training at Rawcliffe Bridge manufacturing site, including participating in process safety audits.
- Oversight and challenge of SHE performance at each Board meeting, with additional quarterly SHE reports on progress against safety metrics.

Status:
Completed

4. Focus on talent and succession planning at all levels within Croda, including ensuring that we continue to have the capacity and capability to support our strategic priorities.

What we did

- In-depth Board discussion on talent, including the implications for talent in delivering the Group's strategic plans.
- Reviewed the succession pipeline for the Executive Directors and the Executive Committee roles.
- The Board strategy day included an in-depth review of work on customer insights, business change, digital solutions and data and systems, including how it would enhance employees' experiences.

Status:
Completed

Looking ahead to 2023:

As well as those areas identified during the 2022 Board evaluation, the Board will:

- Continue to monitor safety leadership and performance.
- Have oversight of inorganic investments in support of our Life Sciences and Consumer Care businesses.
- Continue its focus on our organic capital investment programme.
- Continue to bring external perspectives into the Boardroom – including focus on the competitive landscape, disruptive technologies and outside in customer assessments.

Corporate governance continued
The Board and our stakeholders

The Strategic Report, Directors' Report, Financial Statements and the Sustainability Report help our stakeholders assess how effectively the Board, supported by the Executive Committee, senior managers and employees, promoted the success of Croda and had regard to the factors set out in Section 172(1) of the Companies Act 2006 during the year. By understanding how Croda's activities impact on our various stakeholder groups, the Board can have regard to their interests during discussions and when making decisions. Having consideration for our stakeholders aligns with our Purpose and our values, both of which guide us in our approach to delivering our strategic commitments and promoting the long-term success of Croda for our shareholders and society.

The Board always seeks to understand the priorities and interests of our stakeholder groups during its deliberations and decision-making process with the relevance of each stakeholder group changing depending on the issue under discussion. The Chair and Company Secretary provide guidance when required at Board meetings to ensure sufficient consideration is given to the likely consequences of any decisions in the long-term and to the interests and impact of such decisions on our stakeholder groups. Management is tasked with ensuring that potential impacts on stakeholders are fully considered when presenting to the Board. Information on the key methods utilised by the Board to engage with all our stakeholders is described here, together with a note where further detail is available throughout this report on this engagement.

The Board receives information through the following additional methods which assist the Directors in their understanding of our stakeholders and in performing their duties:

- An annual strategy review which assesses the long-term sustainable success of the Group's strategy and the impact on our stakeholders. See page 76.
- Annual presentations to the Board from all the members of the Executive Committee on the performance across the sectors and regions. A broad spectrum of employees from across the business are also invited to present to the Board.
- An annual Board presentation on progress with the Group's sustainability agenda from the wider sustainability team and regular updates throughout the year. See page 81.
- The Group Chief Executive and Group Finance Director provide updates at Board meetings on their interactions with key stakeholders, as well as updating Board members between meetings on any material issues that arise.
- Comprehensive quarterly reports which cover risk, innovation, global operations including customer service, SHEQ and Sustainability, IT and Digital operations, Legal and Company Secretarial, HR and culture and diversity.

To read our Section 172(1) statement
See page 19

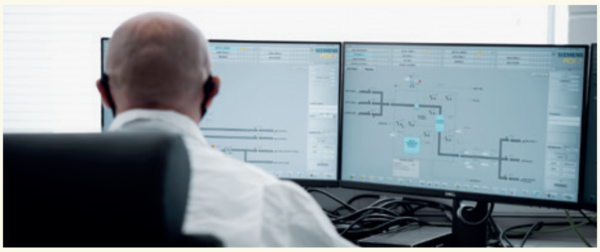
For more information on how the Board protects Croda's culture
See pages 84 and 85

Our people

Our customers

Our communities

Our suppliers



Our shareholders

Our people

Our success depends on our skilled and highly committed employees who are central in our decision-making process. The Board meets regularly with employees, through listening groups and Board presentations. Site visits also present an opportunity for our Directors to connect with and listen to employees across a wide range of functions and locations, with care taken to ensure any engagement sessions contain a diverse selection of employees, be that gender, ethnicity, tenure and role, to ensure that different perspectives can be heard.

The Board received and discussed the results of employee pulse surveys and regular reports from the Group HR Director and other Executive Committee members keep the Board up to date on the wide-range of people initiatives taking place across the Group.

Our customers

Our direct sales model ensures we work closely with customers and allows us to develop a deep understanding of their needs. The Board receives customer insights and information through Board reports from the Group Chief Executive and sector teams, as well as during strategy and business presentations. Strategy sessions will often include customer presentations, providing an ‘outside-in’ perspective.

Our Group Chief Executive maintains oversight of the management of our key customers and regularly updates the Board on these interactions as well as engagement with policy makers and regulatory bodies.

Our communities

As a responsible business, we believe it is essential that we operate safely and sustainably and that we understand the impact of our operations on local communities and on the environment. Living our Purpose also means we are committed to providing a positive impact on society and we nurture the links we have to our communities through our offices and our sites. The Croda Foundation continues its work in making grants aligned to Croda’s Purpose, values and expertise. Engagement with our communities mainly takes place through our local offices and sites, including via the STEM and 1% Club programmes. During site visits the Board has the opportunity to hear from employees on activities undertaken with the local communities and on discussions from the community consultation committees. The Board also regularly receives information and feedback on community activities across the Group during management presentations, and considers issues such as local employment and investments in local communities as part of its Board decisions.

Our suppliers

Supply chain integrity is essential to being a sustainable business and our supplier relationships provide valuable insights to the Board. Site and purchasing teams engage and partner with suppliers on a wide range of matters, from product stewardship and ethical sourcing to regulatory compliance and operational improvements. The Board understands these issues through Board reports and engagement with our operations and functional teams.

For more information on how the Board considers the interests of our suppliers

See pages 80 and 81

Our shareholders

Board engagement is primarily through the Group Chief Executive, Group Finance Director and the Investor Relations and Corporate Affairs Director, who maintain regular dialogue with our shareholders. Committee Chairs have responded to queries from major shareholders regarding their areas of responsibility and this engagement is reported back to the Board. The Directors attend the AGM to allow shareholders to ask questions directly. This year the AGM was also held by webcast, with shareholders online able to ask questions before and during the meeting. The Chair, Senior Independent Director and Remuneration Committee Chair hosted a governance lunch in November which was attended by shareholders representing around 25% of our total issued shares. A summary is provided on page 82. Analyst notes and reports from brokers and advisers are also reviewed to keep the Board informed of shareholders’ views.

Corporate governance continued
Considering the interests of our stakeholders

Separation of the majority of our PTIC businesses

In 2021 the Board approved the sale of the majority of our PTIC businesses to Cargill. The divestment will further our transition into a focused Consumer Care and Life Sciences company. Although the agreement with Cargill was signed in December 2021, the majority of the work to execute the separation of the PTIC assets and business from the rest of Croda took place between January and June 2022, with the transaction closing on 30 June 2022. The Board continued its oversight of this aspect of the transaction, with regular reports and updates from management. The Board considered the impact that the complex separation programme had on our employees, customers and suppliers. All aspects of the separation required careful management of internal and external communications, talent and resources, and an assessment of the interdependencies with other Group programmes to ensure not only that the separation was a success, but whilst also ensuring the continued successful performance of the PTIC business and the retained Croda businesses.

Link to S172(1):
Customers and consumers
Suppliers
Employees
Shareholders

For more information
See page 42

Change to pension contribution rates

During the year the Board undertook its regular review of the UK pension scheme funding, including the output from the UK pension scheme's valuation, which showed that the scheme remained fully funded on a technical provisions basis. Although noting that the scheme's investment remained effective in reducing the valuation volatility and the Company funding risk, the Board took particular note of the fact that the funding of future service accrual had been increasing, partly due to the prolonged lower inflation environment. The Board discussed in detail whether or not to undertake a consultation with employees to increase employee contributions to part fund the total funding cost of future accrual.

The Board had regard to the results of an employee survey on pensions and discussed the welfare of employees given the rapidly rising cost of living in the UK. The Board considered it was in the best interests of the Company to protect employees from additional pension contributions at a time of rising cost of living and agreed the Company would pay the full cost of the rise in funding. In reaching this decision the Board took account of the fact that the pension was an important benefit for employees and importantly remained a significant retention factor.

Link to S172(1):
Employees
Pension trustees
Shareholders

For more information
See page 104

Establishment of a new lipid facility in Lamar, Pennsylvania

In line with Croda's strategy to "Empower Biologics Delivery", during 2022 we continued our investment in our Pharma business to ensure capacity would be available for the pipeline of lipid systems used in novel therapeutic drugs. In considering the investment to establish a new lipid facility as part of a new multi-purpose cGMP site in Lamar, Pennsylvania, the Board discussed the future business opportunities and the possible impact of best and worst case scenarios on the existing operational capacity as well as the underlying financial business case. The Board spent considerable time in understanding the proposal to enter into a cooperative agreement with the United States Government (USG) under which the USG would provide up to $75m alongside Croda's own investment of up to $58m to establish the new lipid facility. The Board considered the likely consequences of the investment decision in the long-term and had regard to the interests of Croda's stakeholders who would be affected by the investment.

The Board considered the interests of Croda's customers, determining that the investment would allow Croda to support their development of vaccines. The Board had regard to alignment of the Company's Purpose of using Smart science to improve lives™ with the benefits that the new facility at Lamar would have in supporting US preparedness for future health emergencies. The new facility would help ensure enough capacity was available in the US to produce the necessary components for vaccine manufacture.

The Board concluded that it was in the best interests of the Company and its shareholders to approve the investment and enter into the cooperation agreement.

Link to S172(1):
Communities
Customers and consumers
Shareholders

For more information on lipid investments
See page 9

Investment in a greenfield site in Dahej, India

In approving an investment in a greenfield site in Dahej, India, the Board considered a number of key areas, including the underlying Indian growth projection, the strategic investment in Dahej, project execution plans, the commercial case underpinning the investment, the safety and sustainability aspects of the project and the steps taken to ensure high standards of business ethics were complied with in delivering the project.

Safety was a fundamental consideration for the Board, not only for employees in the design, construction and operation of the facility but also the safety benefits to local communities in minimising the transportation of ethylene oxide through residential areas. The Board noted that discussions had taken place with raw material suppliers, that new manufacturing technologies would be adopted, and energy efficient systems and equipment would be utilised, all of which would support Croda's sustainability ambition of net zero carbon.

Having regard to the interests of all stakeholders, the Board concluded that it was in the best interests of the Company and its shareholders to approve the investment.

Link to S172(1):
Customers and consumers
Suppliers
Employees
Shareholders
Communities

The Board's focus on sustainability

The Board remained focused on sustainability and achieving our ambition to be the most sustainable supplier of innovative ingredients, becoming Climate, Land and People Positive by 2030. In 2022 Croda joined over 200 of the world's leading sustainable companies as the newest member of the World Business Council for Sustainable Development. We also announced our aspiration to become Net Nature Positive by 2030, which will be achieved through an increased focus on preserving and restoring natural ecosystems in our supply chains, minimising the water impact of our operations and helping accelerate sustainable and regenerative agriculture. Each quarter the Board is presented with a sustainability Board report, which includes a balanced scorecard providing an overview of how we are progressing against our ambitious Commitment, identifying areas where more progress is needed. This enables the Board to challenge the executive team on the pace of change and areas requiring more resource.

As well as quarterly reports, the Board received a strategic presentation from our Chief Sustainability Officer and his team on sustainability leadership. This included a detailed discussion and review of the key strengths and differentiators in Croda's sustainability programme as well as gaps and areas of uncertainty and risk.

The Board has overseen the production of decarbonisation roadmaps for all of our manufacturing sites, which will not only bring opportunities in terms of reduction in emissions, but also drive innovation, capture cost savings, act as a retention for employees and protect Croda from external risks such as carbon tax and energy costs.

Scope 3 greenhouse gas emission remains the industry's biggest challenge and reducing or avoiding scope 3 emissions will be critically important to Croda as our customers transition to net zero. In 2023 the Board will oversee the further development of our scope 3 plans, including the quantification of downstream emissions. In addition, with the increasing number and growing complexity of regulations in sustainability reporting, the Board will review how it will continue to ensure that it has comfort that Croda is in compliance with relevant standards and has assurance on the accuracy and reliability of climate-related and other sustainability disclosures. This will include oversight of the control environment in relation to data and information used in support of the disclosures.

The Board approved the acquisition of Solus Biotech, a Korean based global leader of naturally derived ceramides and phospholipid technologies. The acquisition significantly enhances Croda's sustainable biotechnology capabilities and will create a new biotechnology R&D hub in Asia.

For more information on sustainability
See pages 48 and 49 and our Sustainability Report

Corporate governance continued
Shareholder engagement

Our approach

The Board is committed to maintaining regular dialogue with investors and communicating in a clear and transparent manner. A comprehensive investor engagement programme is led by the Investor Relations and Corporate Affairs Director and comprises results presentations, investor roadshows, attendance at conferences, investor seminars, site visits and ad-hoc meetings.

This programme includes direct Board engagement through the Group Chief Executive and Group Finance Director. The Chair and other Non-Executive Directors aim to meet major shareholders at least annually to discuss topics including governance, strategy, ESG performance, and remuneration. This gives the Board insight into investors' views, helping to inform key decisions and the future direction of the Company. The Board also reviews monthly submitted papers, meeting presentations and investor feedback following roadshows and events. This extends to commentary on the trading environment and Croda's performance relative to peers.

Our AGM offers the opportunity for all shareholders to hear an update on business performance and engage directly with the Board. Results presentations are webcast live, with engagement and replay facilities, ensuring all investors and analysts can participate and ask questions. Investors can also sign up to receive regulatory alerts on our website ensuring they are notified about Company updates.

Activities during 2022

We enhanced our engagement with investors in 2022 as lockdown restrictions were lifted, proactively engaging through seminars and site visits to provide a better understanding of our business model and investment case. In March, we held an investor seminar on Consumer Care, to outline market opportunities and sector strategy in addition to explaining how investment in biotechnology will contribute to future growth. The equivalent seminar for Health Care took place at the London Stock Exchange in October, where we relaunched the business as Croda Pharma and outlined the new strategy. Given investor interest in our recent acquisitions, the Managing Director of Avanti attended the Pharma event, and we hosted a shareholder visit to Iberchem in May which was very well attended.

The 2022 corporate governance lunch was held in November and was attended by shareholders representing over a quarter of our register. Croda was represented by our Chair, Senior Independent Director and Remuneration Committee Chair. A wide range of topics were discussed including sustainability, Board composition, Executive succession, performance metrics and culture. We intend to extend this representation to include our Audit Committee Chair at the 2023 event.

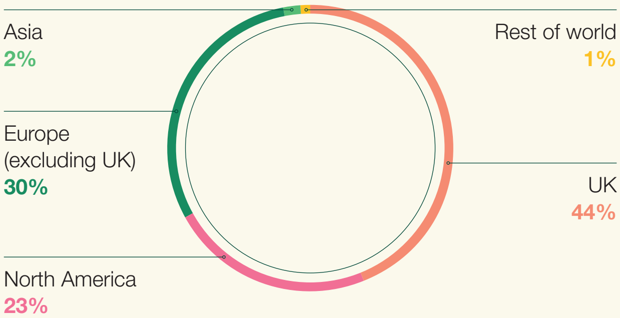
We consulted on our proposed Remuneration Policy during 2022, holding video calls with one third of our investor base. The feedback was helpful and we adjusted the policy to respond to specific points made.

Meeting breakdown

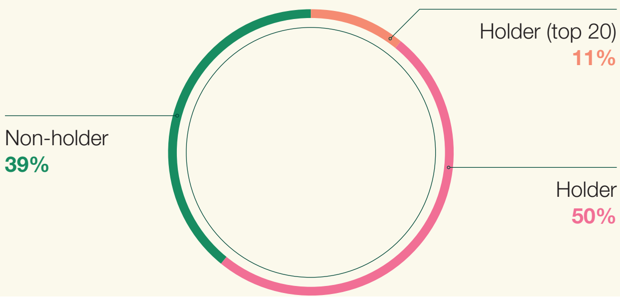
There was a significant increase in investor engagement in 2022, with interactions with 429 institutions compared with 288 in the prior year. This reflects the impact of the investor seminars and the benefits of a hybrid programme that included both physical and virtual meetings. 28 of our top 30 shareholders met management at least once, and interactions with the top 30, other shareholders and non-holders all increased in absolute terms. Investor engagement levels are notably higher than the average for a FTSE 100 company, being approximately 60% above available benchmarks.

Around 30 investors and analysts joined the site visit to our F&F business in Murcia.

Meeting breakdown by investor location



Meeting breakdown by holders and non-holders



Top 5 investor questions

How has inflation impacted Croda?

The cost of our raw materials basket increased by 23% in 2022, with other operating costs including labour and energy also increasing. The strength of Croda's business model has helped ensure inflation recovery and profit protection.

Can you grow Consumer Care when disposable incomes are under pressure?

Croda has the broadest range of critical Consumer Care ingredients in the industry. Our focus on high growth niches, providing sustainable ingredients with performance that is underpinned by innovation, positions us well for growth.

What drove the exceptional Crop Care performance in 2022?

Crop Protection was the standout business in 2022, delivering strong double digit percentage sales growth, benefitting from a strong agricultural commodity pricing and demand environment, supporting demand for value added crop treatments.

With COVID-19 vaccine sales peaking, what does the future growth profile look like for Croda Pharma?

Pharma is focused on technologies with the fastest growth and innovation needs. We expect Protein and Small Molecule Delivery and Adjuvant Systems to continue growing strongly. Nucleic Acid Delivery sales are expected to be c$120m in 2023, comprising a further reduction in sales for COVID-19 vaccines and strong double digit percentage growth for other applications.

How are you reallocating capital following the divestment of most of your industrial businesses?

Our priority is organic capital expenditure to pursue a rich seam of growth opportunities in consumer care and life sciences markets. This will be complemented by targeted acquisitions, in line with our 'buy and build' approach to acquire new technology platforms and build scale through organic investment.

Calendar of investor relations activity in 2022

March
- Analyst presentation of full year 2021 results
- Consumer Care investor day

April
- Scandinavia roadshow

May
- Shareholder visit to Iberchem head office in Spain
- Annual General Meeting

June
- Investor conferences in Paris; visit to Sederma
- ESG roadshow in Germany and the Netherlands
- US roadshow

July
- Analyst presentation of half year 2022 results

August
- Half year results roadshow

September
- Investor conferences in London
- Singapore roadshow

October
- Croda Pharma investor day

November
- US pharma roadshow
- ESG conference in Paris
- Governance lunch

December
- Paris roadshow
- UK conferences

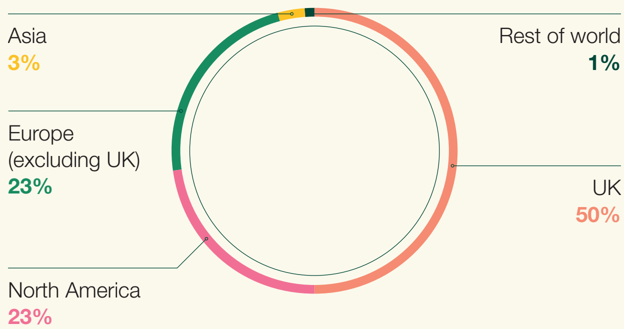
Shareholder register

Croda's shareholder breakdown by investor type is broadly in line with the FTSE 100 average. 10% of our shares are now held by ESG focused investors which is significantly ahead of our peer group. Many of these are EU based shareholders.

Investors holding more than 3%
(as at 31 December 2022)[1]

#	Institution	Country	Holding (%)
1	Norges Bank		4.3
2	BlackRock		4.0
3	BlackRock		3.8
4	Vanguard Group		3.7
5	MFS Investment Management		3.3
6	Impax Asset Management		3.1
7	RBC Global Asset Management		3.1

Shareholders by investor location



1. This is based on register analysis conducted by a third party and may differ from the detail shown on page 142 which is based on notifications received under DTR Chapter 5.

Corporate governance continued
The Board and our culture

How we protect our culture
Our Purpose is to use our Smart science to improve lives™, which guides the choices we make as a business. In line with our Purpose we have committed to be the most sustainable supplier of innovative ingredients by ensuring we are Climate, Land and People Positive by 2030. Our Purpose is reflected in the Board's strategy and is underpinned by our values and our unique culture. The cultural tone of the Company is set by the Board, which is responsible for assessing, monitoring and promoting the Company culture through its decisions and conduct. Croda's positive culture continued to support our employees, suppliers, customers and our local communities.

During 2022 the Board discussed the implications for talent management in delivering the Group's strategic plans including employee turnover rates in Croda and our industry. Nurturing Croda's culture is a key element in retention and the Board places high importance on ensuring the organisation and our employees always live our Purpose of using Smart science to improve lives™ and our values. The Board considers that it is important to continue to share reward and success through the organisation, such as through our Free Share Plan, and that we continue to embrace and enhance flexible working. As well as providing interesting work and career development with transparent career paths and competitive reward packages, we need to ensure employees stay connected with each other and use technology to enhance this.

The Board spends time focused on the values that underpin the Croda culture. As an example, in 2022 the Board reviewed the leadership value potential matrix developed by management, which provides a tool to develop and encourage different styles of leadership but grounded in Croda's common values of Together, Innovative and Responsible. This enables an assessment of how employees undertake their roles and not just the outcome of tasks and objectives achieved. Our leadership and development programmes all have Croda's Purpose and values running through every element of the course.

How we monitor our culture
Although not a science, the Board looks at certain metrics to assist it in measuring culture. These include KPIs received on a quarterly basis relating to:

- Diversity and inclusion – such as gender balance, balanced shortlists, diversity on development programmes.
- Talent development – such as retention rates, training hours and development plans.
- Wellbeing – including employee engagement scores, pulse survey results, flexible working and accident rates.

As well as these KPIs, during 2022 the Board also monitored and assessed culture through multiple sources:

- Inviting employees to present at Board and Committee meetings.
- Regularly meeting with management.
- Receiving regular reports and data on health and safety and sustainability matters.
- Receiving regular quarterly reports from all areas of the business including corporate functions.
- Reviewing reports on significant instances of inappropriate conduct, whether through the Company's Speak-Up line or other grievance channels.
- Engaging directly with employees around the world through listening groups, site visits and town halls.
- Discussing the feedback from listening groups and pulse surveys, which enabled communications and policies to be tailored and adjusted to ensure employees' needs were being met.
- Assessing management's attitude to risk and assurance of the external and internal audit functions through the work and reports of the Audit Committee.
- Reviewing the work on diversity and inclusion and succession planning through the reports of the Nomination Committee.
- Considering feedback from the Remuneration Committee. The Remuneration Policy is aligned to culture and an assessment of our cultural performance is also embedded in the Remuneration Committee's Discretion Framework. Further detail on how remuneration is addressed across the Company is included in the Remuneration Committee report on pages 102 to 140.

The voice of our employees
During the year the Board, assisted by the Nomination Committee, reviewed mechanisms for employee engagement and concluded that there are a variety of effective mechanisms in place for engaging with our employees. Some examples of these are described below. The Board is comfortable that it can continue to rely on alternative methods to engage with employees, rather than one of the three methods outlined in the 2018 UK Corporate Governance Code.

A range of activities for engagement with our employees was agreed at the start of the year, which ensured that the Board had meaningful and regular dialogue with employees. This included holding listening groups, with topics for discussion relevant to the Board matters and employees encouraged to discuss other topics most relevant to them. The Company Secretary takes responsibility for ensuring that those actions requiring feedback are allocated to individuals to follow up on with outcomes reported back to the Board.

The Board discusses the key themes arising from the listening groups undertaken each year. In 2021 and 2022 these included workload and resource planning, including the importance of making time for employees to think creatively in all aspects of the business. The onboarding of newly acquired companies was also discussed, given the recent acquisitions Croda has made. Mental health was a common topic, with employees appreciating Croda's initiatives to boost mental health and wellbeing and providing platforms to talk about mental health. Diversity and inclusion was discussed with the importance of continuing to maintain an inclusive working environment emphasised. Customer service was discussed in several listening groups as the end of the pandemic had increased demand whilst the Ukraine crisis had put stress on the supply chain. These two issues brought capacity constraints throughout the industry, which impacted customer service. Innovation was also a theme with employees wanting more communication about Croda's open innovation and other large scale innovation programmes. The speed of implementation of digital projects was also a theme that arose and was discussed.

"The Board spends time focused on the values that underpin the Croda culture."

Site visits remain a key element of how our Directors engage with employees. During the year the Board visited our site at Rawcliffe Bridge, engaging with a wide range of employees, with a focus on safety, including the site management team, process engineers, SHE managers and Hazard Study Leaders. The Board was trained on and then undertook scenario based inspection techniques on high hazard processes. This allowed the Directors to have a detailed understanding of the day-to-day work that our employees undertake, as well as being trained on the safety hazards and mitigation across our sites.

Members of the Board undertook site visits in North America, specifically to Mill Hall, Avanti and Princeton. Feedback from the site visits was discussed during the following Board meeting. The Board also attended a virtual session with the North American regional management team, which included a summary of the business performance and key challenges facing the region. Other site visits made by our Directors during 2022 included our Iberchem head office and manufacturing facility in Mevisa, Spain.

A culture survey was undertaken during the year, split into quarterly 'pulse' surveys. Each question had a theme: purpose, safety, knowledge, and values. The results of the surveys were included in the Board papers with discussion at the Board meeting. This enables the Board to get a feel for the mood of the organisation, shining a light on areas of difference between sites, countries and regions, as well as understanding how important cultural work is being adopted by our businesses.

The Board strategy day presented further opportunity for the Board to meet with members of the Digital and IT teams, as well as the customer insights teams. Each of the Directors and Executive Committee members has a mentoring relationship with employees below the Executive Committee level. The mentee group is comprised of a diverse group of high potential employees from a range of functions across the business, identified and matched with Executive Committee and Board mentors.

During the year Helena Ganczakowski and Steve Foots attended our Leadership Development Group, which provides attendees with a deep understanding of leading and self enhancing capabilities to lead others through times of uncertainty and change, and draws on best practice 'outside in' perspectives to stimulate innovation. Helena was able to provide her insights and experiences in senior leadership roles and a perspective from the Boardroom. These interactions benefit the participants and also the Directors that attend and help the Directors to build relationships with our highest potential employees and leaders in Croda.

As in previous years, members of the Executive Committee and other senior managers from across the Company attended Board dinners where the Board discussed topics relevant to the business and its strategy.

The Chair spends time interacting with the Executive Committee team between Board meetings and during the year each member of the Executive management team had regular meetings with the Chair. This ensured that she was kept up to date on significant developments and emerging issues and opportunities, as well as forging good working relationships with the senior management team.

The Non-Executive Directors have direct access at any time to the Executive Directors, senior management teams and employees across the Group. This provides the opportunity to develop a deeper understanding of the Company's operations or to request information about specific areas. These interactions not only build connections with employees in the business, they also help provide the knowledge for Non-Executive Directors to provide constructive challenge at Board meetings.

Corporate governance continued
Board leadership

The Company is led by an effective and entrepreneurial Board, whose role is to promote the long-term sustainable success of the Company, generating value for shareholders and contributing to wider society. The Board has ultimate responsibility for the overall leadership of the Group. In this role, it oversees the development and delivery of a clear Group strategy.

At the date of this report, the Board comprises 11 Directors: the Chair; the Group Chief Executive; the Group Finance Director; the Chief Financial Officer Designate; six independent Non-Executive Directors; and one non-independent Non-Executive Director, who was the Company's Chief Technology Officer until his retirement in 2017. The size of the Board allows time for constructive debate and challenge on key elements of the Company's performance and strategic projects and enables all Directors' views to be heard. It monitors operational and financial performance against agreed goals and objectives and ensures that appropriate controls and systems exist to manage risk and that there are the necessary financial resources and people with the necessary skills to achieve the strategic goals the Board has set. The Non-Executive Directors have a broad range of business, financial and international skills and experience, which provide appropriate balance and diversity of thought. The Executive Directors use the specific areas of expertise of the Non-Executive Directors as a source of ideas, experience, as well as challenge when developing strategic plans. The Directors' biographical details are on pages 72 and 73. The Board maintains a formal schedule of matters reserved for its approval. These matters include approving the Group's strategy and budget, material corporate transactions and the authorisation of capital expenditure above delegated authority limits. They include matters relating to risk management, approval of the Annual Report and Accounts, dividends, appointing new Directors and significant communications to shareholders. The full schedule of matters reserved for the Board can be found in the Governance section at www.croda.com.

The Board discharges some of its responsibilities directly and others through its Committees, details of which can be found on the opposite page.

Execution of the strategy and day-to-day management of the Company's business is delegated to the Executive Committee, and subsequently to senior leadership teams where relevant, with the Board retaining responsibility for overseeing, guiding and holding management to account. In addition to its monthly scheduled meetings, the Board met and heard from the Executive Committee members, senior management and a wider range of colleagues on a regular basis. Contributions from the Executive Committee members can be found throughout this report.

The terms of reference for each Board Committee can be found at
Croda.com

Division of responsibilities

Chair
The Chair leads the Board and sets the tone from the top, promoting a culture of openness and debate and effective communication between the Executive and Non-Executive Directors. She creates an environment at Board meetings in which all Directors are able to contribute to discussions and feel comfortable in engaging in healthy debate and constructive challenge.

Senior Independent Director
The Senior Independent Director provides a sounding board for the Chair and acts as an intermediary for the Non-Executive Directors, where necessary. She is available to shareholders where communication through the Chair or Executive Directors has not been successful or where it may not seem appropriate.

Independent Non-Executive Directors
The role of the independent Non-Executive Directors is central to an effective and accountable Board structure as they provide strategic and specialist guidance together with effective governance. They constructively challenge the Executive Directors and scrutinise the performance of management in meeting agreed goals and objectives and ensure all stakeholder views are considered.

Non-independent Non-Executive Director
Having served Croda for 33 years, the latter five of which were as a member of the Board, Keith Layden is not considered independent. However, because of that experience, Keith contributes strongly to the Board's culture and personality, and adds unique and valuable insight as well as constructive challenge to Board discussions.

Group Chief Executive
The Group Chief Executive has day-to-day responsibility for the effective management of the Group's business and for ensuring that Board decisions are implemented. He plays a key role in devising and reviewing Group strategies for discussion and approval by the Board. The Group Chief Executive is tasked with providing regular reports to the Board.

Group Finance Director
The role of Group Finance Director is to bring a commercial and financial perspective to the Boardroom. Working with the Group Chief Executive, he is responsible for the leadership and management of the Company according to the strategic direction set by the Board. He leads the global finance function and oversees the relationship with the investment community.

Group General Counsel and Company Secretary
The Group General Counsel and Company Secretary is Secretary to the Board and its Committees. He works closely with the Chair in the formulation of meeting agendas and annual agenda programmes. He ensures that Board procedures are complied with and also advises on regulatory compliance and corporate governance. This role is to support the Chair and the Non-Executive Directors.

Governance structure

The Board has three main Committees: the Nomination Committee, the Audit Committee, and the Remuneration Committee.

Principal Board Committees

Nomination Committee
Chaired by Dame Anita Frew DBE

Reviews the structure, size and composition of the Board and its Committees, identifies and nominates suitable candidates for appointment to the Board and has responsibility for Board and Executive Committee succession planning.

For more information
See pages 92 to 95

Audit Committee
Chaired by John Ramsay

Monitors the integrity of the Group's financial statements and announcements, the effectiveness of internal controls and risk management as well as managing the external auditor relationship.

For more information
See pages 96 to 101

Remuneration Committee
Chaired by Jacqui Ferguson

Recommends the Company's Remuneration Policy and framework and determines the remuneration packages for members of senior management.

For more information
See pages 102 to 140

The day-to-day operational management of the business is delegated by the Board to the Group Chief Executive, who uses several Committees to assist him in this task: the Group Executive Committee; the Group Finance Committee; the Risk Management Committee; the Group Safety, Health, Environment and Quality (SHEQ) Steering Committee; the Group Ethics Committee; and the Sustainability Committee. Further information on each of the Committees is shown below.

Group Chief Executive

Group Executive Committee
Chaired by Steve Foots

The Committee met 11 times in 2022 and is responsible for: developing and implementing strategy, operational plans, policies, procedures and budgets; monitoring operational and financial performance; assessing and controlling risk; and prioritising and allocating resources.

Group Finance Committee
Chaired by Steve Foots

The Committee met 11 times in 2022 to review monthly operating results and examine capital expenditure projects. Four Executive Committee members and the Group Financial Controller also attend.

Risk Management Committee
Chaired by Jez Maiden

The Committee meets quarterly to evaluate and propose policies and monitor processes to control business, operational and compliance risks faced by the Group, and to identify and assess emerging risks. Three Executive Committee members attend as well as the Group Financial Controller and VP Risk and Assurance.

Group SHEQ Steering Committee
Chaired by Mark Robinson

The Committee meets quarterly to monitor progress against the Group safety, health, environment and quality objectives and targets, review safety performance and audits, and determine the requirement for new or revised SHEQ policies, procedures and objectives. The Group Chief Executive and four Executive members attend. The VP Risk and Assurance also attends.

Group Ethics Committee
Chaired by Tom Brophy

The Committee meets quarterly in support of our culture of integrity, honesty and openness, and to promote the importance of ethics and compliance across the Group and amongst our supply chain partners. It comprises three Executive Committee members. The Global Head of Procurement and Sustainable Sourcing, the Regional MD Latam and the Organisation Development Director also attend.

Sustainability Committee
Chaired by Phil Ruxton

The Committee met six times in 2022 to further develop the Group sustainability strategy, to embed sustainability practices throughout the organisation and to monitor progress towards achieving our Commitment to be the most sustainable supplier of innovative ingredients and to be Climate, Land and People positive by 2030. It comprises a diverse group of leaders representing all aspects of our business, including four Executive Committee members.

Board leadership continued

Board and Committee meetings and attendance

Meetings in 2022

Membership of the Board and its Committees, and attendance (eligibility) at meetings held during 2022.

	Board	Nomination Committee	Audit Committee	Remuneration Committee
Anita Frew (Chair)	C 7 (7)*	C 5 (5)		
Roberto Cirillo	7 (7)	5 (5)	5 (5)	8 (8)
Jacqui Ferguson	7 (7)	5 (5)	5 (5)	C 8 (8)**
Steve Foots	7 (7)			
Helena Ganczakowski	7 (7)	5 (5)	5 (5)	C 8 (8)
Keith Layden	7 (7)	5 (5)		
Jez Maiden	7 (7)			
Nawal Ouzren	6 (6)	5 (5)	4 (4)	6 (6)
John Ramsay	7 (7)	5 (5)	C 5 (5)	8 (8)
Julie Kim	7 (7)	5 (5)	5 (5)	7 (8)***

C – Chair of the Committee

* Anita Frew attended part of the December 2022 Board meeting, but was not able to attend the whole meeting as she had to attend a family funeral.

** Jacqui Ferguson took over as the Chair of the Remuneration Committee from 1 September 2022.

*** Julie Kim was unable to attend the ad-hoc Remuneration Committee meeting on 21 January 2022 due to a scheduling conflict.

Independence of Non-Executive Directors

Croda complies with the Financial Reporting Council's Reporting Code in having experienced Non-Executive Directors who represent a source of advice, strong judgement and challenge to the Executive Directors. At present there are eight such Directors, including the Chair and the Senior Independent Director, each of whom has significant commercial experience. Details of their experience is on pages 72 and 73.

The independence of the Non-Executive Directors is kept under review to ensure continuing independence and objective judgement. The Chair was independent upon her appointment in 2015 and both the Chair as head of the Board and the Chief Executive as head of executive management have clearly defined roles. Further information on their roles is included on page 86. With the exception of Keith Layden, the Board considers that all Non-Executive Directors who served during the year are independent in character and judgement, with no relationships or circumstances that are likely to affect, or could appear to affect, their judgement. Keith Layden is not considered independent, having served as the Company's Chief Technology Officer prior to retirement from the Company and appointment as a Non-Executive Director in May 2017.

Director induction

The Company provides new Directors with a comprehensive and tailored induction process. One of the first sessions attended is a health and safety briefing, and the induction schedule includes meetings with members of the Board and Executive Committee, meetings with key senior managers and the Group's audit partner and other key advisers. Induction programmes are developed by the Group's Company Secretarial department and discussions start well in advance of the appointment date to tailor the experience to the existing knowledge and experience.

New Directors are provided with external training that addresses their role and duties as a Director of a quoted public company. All new Directors are given access to our electronic Board papers which provide easy and immediate access to key documents including previous Board and Committee papers; recent reports from the external auditor; the Group's risk register and Schedule of Principal Risks; the latest budget and strategic plan; recent sell-side analyst reports and feedback from our stakeholder engagement programmes; information on our sustainability initiatives; matters reserved for the Board; the Committee terms of reference; and other key policies. This information is supplemented by country and site visits.

Training

All Directors keep their knowledge and skills up to date and include training discussions with the Chair in their annual performance reviews. As required, professional advisers are invited to provide in-depth updates and the Board also receives updates on market trends and environmental, technological and social considerations when appropriate. The Company Secretary provides regular updates to the Board and its Committees on regulatory and corporate governance matters. Our Directors receive training on their duties under Section 172(1) of the Companies Act 2006 as part of their induction process from the Group's corporate lawyers. All Directors participate in online compliance training courses as required.

Board evaluation

The Board undertakes a formal review of its performance and that of its Committees each year. In 2020 an externally facilitated Board review was conducted, and we will conduct another externally facilitated review in 2023. This year we used an online questionnaire from Lintstock tailored to Croda's activities and current concerns. Separate questionnaires were also used for the Audit, Remuneration and Nomination Committees. A report was prepared based on the completed questionnaires, which facilitated an evaluation of the effectiveness of the Board and its Committees and the support and information received from management and advisers.

The Board effectiveness report is discussed in detail by the Board, with facilitation by the Chair and the Company Secretary. The report contains a ranking for each question, showing the highest to lowest scoring areas and also the scores against comparator companies that use the Lintstock questionnaires. These provide an additional lens through which the Board can focus the discussion of its effectiveness.

The composition of the Board and the Board Committees was rated very highly, and the report highlighted the key changes that could be made to the profile of the Board in terms of experience that would match Croda's strategic goals. These will be taken into account in any new Non-Executive Director searches going forward. The Board's understanding of the views and requirements of key stakeholder groups was scored very highly, particularly those of employees. The Board's understanding of the views and requirements of suppliers received a comparatively lower score however and was seen as an area for improvement. The quality of the Board's relationships and its interaction with management received very high ratings, as did the management and focus of meetings. Suggestions for further improvements included limiting the time attendees spent on presentations in order to enable greater discussion time between the presenters and the Board. Board support and information provided to the Board were rated highly overall. Suggestions were made as to areas in which the Board would benefit from further training, including sustainability, which is being picked up as part of the Board's 2023 agenda programme. The top strategic issues facing the Company were identified and now form part of the agenda programme for 2023. Finally, both succession planning and oversight of risk management were positively rated.

The Chair and Non-Executive Directors met without the Executive Directors present to allow an additional opportunity to discuss areas relevant to the operation of the Board. The Non-Executive Directors also met on their own, without the Chair.

The Senior Independent Director met with the Chair to provide feedback on her performance following discussions with the other Non-Executive Directors and the Executive management to gather their views. It was agreed that the Chair remained dedicated to her role. She creates a culture of trust, openness and debate, facilitating an atmosphere of challenge whilst encouraging the effective contribution of all Board members.

The Chair met and provided feedback to each Non-Executive Director and the Executive Directors. Following these discussions, the Chair was satisfied that all the Directors continued to be effective and demonstrate commitment to the role, including having time to attend all necessary meetings and to carry out all their duties.

Conflicts of interest

A well established process is in place whereby the Board regularly reviews and monitors potential conflicts of interests. Under the Company's Articles of Association, the non-conflicted Board members have authority to authorise a conflict or potential conflict of interest. Directors holding significant commitments outside of the Company are required to disclose them prior to appointment and on an ongoing basis when there are any changes. Actual and potential conflicts of interest are included on a register which is maintained by the Company Secretary and reviewed annually.

During the appointment of any new Non-Executive Directors, the candidate's other commitments are taken into account, in addition to whether or not a conflict or potential conflict would exist. Details of the professional commitments of the Chair and the Non-Executive Directors are included in their biographies on pages 72 and 73. The Board is satisfied that these do not interfere or conflict with the performance of their duties for the Company.

Board support

Each Director has access to the advice and services of the Company Secretary. Where necessary, the Directors may take independent professional advice at the Company's expense. Papers are made available electronically one week in advance of meetings, which ensures that each Director has the time and resources to fulfil their duties. A resource centre within the web portal provides access to useful information about the Group, including corporate governance materials, finance and strategy information, Group policies and procedures, and information on topics such as risk and insurance. In order to build and increase the Non-Executive Directors' familiarity with, and understanding of, the Group's people, businesses and markets, senior managers regularly make presentations at Board meetings. Their understanding of the Group's operations is enhanced by regular business presentations and site visits whenever possible. At induction, and as requirements change, training is provided on governance, legal and regulatory matters. Online training is provided on competition law and anti-bribery and corruption. Specific training is provided when requested by the Directors. To remain up to date with wider issues the Directors are encouraged to participate in events hosted by external organisations to develop broader perspectives.

Board re-election

Following the individual performance assessments, the Board is satisfied that each Director continues to perform effectively, allocates sufficient time for their duties and remains fully committed to their role. Full biographies for the Directors are on pages 72 and 73. The terms and conditions of appointment of Non-Executive Directors can be viewed at www.croda.com. Contracts for Executive and Non-Executive Directors can be inspected during normal business hours at the Company's registered office by contacting the Company Secretary and will also be available for inspection at the AGM. The Directors, with the exception of Jez Maiden and Helena Ganczakowski, will be proposed for election and re-election at the AGM on 26 April 2023 and details are in the Notice of Meeting.

Corporate governance continued
Audit, risk and internal control

Fair, balanced and understandable

To assist the Board in determining whether the Annual Report was fair, balanced and understandable, the annual report team prepared a Board paper that, amongst other things, reviewed the process of preparation of the report, the controls in place to ensure consistency and reliability of the underlying information, identified the material positive and negative matters referred to in the report to ensure balanced content and provided details of the level of senior oversight of the content of the report.

The Annual Report and Accounts process is designed to give the Board enough time to assess whether it is fair, balanced and understandable, as required by the Code. The key themes and messages to be included in the Annual Report and Accounts are considered by the Board early in the process.

The Board considered whether the Annual Report and Accounts contained the necessary information for shareholders to assess the Company's position and performance, business model and strategy. The Directors received a full draft of the Annual Report and provided feedback. This review ensures that each Director has an opportunity to highlight any areas requiring further clarity as well as suggesting issues and areas that were not adequately covered or on which the report may have placed too much emphasis.

The key messages in the narrative in the Strategic Report and Governance sections of the Annual Report and Accounts were reviewed to ensure they were consistent with the financial reporting contained in the financial statements. The Board believed that clear explanations had been provided for the KPIs.

The Board reviewed whether the Annual Report and Accounts disclosed the successes and the challenges that had been faced in the period and that the narrative and analysis effectively balanced the information needs and interests of each of our key stakeholder groups. In particular, the Board had regard to the current macro economic and uncertain geopolitical environment and the inflationary pressures worldwide caused by the pandemic and exacerbated by Russia's invasion of the Ukraine.

The framework and layout were considered to be clear and coherent, with a consistent tone throughout and clearly signposted linkage between all sections, in a manner that reflected a comprehensive narrative and highlighted the key messages appropriately throughout.

Following this assessment, the Board was of the opinion that the 2022 Annual Report and Accounts are representative of the year and present a fair, balanced and understandable overview, providing the necessary information for shareholders to assess the Group's position, performance, business model and strategy.

For the full statement of Directors' responsibilities
See page 144

Risk management and internal control

The Board acknowledges its responsibility for ensuring the maintenance of a sound system of internal controls and risk management, in accordance with the guidance set out in the Financial Reporting Council's Guidance on Risk Management, Internal Control and Related Financial Business Reporting 2014, and in the 2018 UK Corporate Governance Code.

> "The Board receives updates on principal risks and risk appetite on an annual basis."

Executive management have established an organisational structure with clear operating procedures, lines of responsibility and delegated authority which was reviewed by the Board (page 87). In particular, there are clear procedures and defined authorities for the following:

Financial reporting and financial statements review

Policies and procedures governing the financial reporting process and preparation of the financial statements are owned by the Group Finance Director and clearly and transparently communicated through the Group Policies system. In order to assess the financial statements, the Audit Committee regularly reviews reports from members of the finance team and the external auditor who is invited to attend the Committee's meetings. When conducting its review the Committee considers material accounting assumptions and estimates made by management, any significant judgements or key audit matters identified by the auditor (pages 149 to 152), compliance with relevant accounting standards and other regulatory reporting requirements, including the 2018 UK Corporate Governance Code, and the accounting policies and procedures applied (pages 97 and 98).

Internal audit function

The internal audit function is a key element of the Group's corporate governance framework. Its role is to provide independent and objective assurance, advice and insight on governance, risk management and internal controls to the Board and Audit Committee and the Group. It supports the Group's strategy and objectives by evaluating and assessing the effectiveness of risk management systems, business policies and procedures, system and key internal controls. In reporting on their reviews, internal audit makes recommendations to address issues and improve processes. Once recommendations are agreed with management, the internal audit function monitors their implementation and reports to the Audit Committee on progress at every meeting. See pages 98 and 99 of the Audit Committee report.

Capital investment

The Finance Committee (a sub-committee of the Executive Committee) operates a clearly defined capital expenditure process including detailed business plan appraisal, risk analysis and authorisation. The Global Capital Project Director has developed a framework for managing major capital expenditure, and post-investment review processes are completed by internal audit (at the Audit Committee's request).

Business risk management

As described on page 52 the Executive Committee has established an ongoing process for identifying, evaluating and managing emerging and principal risks. The Board receives updates on principal risks and risk appetite on an annual basis and the Audit Committee receives reports from internal audit on the effectiveness of mitigating controls in place over selected principal risks at each meeting. The Risk Management steering group, a sub-committee of the Executive Committee (page 87), meets on a quarterly basis to monitor and review both current and emerging risks.

Internal controls

There is a documented framework of required internal controls for business processes, IT, safety and quality, which form part of our business as usual activities and which are documented in controls manuals. Policies governing the internal controls are documented in the Group Policies system, which is available online to all employees, and each Group policy is owned by a member of the Executive Committee. Confirmation that the controls are being adhered to is the responsibility of managers, who together with their teams complete an annual self-assessment process against all controls which provides a snapshot of the control environment at the start of the year. Compliance with controls is tested by the internal audit team as part of their annual plan of work approved by the Audit Committee each year (page 98), as well as being tested by other internal assurance providers.

The Board discharged its responsibility for monitoring the operational effectiveness of the internal control and risk management systems throughout the year using a process which involved:

- Delegation of review of systems of risk management and internal control to the Audit Committee, whose activities are described in detail on pages 96 to 101.
- Receipt of written confirmations from senior management.
- Board review of the report on significant control weaknesses.
- Annual review of risk appetite statements and principal risks (page 52).

These processes have been in place for the full financial year up to the date on which the financial statements were approved by the Board. The systems are designed to mitigate, rather than eliminate, the risk of failure to achieve business objectives and provide reasonable, but not absolute, assurance against material misstatement or loss.

Report of the Nomination Committee

for the year ended 31 December 2022

Dame Anita Frew DBE, Chair

"Having a diverse and talented group of people at all levels of Croda is essential for delivering success."

The Committee's terms of reference are reviewed annually and they can be found in the governance section at **Croda.com**

Details of attendance at the meetings during the course of the year can be found on **page 88**

Dear fellow shareholder

I am pleased to present the Nomination Committee report for the year ended 31 December 2022.

Main activities and priorities in 2022

Board changes

During the year the Nomination Committee undertook a search for a new Chief Financial Officer to succeed Jez Maiden and commenced a search for a new Non-Executive Director to replace Helena Ganczakowski, both of whom will retire from the Board at the AGM in April 2023.

Each year the Board considers the composition of the Board, in terms of the balance of skills, experience, length of service and wider diversity considerations. The FRC's Guidance on Board Effectiveness comments that boards are more likely to make good decisions and maximise opportunities for long-term success if their members collectively have the right balance of skills, experience, knowledge and independence. The review in 2022 guided the Committee's assessment of the skills and experience for both searches, details of which are summarised on page 95.

On 1 January 2023 Louisa Burdett joined Croda and the Board. Louisa will succeed Jez as Group Finance Director on 13 March 2023, and Jez will step down from the Board at the Annual General Meeting on 26 April 2023 and retire from the Company on 31 May 2023. Jez has been instrumental in the development and growth of Croda, always nurturing a culture of transformation. I have hugely appreciated his diligence, intellect and thoughtful approach, particularly his contribution to Board debate. On behalf of the Board and all my Croda colleagues, I would like to thank Jez for his outstanding contribution over the last eight years, and wish him the very best for the future.

I am delighted that we have been able to appoint Louisa as Jez's successor. She has an exceptional ten-year track record as a CFO of listed companies, with valuable experience both in speciality chemicals and the broader manufacturing sector. This includes four years as CFO of Meggitt, before it was acquired by Parker-Hannifin in September 2022, and five years as CFO of Victrex, the speciality chemicals company.

Louisa's appointment brings even greater diversity to the Board in terms of gender and ensures we continue to meet our commitment for gender balance on the Board. We also have gone beyond the requirements of the Parker Review on ethnic diversity.

In preparation for Helena's retirement, Jacqui Ferguson took over as Chair of the Remuneration Committee on 1 September 2022. This gave Jacqui a good period as Chair to prepare for the Committee's review of the Company's Remuneration Policy at the end of the year. Jacqui has been a member of the Remuneration Committee since 1 September 2018.

Nomination Committee overview

Responsibilities

The Committee is responsible for nominating candidates for appointment to the Board for approval by the Board, and for succession planning. It evaluates the balance of skills, knowledge, experience and diversity on the Board.

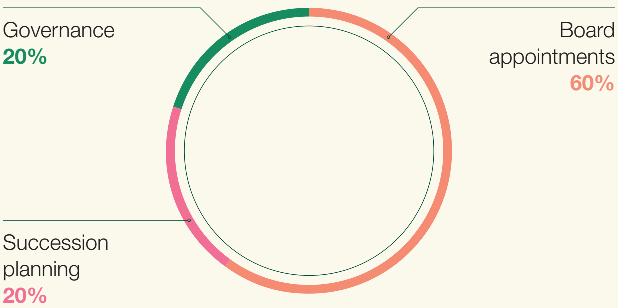
Key responsibilities

- To regularly review the structure, size and composition, including the skills, knowledge, experience and diversity, of the Board and make recommendations for any changes to the Board.
- To give full consideration to succession planning for Directors and other senior Executives, taking into account the challenges and opportunities facing the Company and, consequently, what skills and expertise the Board will need in the future.
- Where a Board vacancy is identified, to evaluate the balance of skills, knowledge, experience and diversity on the Board, and prepare a description of the role and capabilities required for the respective appointment.
- To identify and nominate candidates to fill Board vacancies, for the approval of the Board, as and when openings arise.
- To keep the organisation's leadership needs, both Executive and Non-Executive, under review to ensure that the Company continues to compete effectively in the marketplace.
- To review annually the time required from a Non-Executive Director and the Chair to fulfil their duties.
- To make recommendations on succession planning for the Board.

Key focus areas

- Board appointments – Reviewed the updated NED skills/ experience assessment, led the recruitment process for a new CFO and commenced the search for a new Non-Executive Directors.
- Succession planning – Assessed the changes to the Executive Committee and senior leadership teams.
- Governance – Ensured compliance with key governance issues.
- The Committee's terms of reference are reviewed annually and they can be found in the governance section at www.croda.com.
- Details of attendance at the meetings during the course of the year can be found on page 88. When it is appropriate to do so members of the Executive Committee attend the meetings on request of the Chair of the Committee.

Time allocation



Helena will remain a member of the Remuneration Committee and will continue in her role as the Senior Independent Director until her retirement from the Board, at which time Jacqui Ferguson will succeed Helena as Senior Independent Director.

John Ramsay's and my own appointment were considered by the Committee. John's term was extended by three years, having completed his first three-year term. My term of office was extended by another year in line with the Nomination Committee policy that once a Non-Executive Director has served six years, any extension to their term would be on a year by year basis.

Our Group HR Director, Tracy Sheedy, will also retire from the Executive Committee and the Company at the end of April after six years in the role. Tracy's successor, Michelle Lydon, was appointed on 1 January 2023 and joined the Executive Committee. She will take over from Tracy as President Human Resources in mid-March. Michelle is an experienced HR leader, having recently been Chief People Officer for British Airways and before that QinetiQ.

During 2022, the Committee also reviewed the emergency succession planning for both the Group Chief Executive and Chair roles. Although the successor for the Group Chief Executive role would need to be determined at the time based on the circumstances that exist, the Nomination Committee discussed Executive Committee members that would be able to take on the role on a temporary basis if Steve Foots was unavailable to perform his role. In the event I was unavailable to perform my role as Chair, the expectation would be that the Senior Independent Director would take on the Chair responsibilities.

Diversity and inclusion

Having a diverse and talented group of people at all levels of Croda is essential for delivering success. The Board supports the recommendations of the FTSE Women Leaders Review and the Parker Review in relation to gender and ethnic diversity. I am pleased to report that we have now achieved a position of gender balance on the Board as well as female Directors as Chair, Senior Independent Director and, with the appointment of Louisa Burdett, Chief Financial Officer.

The gender balance on the Executive Committee and senior management teams (direct reports to the Executive Committee) by 31 December 2022 stood at 38% female. We continued to increase the diversity of our leaders below Board and Executive Committee level. 29% of our top 55 employees are female, with the top 55 made up of employees across 11 nationalities.

Corporate governance continued
Report of the Nomination Committee continued

There continues to be work to do to create further diversity and in the gender balance in the underlying management teams and this will take a number of years to achieve.

Further information on our current people initiatives including diversity and inclusion and our ambitions in these areas can be found on pages 20 and 21. The Committee and the Board receives updates from the Group HR Director on these activities throughout the year. Members of the senior management team and potential future leaders are given the opportunity to present to the Board whenever the opportunity arises. Also, Board members are invited to attend feedback sessions with the Group D&I Committee and regional D&I committee members on an annual basis. Topics have included LGBTQ, Black and ethnic minority inclusion at Croda, where passionate speakers talk about their lived experience in order to create awareness and shape onward discussions.

A copy of our Board Diversity Policy, which is regularly reviewed by the Board, is available in the corporate governance section at www.croda.com. The Board has committed to meeting or exceeding the target set by the FTSE Women Leaders Review and the Parker Review. For more information on our Board see the Directors' biographies on pages 72 and 73.

Other activities of the Committee

The Committee reviewed the time commitment of the Non-Executive Directors. This is assessed before appointment and on an annual basis. The Committee was satisfied that all the Non-Executive Directors remain able to commit the required time for the proper performance of their duties.

The Committee considered and concluded that, except for Keith Layden, all the Non-Executive Directors continue to fulfil the criteria of independence. As Keith was formerly an Executive Director of the Company, he is not currently considered to be independent.

The annual Committee evaluation was conducted using an online questionnaire from Lintstock tailored to Croda's activities and current concerns to consider the Committee's operations, oversight and progress during the year. The evaluation confirmed that the Committee continued to be well led and excellent progress had been made with the Board appointments during the year.

I will have served my nine years on the Board and as Chair in April 2024 and the Committee has started to consider the process to find my successor. As Senior Independent Director, Helena Ganczakowski chairs the Committee for all discussions concerning the search for my successor, and is working closely with our Group Chief Executive and Company Secretary to identify suitable search firms to work on the search. A specification will be drawn up with contributions from each member of the Committee and the search will commence during 2023.

Dame Anita Frew DBE, Chair of the Nomination Committee

Defining the criteria for our new Chief Financial Officer (CFO)

The Nomination Committee spent considerable time scoping the requirements for the new CFO to replace Jez Maiden.

Having selected Egon Zehnder (EZ) as the firm to lead the search, members of the Committee worked with EZ to develop and then fine tune the specification/brief to ensure EZ had a clear understanding of the cultural aspects of the search, the key challenges and priorities for the CFO and the personal skills and qualities needed. EZ has no connection with the Company or any individual Director.

Key challenges and priorities – The CFO is a trusted and strategic partner to the Group Chief Executive, a key member of the Executive team and the Board, and leads our engagement with the investor community alongside the Group Chief Executive. It was essential to find someone who could continue with and build upon the work Jez Maiden had undertaken in building a world class, future proof finance function backed by top diverse talent, digital technology and strong processes.

Personal characteristics – The Croda culture is a significant competitive advantage, so as well as finding candidates with the key critical skills and experience, the CFO needed to identify with and live our corporate values and Purpose, individually, and as part of the leadership team. The Committee looked for candidates with humility, authenticity, an inclusive leadership style and a natural team player, and that thrive in a nimble, entrepreneurial and fast-moving business, who would bring a continuous improvement mind-set that is appropriate for Croda's stage of development and aspirations as well having positive energy and a 'can do' attitude.

Skills and experience – The critical skills and experience that the Committee specified for the search included, amongst other things, being a well-rounded finance leader of a complex, global business with a dispersed customer and operational/ manufacturing footprint, and experience in innovation led, growth oriented (organic and inorganic) settings. The ability to inspire, motivate and empower high performing diverse teams was critical, as was establishing a collaborative culture within Croda to help shape corporate strategy for further growth.

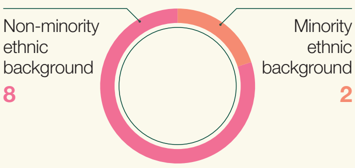
Diversity – Broad diversity was a key consideration for the search. To meet the Commitment target set for gender balance in senior decision making roles, our search firm was required to bring forward a balanced longlist of candidates.

Board and Group diversity

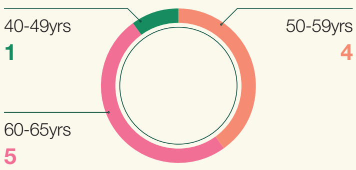
As at 31 December 2022

Board balance

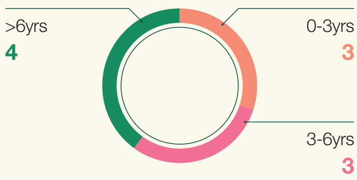
Ethnic diversity



Age

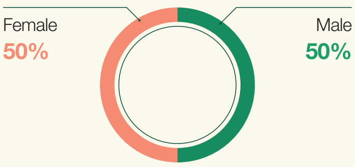


Tenure

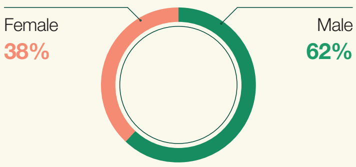


Gender balance

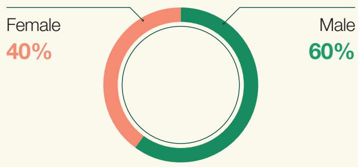
Board of Directors



Senior management



All employees

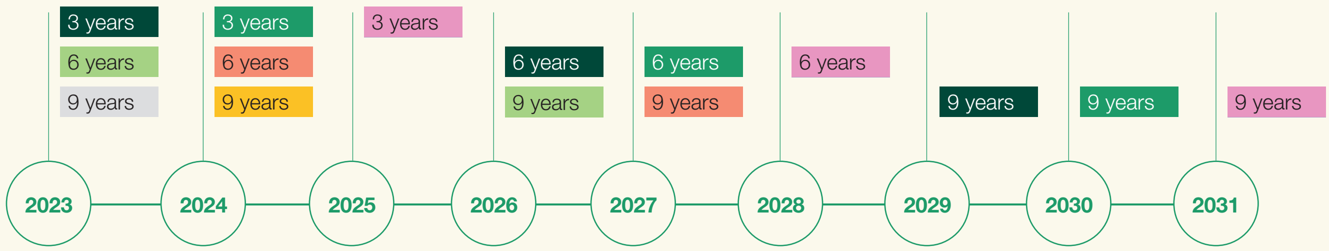


Non-Executive Directors’ tenure

The Committee reviews the tenure and succession plans for the Non-Executive Directors annually. The focus in 2023 will be on the succession for Anita Frew as Chair of the Board and to continue our search for a Non-Executive Director to replace Helena Ganczakowski.

Key

John Ramsay	Anita Frew
Julie Kim	Jacqui Ferguson
Keith Layden	Roberto Cirillo
Helena Ganczakowski	Nawal Ouzren



Board skills and experience assessment

The assessment below is an analysis of the collective skills and experiences of the Directors, assuming Helena Ganzakowski is no longer a Director.

General – skills/experience required from the majority of FTSE 100 Boards

Strategy	✓✓✓
Governance and Risk	✓✓✓
Remuneration	✓✓✓
Finance/accounting	✓✓✓

Croda – skills/experience required from the majority of global speciality chemical company Boards

SHE	✓✓✓
Operations	✓✓✓
Sustainability	✓✓
International and emerging markets	✓✓✓
Emerging markets (‘in country’ living and working experience)	✓✓
Experience as a CEO	✓✓✓
M&A	✓✓✓

Croda – skills/experience required from Croda’s Board

Consumer Care (Personal Care and F&F)	✓✓
Life Sciences	✓✓✓
Marketing	✓✓✓
Digital	✓✓✓
Innovation	✓✓
Technical (including Biotech)	✓✓✓

Key:

✓✓✓ the Board has the appropriate amount of skill/experience in this area

✓✓ the Board would benefit from additional skill/experience in this area

✓ the Board does not have the required skill/experience in this area

Report of the Audit Committee

for the year ended 31 December 2022

John Ramsay, Chair of the Audit Committee

"The dedication and commitment from the Croda executive management team, the audit teams and Croda employees has once again delivered high quality and robust audit processes."

Detailed responsibilities are set out in the Committee's Terms of Reference which are reviewed regularly. They can be found in the governance section at **Croda.com**

For details of meeting attendance during the course of the year
See page 88

For details of the key focus areas for 2023
See page 99

Dear fellow shareholder

Report of the Audit Committee for the year ended 31 December 2022

I am pleased to present the Audit Committee report for the year ended 31 December 2022. This report provides shareholders with an overview of the work undertaken by the Committee and the key areas considered when discharging its responsibilities and providing assurance on the integrity of the Annual Report and financial statements for the year ended 31 December 2022.

As the restrictions surrounding the pandemic eased, the Committee has thankfully been able to meet in person during the year rather than by video conference as was the case through much of the COVID-19 pandemic. Similarly the external audit and internal audit teams were largely able to revert to physical presence at audits. I received regular updates from the Group Finance Director, the wider global finance team, the Lead Audit Partner and the VP Risk and Assurance. The dedication and commitment from the Croda executive management team, the audit teams and Croda employees has once again delivered high quality and robust audit processes.

The Board including myself spent a considerable time in the search for our new Chief Financial Officer, Louisa Burdett who joined the Board on 1 January 2023. A critical role of the Audit Committee Chair is to develop a strong, professional, healthy relationship with the Chief Financial Officer, developing mutual trust in the relationship to ensure constructive challenge in support of highly effective internal controls and injecting objectivity into the Company's financial disclosures. I have built an excellent working relationship with Jez Maiden, and on behalf of the Committee I wish to thank him for his professional and highly valued contribution to Croda and to the work of the Committee. I am looking forward to building the same relationship with Louisa.

Having served 14 years as VP Risk and Assurance and over 16 years as an employee of Croda, Hazel Whitaker retired from her role in August 2022. On behalf of the Committee and the Board, I wish to thank Hazel for her commitment and contribution to Croda and her support to the Committee. Eduardo Peloia assumed the role of VP Risk and Assurance. Eduardo has worked at Croda for 7 years and was formerly the Finance Director for our Latam region.

Committee membership and attendance

The Committee at the end of the year comprised of six independent Non-Executive Directors. The experience of each Board member is outlined on pages 72 and 73. The Board considers all members of the Audit Committee have the appropriate and relevant level of experience in financial matters as well as a diverse and broad range of competence relevant to the sector focus and the future strategic direction of the Group.

These skills and my own experience of over 30 years in international finance and extensive experience as an audit committee chair provide the Board with assurance that the Committee has the appropriate skills and breadth and depth of experience to ensure that it can be fully effective. It also meets the Code requirement that at least one member has significant, recent and relevant financial experience.

Audit Committee overview

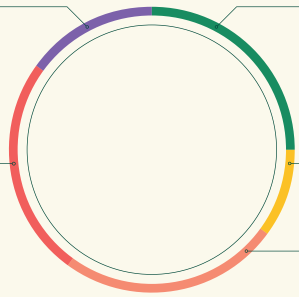
Responsibilities

The Committee assists the Board in ensuring that the Group's financial systems provide accurate and up to date information on its financial position.

Key responsibilities

- To monitor the integrity of the financial statements and results announcements of the Group and to review significant financial reporting issues and judgements.
- To recommend external auditor appointment and removal, assess audit quality, negotiate and approve the audit fee, assess independence, monitor non-audit services and be responsible for audit tendering.
- To review the adequacy and effectiveness of the Group's internal controls and risk management systems, and the adequacy, effectiveness and output of the internal audit function.
- To review the adequacy of the Group's whistleblowing arrangements and procedures for detecting fraud.

Time allocation



Specific focus areas in 2022

- Maintain focus on cyber security and the delivery of projects identified in the 2021 information security strategy.
- Monitor progress in the development of processes and controls over the reporting of non-financial KPIs, particularly relating to sustainability.
- Monitor the impact of major business change programmes on Croda's risk and control environment.
- Review management's oversight and monitoring of quality controls within the health care sector.

See page 99 for progress on these areas.

The Chair of the Board, Keith Layden (a Non-Executive Director), the Group Chief Executive, the Group Finance Director, the Group Financial Controller, the VP Risk and Assurance (who leads the internal audit function) and representatives from the external and internal auditors attend the meetings by invitation.

The Committee met on six occasions during the year and has met twice since the financial year end. The meetings were held in advance of the Board where I provided a report of the key matters that were discussed and any emerging areas that may require additional focus. A programme of business is agreed at the start of the year and it is reviewed and updated to ensure any emerging areas identified are considered.

To ensure the work of the Committee remains focused on the key and emerging issues, I regularly meet and speak separately with the Group Finance Director, the Group Financial Controller, the VP Risk and Assurance and the internal and external auditors. Meetings without the Executive Directors present are also held with the internal and external auditors to facilitate open dialogue and assurance. Before each Audit Committee meeting, I also meet with the external auditors, the Group Finance Director, the Group Financial Controller and the VP Risk and Assurance to discuss control and compliance issues generally and specifically the detail of the year end and half year results, accounting judgements and disclosures. This helps me to ensure there is a shared understanding of the key issues, technical matters and judgements and to make sure sufficient time is devoted to them at the meetings.

Committee activity in 2022

The Committee's core activities, as well as the additional focus areas, and an estimate of the proportion of time spent on them, are:

Financial reporting (25%)

The Committee:

- Monitored the Group's financial statements and results announcements, including the Annual Report and the interim statement, and with support from the external auditors, reviewed those items in the Group's financial statements that were material to our reporting. The Committee challenged management on the statements and was satisfied with the explanations provided. Consideration was given to the appropriateness of accounting policies, critical accounting judgements and key sources of estimation of uncertainty. Recommendations were made to the Board supporting the half and full-year accounts and financial statements.
- Reviewed the Group's external reporting framework and use of Alternative Performance Measures (APMs) to assess ongoing appropriateness. The Committee was satisfied that the APMs reviewed were consistent with market practice of both the peer group and wider FTSE 100 companies, and that disclosure and reconciliation to statutory measures were appropriate.
- Reviewed consideration given by management relating to various FRC thematic reviews and guidance for financial reporting.
- Assessed the impairment testing reviews on goodwill balances on the Group's balance sheet and was satisfied with the output of the reviews which included an impairment of the Flavours cash generating unit covered under significant financial statement reporting items. In conjunction with the Board, reviewed the financial modelling and stress testing conducted for the going concern assessment. A recommendation was made to the Board to support the going concern statement. Further information can be found on page 164.

Report of the Audit Committee continued

- Reviewed the viability assessment process undertaken in support of the long-term viability statement, based on plausible scenarios (including different combinations of scenarios) arising from key risks and their impact on headroom and debt covenants. The Committee challenged the assumptions and calculations in the modelling and scenarios, noting the effect they would have during the viability period and were satisfied that they were robust and well thought through. Further information can be found on page 59.
- Undertook regular reviews of the Group's litigation. The Committee receives reports twice a year from the Group General Counsel and Company Secretary and was satisfied with the approach to provisioning and disclosure.
- Reviewed the accounting treatment of the divestment of the majority of the PTIC business.

Governance (10%)

The Committee:

- Reviewed the effectiveness of the Group's anti-bribery and fraud procedures, including those for whistleblowing. The Committee received a report on the independent investigations that had been conducted in response to concerns raised under the whistleblowing and fraud policies and were satisfied with the outcome, including follow-up actions. The Committee also reviewed a summary of the controls in place to mitigate the risk of fraud in the Group. The Committee was satisfied that the ethics and fraud programmes were effective. Further work on fraud risk assessment will take place during 2023 in preparation for the Directors' fraud statement, which is a planned disclosure under the UK Government's proposed corporate reforms.
- Undertook an external evaluation of the Committee's effectiveness. Information on the evaluation process can be found on page 100. The results of the review concluded that the Committee continued to be effective.
- Reviewed the Committee's terms of reference and confirmed that the role and responsibilities of the Committee are aligned with the 2018 UK Corporate Governance Code. No changes were made during the year.
- Undertook its annual legal and compliance review of the corporate governance and regulatory requirements of the Committee, concluding that it was in full compliance with the 2018 UK Corporate Governance Code and other corporate governance requirements.
- Completed its annual review of the Group's tax compliance policy and risks relating thereto. No significant updates were required. The policy is available at www.croda.com.

The Committee spent considerable time during the year focusing on and assessing the expected impact of the UK Government's proposed corporate reforms on Croda, including the future requirement to provide a statement on the effectiveness of internal control systems and the proposals to publish a resilience statement in the Annual Report. The Committee agreed an indicative timeline outlining the planned actions for meeting such requirements, building this within the agenda programme for the year. While the Government has not yet formalised the proposed reforms the Committee is keen that the Company is aligned with emerging best practice so this will be a focus area for the Committee in 2023.

External audit (25%)

The Committee:

- Discussed and approved the external audit plan, including the assessment of significant audit risks; the engagement risk profile; the use of data analytics; the scope of the audit in terms of coverage, the materiality level and the de minimis reporting threshold; the co-ordination of external audits; and the key members of the engagement team. The Committee monitored the progress made by the statutory audit team against the agreed plan and discussed issues as they arose.
- Discussed and approved the increase to the external audit fee. The Committee was concerned about the level of fee increase proposed and challenged the auditor before agreeing to a 45% increase over two years, whilst ensuring that the external audit was delivered effectively. The reasons given by the auditor for the increase were inflation in professional staff salaries, increased regulation and expansion in the scope of the audit. Information on the audit fees can be found in note 3 on page 174.
- Directed the auditor to ensure sufficient focus on areas of particular concern to the Committee (eg the impact of the PTIC divestment and separation).
- Reviewed in-depth a range of indicators to judge the overall audit quality as described in the auditor effectiveness considerations on page 100.
- Met with the auditor without management present. The Committee considered the auditor's views. There were no significant issues to report.
- Considered the independence and objectivity of the auditor. The Committee confirmed the independence of the auditor as further described on page 101.
- Considered the effectiveness of the external audit process, concluding that the audit was effective (see page 100) and a recommendation was made to the Board on the re-appointment of KPMG as auditor at the 2023 AGM.

Internal audit and risk management (25%)

The Committee:

- Reviewed the internal audit planning approach and its link to the Company strategy, reviewed reports on the work of the internal audit function from the VP Risk and Assurance and monitored compliance with the Group risk assurance programme. The Committee approved the internal audit plan and the implementation of any resulting actions by management.
- Discussed the results of the 2022 controls assurance internal audits delivered by our co-source partner, PwC. The Committee considered the adequacy of management's response to matters raised and the timeliness in resolving such matters.
- Discussed sustainability related non-financial KPIs and how the Audit Committee and the Board could obtain visibility about the processes and systems that underlie the KPI calculations. For more information see page 99.
- Received assessments of several significant capital expenditure projects against the Group's project guidelines, following up on areas requiring attention by the project teams as the projects progressed. For more information see page 99.
- Received updates on the IT control environment, following the specific control improvements delivered in 2021.

- The Committee spent time reviewing the speed at which internal audit action items were completed and closed to ensure management was focused on overdue audit actions. The Committee requested that the internal audit team continued to monitor the completion rate.
- Assisted the Board in its assessment of the Group's emerging and principal risks. The Committee assessed the results of the 2022 risk assurance activity carried out by internal audit and considered any additional key risks as a result of acquisitions during the year.
- Continued focus on implementation of the information security programme agreed in 2021, including inviting the recently appointed Chief Information Officer to present to the Committee to discuss strengths, weaknesses and action plans as well as the findings of third party audits. The Committee reviewed the resource and pace of implementing the programme and will receive quarterly updates, including progress against agreed KPIs. For more information see the table below.
- Reviewed and approved the 2023 internal audit plan and scope of the peer reviews.
- Met with the internal auditors without management present. There were no significant issues identified.
- Conducted its annual review of the effectiveness of the Group's internal audit function. The Committee concluded that the internal audit team, supported by PwC resource was effective.
- The Committee received a presentation on the roll out of the global finance standardisation project, which had realised significant improvements in the application of cost accounting across the Group. The project had enhanced the business' ability to analyse profitability at product level to support commercial decision making. It had also allowed the carbon impact of the Group's products to be assessed and would assist the business in reviewing the impact of its product portfolio and aid the reduction of carbon.

Specific focus areas for 2022 (15%)

In addition to our core work, as set out in our terms of reference, we noted four specific focus areas for 2022, which absorbed the balance of the Committee's time.

Specific focus area	Actions during the year	Progress
Maintain focus on cyber security and the delivery of projects identified in the 2021 information security strategy	Focus was given to the execution of 12 strategic initiatives agreed at the November 2021 Audit Committee meeting. Two external third party assessments were conducted to evaluate the information security maturity level and help identify strengths and weakness versus benchmarks. Both studies reconfirmed the existence of strong controls in several areas while highlighting gap areas already identified. Group Risk and Assurance conducted a risk review around IT asset management and third party supplier risk management, with an action plan agreed to address the gap areas.	Ongoing – will remain a focus for 2023
Monitor progress in the development of processes and controls over the reporting of non-financial KPIs, particularly relating to sustainability	Group Risk and Assurance completed an advisory project with the Group Sustainability team around the design of processes and controls to address risks associated with the reporting of non-financial KPIs. The Committee received regular updates, including from the Group Sustainability team. The Company's 2021 Annual Report was included in the FRC's sample for its thematic review covering TCFD disclosures and climate in the financial statements. The FRC did not have any questions or queries following their review. The FRC provides no assurance that the annual report and accounts are correct in all material respects. The FRC's role is to consider compliance with reporting requirements, not to verify the information provided. The FRC accepts no liability for reliance on this review by the company or any third party, including but not limited to investors and shareholders.	Completed – will now move to business as usual
Monitor the impact of major business change programmes on Croda's risk and control environment	Internal audit performed two reviews of major capex projects, with assessments against the Group's project guidelines. A detailed end to end assessment of our business processes was undertaken by a third party, with findings discussed. One of the key steps taken was to create a set of Global Business Process Owners. Group Risk and Assurance was regularly updated on plans and progress by the Business Transformation Director, with updates provided to the Committee.	Ongoing – will remain a focus for 2023
Review management's oversight and monitoring of quality controls within the health care sector	Group Risk and Assurance oversaw the integration of Avanti into the Croda risk framework, which now provides visibility over the risk register of all dedicated Pharma sites. PwC started work on a quality management system (QMS) maturity assessment specifically around pharmaceutical quality requirements, including GMP systems, with the objective to highlight key risks and gaps with the current structure and build a roadmap to further develop and improve Croda's Pharma QMS.	Ongoing – will remain a focus for 2023

Report of the Audit Committee continued

Looking ahead to 2023

In addition to our core business, the Committee has identified four focus areas for 2023. We will:

- Maintain focus on cyber security and the delivery of projects identified in the information security strategy
- Maintain focus on monitoring the impact of major business change programmes on Croda's risk and control environment
- Monitor progress of control framework changes resulting from UK corporate reform
- Review management's oversight and monitoring of quality controls within the Pharma business

Internal audit and risk management

I met with the VP Risk and Assurance several times during the year outside of the formal meetings to discuss the performance and output of the internal audit function and aspects of risk management. The VP Risk and Assurance attended each Committee meeting and presented an internal audit report that was fully reviewed and discussed, highlighting any major deviations from the annual plan agreed with the Committee. I also participated in the selection of a new VP Risk and Assurance from within the business.

At each meeting, the Committee considered the results of the audits undertaken and the adequacy of management's response to matters raised, including the time taken to resolve such matters. Particular focus was addressed to those areas where there was a major divergence between the outcome of the internal audit and the scoring of the self-assessment questionnaire, completed annually by each business unit. In these instances, the Committee challenged management as to what actions it was taking to minimise divergences arising in the future.

In January, the Committee conducted its annual review of the internal audit function, including its approach to audit planning and risk assessment, communication within the business and with the Committee and its relationship with the external auditors. Senior management feedback from sites, included in the 2022 audit programme, is gathered by questionnaire to support this process. Details on how the business monitors risk and how it implements its risk management framework are set out on pages 52 to 54.

Committee evaluation

The Committee performance was assessed as part of the internal annual Board evaluation process (see pages 88 and 89). The output of the evaluation was considered by the Committee in January 2023.

Overall, the evaluation concluded that the Committee was operating effectively. The overall performance of the Audit Committee and that of the Committee Chair were both highly rated. The Committee's use of time was highly commended, with meetings being well run with appropriate time allowed for more in-depth discussion when required. Agenda coverage through the year was seen as full and appropriate. Committee members were well prepared for meetings, engendering informed discussions and constructive debate.

The Committee's effectiveness at assessing the system of internal controls was rated positively, including its regular review of general computer controls. Relationships between the Committee and Croda management were considered very effective with the Audit Committee providing both support and challenge. The relationship with KPMG's lead audit partner also received good ratings.

The review highlighted the need for further focus on cyber and the execution of the cyber programme as well as to continue its focus on the UK corporate reforms and non-financial reporting. Four focus areas for 2023 were identified and these are summarised above.

External auditor's effectiveness

During the year, the Committee assessed the effectiveness of KPMG as Group external auditor. To assist in the assessment, the Committee considered the quality of reports from KPMG and the additional insights provided by the audit team, particularly at partner level. It took account of the views of the Group Finance Director and Group Financial Controller, who had discussed subsidiary component audits with local audit partners, to gauge the quality of the team and knowledge and understanding of the business. The Committee also considered how well the auditor assessed key accounting and audit judgements and the way it applied constructive challenge and professional scepticism in dealing with management.

The Committee reviewed the output from a questionnaire completed by senior members of the finance team to obtain their views on KPMG's effectiveness in carrying out the audit. The questionnaire covered:

- Structure of the external audit team and their quality and approach.
- The planning, delivery and execution of the audit.
- The effectiveness of their reporting.
- Effectiveness of communications between management and the audit team.
- Robustness of the audit, including the independence of the external audit team and their ability to challenge management as well as demonstrate professional scepticism and independence.
- The external audit team's judgement.

Scores were compared with previous years to understand trends and highlight areas of improvement. The independence, team size, seniority and expertise of the external audit team continued to be assessed positively. Examples included that the senior team had dealt with complex issues as they came up and were helpful in providing feedback on technical accounting and disclosure issues. Regional close-out meetings had been succinct and clear. Minor improvement areas were noted, which included the need for clearer upfront planning and effective communication on progress in some areas.

The Committee also reviewed a report produced by KPMG that summarised the internal measures that KPMG used to assess audit quality as well as responses to thematic areas identified by the FRC that were relevant to the Croda audit.

There were several quality interventions that attributed to the overall audit quality and ensured independent challenge. These included the use of specialists, audit consultations, a technical review, a second line inflight review and finally an independent audit partner review.

External auditor's independence

The Committee and the Board place great emphasis on the objectivity of the Group's external auditor, KPMG, in reporting to shareholders. Our Group policy on the provision of non-audit services by external auditors, which is on our website www.croda.com, sets out permitted and prohibited non-audit services and the controls over assignments awarded to the external auditor to ensure that audit independence is not compromised and the provision of such services does not impair the external auditor's objectivity.

During 2023, it was identified that certain KPMG member firms had provided preparation of local GAAP financial statement services and in some cases, foreign language translation of those financial statements, over the period 2019 to 2022. No entities with these services were in scope for the group audit. No entities with word processing services were in scope for the group audit. The services, which have been terminated, were administrative in nature and did not involve any management decision-making or bookkeeping. The work was undertaken after the group audit opinion was signed by KPMG for each of the impacted financial years and had no direct or indirect effect on the Group's consolidated financial statements. In the Committee's view, based on their assessment of the breach, KPMG's integrity and objectivity as auditor has not been compromised and we believe that an objective, reasonable and informed third party would conclude that the provision of these services would not impair KPMG's integrity or objectivity for any of the impacted financial years.

In 2022, non-audit fees were £0.2m, significantly less than the total audit fees of £2.4m; the non-audit to audit fees ratio stands at 0.1:1.

The Committee undertook its annual review of the Group's policies relating to external audit, including the policy that governs how and when employees and former employees of the Group's auditor can be employed by the Company. No changes were made. The Committee also reviewed and accepted KPMG's independence letter which annually confirms their independence and compliance with the FRC's ethical standard. In conclusion, the Committee agreed that KPMG were independent.

Croda is in compliance with the Statutory Audit Services Order 2014. We undertook an audit tender in 2017 and the Board appointed KPMG as external auditor, with Chris Heald as the Lead Audit Partner. The first year to be audited by KPMG was the year ended 31 December 2018. Subject to the continued quality and effectiveness of the current auditor, we plan to re-tender ahead of a 2028 appointment. Following an organisational change in KPMG, Chris Heald stepped down as Lead Audit Partner following the 2021 AGM and was succeeded by Ian Griffiths.

External auditor reappointment

As noted above, the Committee recommended to the Board that KPMG be offered for re-election at the forthcoming AGM. I will be available at the shareholder engagement event to respond to any questions shareholders may raise on the Committee's activities in the year.

John Ramsay, Chair of the Audit Committee

Significant financial statement reporting items

The Committee, with support from the external auditor, reviewed those items in the Group's and Parent Company's financial statements that have the potential to significantly impact reporting. These are set out below.

Impact of the divestment of the majority of PTIC: On 30 June 2022, the Group divested the majority of its PTIC businesses to Cargill for gross proceeds of €775m (£665m), subject to customary adjustments for separation costs and cash/debt-like items. This divestment excluded the potential sale of Croda Sipo in China in which we have a 65% shareholding. The Group has recognised a profit before tax on the disposal of £356.0m, with the Parent Company recognising a profit before tax on disposal of £6.5m. The Committee assessed the key accounting considerations, and after challenge, was satisfied that the disposal group did not meet the requirements to be classified as a discontinued operation.

Goodwill impairment: The strategy of the Group includes acquiring new technologies and businesses operating in adjacent markets. As a result, goodwill represents a significant asset value on the balance sheet of £844.6m out of total net assets of £2,431.1m at 31 December 2022.

The Committee completed its annual impairment review of the carrying value of goodwill, as prepared by management, including the detailed sensitivity analysis to a number of underlying assumptions, including the current macroeconomic outlook and the broader consequences on the markets in which the Group operates.

The Committee assessed the methodologies used and the adequacy of the management disclosures. Particular attention was given to the Flavours cash generating unit's value in use model, which demonstrated a £34.6m impairment versus its carrying value as lower forecast sales and margin have reduced its future value projection. The Committee reviewed the methodology adopted to evaluate the risk of goodwill impairment. After challenge, the Committee was satisfied that the assumptions were reasonable and that no other impairments were necessary; however, enhanced disclosure was agreed to be appropriate for the Fragrances cash generating unit, given the sensitivity of the calculations to certain assumptions.

Pensions: The Committee monitored the Group's pension arrangements, in particular the funding of the defined benefit plan in the UK, which are sensitive to assumptions made in respect of discount rates, salary increases and inflation.

The Group engages external actuarial specialists. The Committee reviewed the actuarial assumptions used and compared them with those used by other companies. The external auditors also challenged the benchmark assumptions applied and conducted sensitivity analysis. Following their review, the Committee found the assumptions to be reasonable.

Parent Company's carrying value of investments in subsidiaries and intercompany receivables: The Committee reviewed the risks around the carrying amount of the parent Company's investments in subsidiaries and intercompany debtors, which had previously been disclosed as a significant reporting item. However, the relative significance of this matter has reduced in the current period due to the disposal of PTIC businesses and therefore it was concluded that separate consideration was no longer required.

Remuneration Report

Report of the Remuneration Committee

for the year ended 31 December 2022

Jacqui Ferguson, Chair of the Remuneration Committee

"This year's Policy review has given us the opportunity to engage with shareholders and to refresh our policy and its application to enable Croda's strategy and ambition."

Contents

A. Chair's letter

On behalf of the Board and the Remuneration Committee, I am pleased to present Croda's Directors' Remuneration Report for the year ended 31 December 2022. This is my first report as Chair, having been a member of the Remuneration Committee for four years. I would like to thank Dr Helena Ganczakowski for her work and significant contribution as Committee Chair prior to my appointment.

The Committee believes that Croda's remuneration approach plays a key role in the continued achievement of the Group's strategic objectives and in the delivery of sustainable, profitable growth. We last reviewed and updated our policy to ensure ongoing alignment to Croda's evolving ambition in 2020 and received 97.6% votes in favour. Last year we were pleased to receive 95.0% votes in favour of the 2021 Remuneration Report.

This year's Policy review has given us the opportunity to engage with shareholders and to refresh our policy and its application to enable Croda's strategy and ambition. We are grateful to shareholders who gave their time as part of the consultation, and we adapted our proposals as a result of feedback received.

Throughout the review we have also been mindful of new governance expectations, shareholder sentiment, and the changing dynamics of our workforce including the cost-of-living crisis and the impact this has on our workforce. The Committee is keen to ensure our remuneration approach reflects the developing needs of all our stakeholders.

Remuneration Policy review

Since the approval of the current Directors' Remuneration Policy in 2020, Croda has grown and is now a constituent of the FTSE 50 (with c.£2.6bn of shareholder value created over the last three years).

In line with our strategy to transition to a pure play Consumer Care and Life Sciences business, Croda has recently concluded the divestment of the majority of our Performance Technologies and Industrial Chemicals (PTIC) businesses. Croda will continue to focus on consistently delivering sustainable, profitable growth by providing innovative, sustainable solutions to our customers, consistent with our Purpose: Smart science to improve lives™. Future growth will be driven principally through organic investment and through acquisition.

Our focus on Consumer Care and Life Sciences means that our leaders will be managing an increasingly complex and international business and these changes will impact the nature of talent required across our organisation.

Therefore, the focus of the Remuneration Policy review was to ensure that the existing remuneration framework and its implementation remained aligned to the business strategy and the evolving scope and responsibilities of our leadership roles.

Our updated Policy largely reflects our need to address the implications of the significant growth of the Company, the growing complexity of the business and the level of sector competitiveness to ensure we can continue to attract and retain the best talent.

In summary, we are proposing quantum increases to both the Group Profit Incentive Bonus Scheme (senior annual Bonus Plan) and Performance Share Plan (PSP), although opportunity levels remain modest in comparison to our peers, along with the introduction of an ESG metric into the senior annual Bonus Plan reflective of shareholder feedback and our strategic priorities. We also propose to increase shareholding guidelines and, in response to shareholder feedback, to increase our post-employment shareholding requirement.

In developing our Remuneration Policy, we undertook a significant consultation exercise and we are grateful that most of our top 20 shareholders gave their time to discuss and provide advice on our proposals. Others provided a written response. We also consulted with proxy agencies and took account of their views. In total we invited c.60% of our shareholder base to take part in the consultation exercise and directly engaged through video calls with approximately 31% of our shareholder base. We adjusted our proposals as a result of feedback during the consultation process as outlined further below.

Summary of proposals

Increase to the senior annual Bonus Plan and PSP maximum incentives – Against the background of strong business performance, increased complexity and evolving talent needs, we are proposing an increase to incentives for both Executive Directors.

While our approach to remuneration has never been driven by benchmarking, our view is that this proposed increase in incentive opportunity is aligned to shareholder interests to support the next phase of the Group's strategic development. The benchmarking suggested that it was the senior annual Bonus Plan opportunity in particular which has fallen significantly below market for a company of our size and there was a case for an increase. However, we were keen to continue with an incentive structure heavily weighted to the long-term.

The proposal is an increase to the maximum annual bonus of 25% of base salary and an increase to the maximum PSP of 25% of base salary. The resulting incentive levels (set out on page 108) will continue to be modest against the market.

Shareholding guidelines – We are increasing the shareholding guidelines so that they are in line with the increased PSP opportunity, meaning a shareholding guideline of 250% of salary for the Group Chief Executive and 200% of salary for the Chief Financial Officer.

Post-employment shareholding – The time horizon for post-employment shareholding will be extended to apply in full over the two years, rather than operating on a tapered basis during this period.

Recruitment headroom – We are proposing additional annual bonus headroom (maximum 200% of salary) in the Policy which would only be permitted to be used in exceptional circumstances of recruitment.

The above are the key structural changes to our Remuneration Policy. Our review also included consideration of our overall performance framework and as a result of this review we are also proposing some changes to the implementation of our Policy.

Performance measures for the senior annual Bonus Plan
Currently our senior annual Bonus Plan is based 100% on profit performance with no bonus payable until the previous year's profit is exceeded. Prior to the review we had received feedback from some shareholders that they would like to see additional measures introduced.

Following our review we concluded that, given the increased complexity of the business, as well as the proposed increase in annual bonus levels, it would be appropriate to introduce another measure in order to better reflect overall performance for all our stakeholders.

We are therefore introducing an ESG measure into the senior annual Bonus Plan performance framework weighted at 10%. We anticipate that the ESG measure will vary each year adapting to our evolving priorities in this area. In 2023 we will focus on safety which is identified as a current strategic priority taking into account our evolving capacity expansion. In addition, we have also strengthened the safety underpin which applies to the senior annual Bonus Plan.

Flexibility in target setting framework – Our senior annual Bonus Plan profit target has also been set using a consistent and distinctive framework, focused on sustainable year-on-year growth rather than a range around the annual budget and we intend to continue with this approach. We propose to introduce additional flexibility into the target setting framework taking into account the potential for increased volatility in profits which may arise from time to time (for example, as seen in the COVID-19 vaccine contract) and therefore avoiding disincentivising over performance.

Response to shareholder consultation

Most shareholders we engaged with appeared comfortable with our proposals to increase incentive opportunity, given Croda's performance to date, our strategic ambitions and our growth trajectory since the last Policy review. Shareholders also recognised that the incentive opportunities continued to be modest against the market.

The increases to shareholding guidelines were also welcomed, however some shareholders gave feedback that they would like to see an increase in our post-employment shareholding requirement which is currently set at 100% of the in-employment guideline for the first year after leaving employment, tapering to 0% by the end of year two. Responding to this feedback we will increase the requirement to 100% of the in-employment guideline for the full two years post-employment.

There were some clarifications about when the increase to additional annual bonus headroom might be used in exceptional circumstances. We have modified our proposal so that this headroom would only be available for use in the case of recruitment.

Finally, a number of shareholders expressed a desire for a specific Return On Invested Capital (ROIC) metric in either the short or long-term incentive plans. Our discretion framework does include ROIC and therefore the Committee considers the performance alongside a range of other measures before either the senior annual Bonus Plan or PSP awards are approved. However, listening to this request we have now included ROIC as a specific underpin in our PSP. In addition, ROIC remains part of the discretion framework for our senior annual Bonus Plan.

Remuneration Report continued

Performance framework for 2023

Croda's strategy continues to focus on consistently delivering sustainable, profitable growth by providing innovative, sustainable solutions to our customers consistent with our Purpose, Smart science to improve lives™, and this is directly reflected in our performance measures and stretching targets.

For 2023, the senior annual Bonus Plan will continue to be largely based on an operating profit metric. In addition, an ESG measure with a weighting of 10% is being introduced as described above.

The PSP performance framework is unchanged in substance and will continue to include Earnings Per Share (EPS) growth (35% of the award), relative Total Shareholder Return (TSR) (35% of the award) and sustainability targets (30% of the award), within which 15% will be based on our innovation metric, New and Protected Products (NPP); those products that will drive our future growth. Innovating sustainably is core to Croda's success, and we continue to focus management on the delivery of this. The remaining 15% will be focused on selected KPIs aligned to the delivery of our 'Climate Positive' and 'People Positive' sustainability commitments.

We are making some changes to the bespoke peer group against which relative TSR is measured to better reflect the strategic focus of the business following our divestment. The NPP measure has been simplified and will now focus simply on growth in NPP over the performance period. Further details are contained on page 110.

Performance is always considered holistically; each year the Committee applies a Discretion Framework to satisfy itself that the outcome in terms of primary performance metrics has not been to the detriment of other measures of corporate performance.

Consideration of wider workforce and alignment of reward across the organisation

Our approach to workforce reward is an important part of Croda's philosophy. We are particularly sensitive at this time to the impact of the cost-of-living crisis on our wider workforce. One of the principles of Croda's culture is to drive 'One Croda', and therefore many of the remuneration structures that apply to the Executive Directors already also apply further in the global organisation. Highlights of our approach to workforce pay include:

- **Our commitment to the Global Living Wage** – In 2021 Croda established a Living Wage in each of the countries in which it operates and ensured that all employees receive this as a minimum. We are now working with the Fair Wage Network to gain accreditation for our work in this area and to ensure our progress stands up to external scrutiny.

- **Sharing success across the business via our Free Share Plan and other all-employee plans** – Launched in 2021, under the Free Share Plan all employees globally who are not eligible for the senior annual Bonus Plan are gifted Croda shares (or the cash equivalent) if the senior annual Bonus Plan pays out. In May 2022, all eligible employees (c.5,150 in total) were gifted 10 Croda shares (or the cash equivalent) which at the time of the award amounted to a value of £761.

  Around 81% of our UK workforce and 56% globally participate in share plans operated by the Company and therefore benefit from the rewards enjoyed by all shareholders.

- **Our CARE defined benefit pension** – This applies across our entire UK workforce and is a generous and inclusive benefit. Under the CARE pension scheme the Company bears all of the investment risk and the security for our workforce is an important part of our 'One Croda' culture. In 2022 we were due to implement planned increases to employee contributions but in light of the cost-of-living crisis these increases were not implemented. Croda now pays an average contribution of 28% of salary per employee to fund the scheme.

More recently and in direct response to the cost-of-living crisis initiatives have focused on:

- **Enhanced health and wellbeing benefits for all UK employees** – In response to the cost-of-living crisis and concerns about accessing health care we have extended private health care through BUPA to all our UK employees and their families and now offer three-year private medical assessments to all UK employees.

- **Cost-of-living actions across Croda businesses** – We have implemented a range of actions across the business to help address the cost-of-living crisis including one-off payments, improved benefits and mid-cycle annual increases. For example, in the US, we have given all employees a one-off $1,500 bonus, which has favoured employees on lower salaries. Elsewhere, at the beginning of 2022, we made an 'across the board' 5% increase for the entire UK workforce.

In line with our 'One Croda' culture, our senior leaders all share the same performance metrics for the senior annual Bonus Plan and PSP. Around 500 employees participate in the senior annual Bonus Plan and 70 of these are also in the PSP. We believe that this focuses our leadership on working together globally to deliver the best overall outcome for our customers and, in turn, our shareholders and other stakeholders.

Our policy review extended to a wider review of our management incentives, taking into account our strategic objective of a pure play Consumer Care and Life Sciences business. As a result of our wider review, bonus potential for other employees, who are members of bonus plans, will also be increased in 2023.

Workforce engagement

Through our regular Purpose and Sustainability Commitment (PSC) survey we ask employees about their views on a range of topics. As part of the March 2022 survey, employees were asked how they feel they are valued and rewarded at Croda and the findings of this were presented to the Remuneration Committee as part of the information considered for the policy review.

Overall employees felt valued by Croda and appreciated the work we have done to extend flexible working, however, there was concern about the fairness of the overall reward package.

In response, as described above, consistent with our proposals for Executive Directors, we have also increased the maximum annual bonus opportunity for employees. We have also stepped-up salary benchmarking locally to ensure we continue to provide a competitive package to our global workforce.

In addition, myself and other members of the Board meet regularly with employees to discuss a range of issues including reward and we have a dedicated email address where employees can email me directly about any questions or concerns, they may have in relation to their own or Executive reward.

Remuneration out-turn for 2022

2022 was a record year for Croda exceeding £2 billion of sales and £500 million of adjusted operating profit. This was driven by the strength of our operating model, which enabled continued recovery of unprecedented cost inflation, and the ongoing successful implementation of our strategy.

Consumer Care achieved record sales up 18% and saw expanded sales of our sustainable technologies, increased geographic coverage in fragrances and continued profit growth. The increasing depth and diversity of our Life Sciences portfolio delivered 19% sales growth with a strong result in Crop Protection, whilst Pharma built on an exceptional 2021 performance and is developing an extensive pipeline of non-COVID applications.

Bonusable Profit, which includes profit from our divested PTIC business but with the base year adjusted to ensure like-for-like comparison and adjustment for the lipid system sales for our principal COVID-19 vaccine contract, exceeded the outcome for 2021 and the maximum pay-out target. Reassuringly the maximum pay-out target would have been met even if PTIC profits had been excluded from the calculations. The Committee used the Discretion Framework to satisfy itself that this performance was robust and sustainable by reviewing underlying performance. The Committee determined that 100% of the senior annual Bonus Plan was payable.

Croda’s longer-term performance in profitable growth and TSR was also strong and reflected the long-term growth trajectory of the business. 2022 was the year in which PSP grants made in 2020 concluded their three-year period, and the Committee reviewed performance for the targets that were set at that time.

Over the period TSR performance was 45.4%, placing Croda in the top quartile against our bespoke comparator group with 100% of this part of the award vesting. Our strong profit performance led to EPS growth of 47.5% which resulted in a 100% vesting of this part of the award. EPS was adjusted for the divestment of the majority of the PTIC business. The outcome was not impacted by this adjustment.

NPP growth also met the stretching vesting target, growing by 2.24 times non-NPP sales over the period, and therefore full vesting will be achieved for this target, worth 20% of the overall award. 2020 was the first year in which we introduced sustainability targets both relating to our Climate Positive ambitions; including the development of decarbonisation roadmaps and scope 1 and 2 emissions reductions. Both targets were met, and vesting will be at maximum for these targets.

The Committee considered this, the EVA underpin, and a range of broader performance criteria using the Discretion Framework and concluded that the PSP awards were consistent with and reflective of overall financial performance over the time period. Therefore, after consideration of all factors, an overall PSP vesting of 100% of the total award was agreed.

Transition of Chief Financial Officer

Jez Maiden will retire as Group Finance Director of Croda in 2023 and will be succeeded by Louisa Burdett as Chief Financial Officer.

Louisa Burdett was appointed on a salary of £520,000 and will participate in both the senior annual Bonus Plan and PSP on the same basis as Jez Maiden. There was no sign-on bonus or buy-out.

Remuneration arrangements for Jez Maiden on his retirement were managed in line with the Remuneration Policy. As he was never a member of the Croda Pension Scheme no pension is payable. Further details are provided within this Report.

Salaries for 2023

For 2023 there will be a general increase for our UK employees of 7%. In addition a one-off supplement payment of £1,500 will be paid in two instalments in January and June 2023 to help address energy prices. The payment of a non-consolidated fixed amount has favoured employees on lower salaries. Overall, the budget for salary increases for all UK employees has increased by over 9%.

Recognising advice from our shareholders for restraint regarding Executive pay, our Executive Directors will receive an increase in salary of 4% and will not receive the one-off supplement. This increase will not apply to our newly appointed CFO who is not eligible to receive an increase until January 2024. Increases awarded to our Executive Committee are also below that of the UK workforce.

A review of the Chair fees was also undertaken and, reflecting similar principles to those applied to our Executive Directors whilst also recognising the continuing high time commitment, an increase of 4% was awarded.

Looking ahead

The proposed changes to our Remuneration Policy will be voted on by our shareholders at our 2023 AGM. As stated above we have listened to the views of our many shareholders through consultation and are hopeful they are able to support our proposals.

We remain committed to ensuring that our remuneration framework reflects the evolving needs of all of our stakeholders and the communities in which we operate.

Jacqueline Ferguson

Jacqui Ferguson, Remuneration Committee Chair

B. Remuneration at a glance

How we performed in 2022 – record sales and profit performance

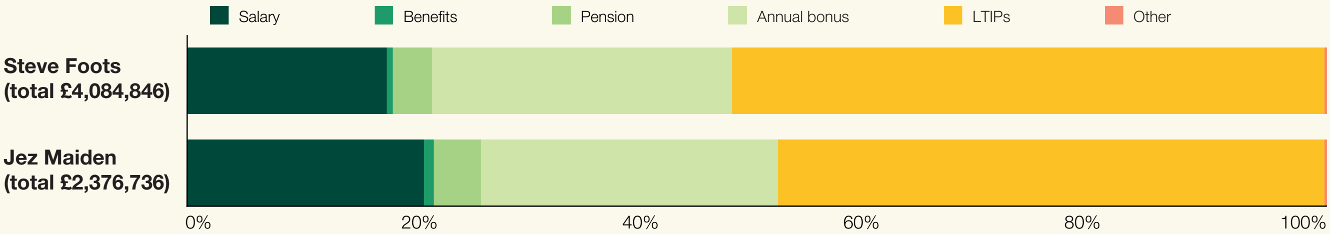
Adjusted operating profit
+9.9% to
£515.1m

Adjusted basic EPS
+8.8% to
272.0p

NPP (constant currency)
34.7%
of Group sales

Total Shareholder Return
45.4%
over the three-year PSP performance period (1 January 2020 to 31 December 2022)

Single figure remuneration:



Operation of our policy in 2022

Key component and timeline	Feature	Metrics and results	Group Chief Executive (CEO)	Group Finance Director (GFD)
Basic salary	Competitive package to attract and retain high calibre executives.	• Pay rise of 5% awarded to Executive Directors at the start of 2022. • General pay increase of 5% awarded to the wider UK workforce.	£716,457	£494,108
Annual bonus	Incentivise delivery of strategic plan, targets set in line with Group KPIs.	Bonusable Profit (see page 111 for definition of Bonusable Profit) Threshold: 2021 actual Maximum: 2021 actual plus 10% Actual: 2021 actual plus 11.7% **100% of maximum bonus paid**	£1,074,686	£617,635
Deferred element of bonus	Compulsory deferral of one third of bonus into shares with three-year holding period to align with long-term business performance.	N/A	Of which £358,229 is deferred	Of which £205,878 is deferred

PSP	Incentivise execution of the business strategy over the long-term measuring profit, shareholder value, innovation and sustainability.	Vesting of the 2020 PSP award (see below)	£2,124,893	£1,139,772

Vesting of the 2020 PSP award

	Threshold	Maximum	Actual	% payout
EPS[1] (35%)	5%	11%	15.8%	100%
TSR (35%)	Median	Upper Quartile (UQ)	94.4 percentile Above UQ	100%
NPP[2] (20%)	NPP sales growth to be at least twice non-NPP sales.		2.24x	100%
Sustainability metric 1 (5%)	Development of decarbonisation roadmaps[3], covering all Scope 1 and 2 emissions. The achievement of this target in full would be a 5% pay-out with a 2.5% pay-out for a better than 95% achievement.		All roadmaps completed	100%
Sustainability metric 2 (5%)	Measurable reductions in Scope 1 & 2 emissions. Target of 30,000 tonnes against adjusted 2018 baseline of 232,000 tonnes. Following the discovery of a calculation error the 2018 baseline was reduced to 208,328[4] tonnes, the target remained at 30,000 tonnes (making it harder to achieve). Achievement for target in full is 5% pay-out with a 2.5% pay-out for a better than 75% achievement.		39,335 tonnes	100%

EVA underpin – In relation to the EVA underpin which applied across the whole award, EVA in the final year of the performance period exceeded EVA in the year prior to the start of the performance period and therefore no adjustment was required.

Total payout – 100%

1. EPS growth p.a. is calculated on a simple average basis over the three-year period. The calculation of the EPS growth has been adjusted for the divestment of the majority of the PTIC business. The mechanics of the adjustments were independently recalculated by KPMG under agreed-upon procedures standard (ISRS 4400) (advice delivered to the Company and not constituting assurance or an opinion). The outcome was not impacted by this adjustment.
2. Subject to a minimum average of 3% growth per year and overall positive Group profit growth.
3. Decarbonisation Roadmap: A plan for a site, charting emissions reduction through for example, maximising use of renewable energy, novel process technologies and energy efficiency measures. The quality assessment process was validated externally by Accenture who also performed sampling to validate the outcome assessments.
4. The revised 2018 baseline has been independently verified by Carbon Smart, as has the breakdown of emissions per site. Adjustments have been made for acquisitions and the divestment of our PTIC business.

Pension	Pension benefits are either a capped career average defined benefit pension plan with a cash supplement above the cap, or a cash supplement. For 2022, cash allowance of up to 20% of salary, in line with the UK workforce.	N/A	£143,291	£98,822
Shareholding requirements	Share ownership guideline to ensure material personal stake in business.	• CEO – 225% of salary • GFD – 175% of salary	>225% of salary	>175% of salary

The single figure remuneration also includes all benefits. For a full breakdown of the Executive Directors' remuneration for 2022 please see page 130.

C. Proposed Remuneration Policy

1) Overview of the new Remuneration Policy including Executive Directors' remuneration for the year ending 31 December 2023

Our proposed Remuneration Policy will be presented to shareholders at the 2023 AGM and is intended to operate for three years until the AGM in 2026.

In reviewing the Policy, the Committee has considered the following principal objectives to:

- Achieve the closest possible alignment with the Company's evolving strategy to become a pure play Consumer Care and Life Sciences business;
- Support the Company's ambition to be a purpose led organisation focused on Smart science to improve lives™ and an industry leader in sustainability;
- Ensure that business performance is appropriately measured and rewarded and that the scale of reward is proportionate;
- Make certain that the Policy properly reflects the various interests of all our stakeholders in its structure and metrics;
- Ensure that the Policy is fair and competitive and that it also considers reward more broadly in the organisation; and
- Disclose the Policy in an open and transparent way.

The evolution in the Group's strategy, following the divestment of the PTIC businesses, and the increased size and complexity of the business was a key focus for the Committee when considering changes to the Remuneration Policy. In advance of finalising the proposals an extensive shareholder consultation exercise was undertaken, as described in the letter from the Remuneration Committee Chair. Feedback received as part of this process resulted in modifications to proposals.

The Committee's method of operation will be flexible and dynamic taking account of external changes and business performance.

Main changes to the Remuneration Policy

It is proposed to make changes to the Policy and application of the Policy in five key areas:

1. Against the background of strong business performance, increased complexity and evolving talent needs, we are proposing an increase to the maximum annual bonus of 25% of base salary and an increase to the maximum PSP also of 25% of base salary.
2. Increasing shareholding guidelines in line with the increased PSP opportunity and extending post-employment shareholding requirements to apply in full over the two years, rather than on a tapered basis during this period.
3. Increasing the maximum annual bonus headroom to 200% of base salary to provide some additional flexibility but only in exceptional circumstances of recruitment.
4. Introduction of an ESG metric into the senior annual Bonus Plan to align with our strategy to be industry leaders in sustainability.
5. Introduction of additional flexibility into the senior annual Bonus Plan target setting framework taking into account the potential for increased volatility in profits which may arise from time to time (e.g. profit from our lipid system sales for our principal COVID-19 vaccine contract).

The remainder of this section provides the context and details to these changes.

1. For both Executive Directors, an increase to the maximum annual bonus of 25% of base salary and an increase to the maximum PSP of 25% of base salary.

Over the last three years Croda's market capitalisation has increased from c.£6.6bn to c.£9.2bn, creating c.£2.6bn of value for shareholders, and we are now a FTSE 50 company. We have also become an increasingly complex and international business. Against that background we are proposing increases to our incentives.

While our approach to remuneration has never been driven by benchmarking, our view is that this proposed increase in incentive opportunity is aligned to shareholder interests to support the next phase of the Group's strategic development.

		Current	Proposed
Annual bonus	**CEO**	150%	175%
	CFO	125%	150%
PSP	**CEO**	225%	250%
	CFO	175%	200%

The benchmarking, undertaken as part of the Remuneration Policy review process, suggested that it was the annual bonus opportunity in particular which has fallen significantly below market for a company of our size and there was case for an increase to annual bonus opportunity. However, we were keen to continue with an incentive structure heavily weighted to the long-term. For this reason, we are proposing that our annual bonus is increased relatively modestly (+25% of base salary), but that PSP is also increased (+25% of base salary). The resultant incentive levels continue to be relatively conservative against the benchmarks.

2. Increasing shareholding guidelines in line with the increased PSP opportunity and extending post-employment shareholding requirements to apply in full over the two years, rather than on a tapered basis during this period.

Shareholding guidelines will continue to be set in line with 'normal' PSP awards; in line with the proposal above, levels for 2023 would increase:

	Current shareholding requirements	New shareholding requirements
CEO	225%	250%
CFO	175%	200%

We also propose to extend the **post-employment shareholding requirements**, requiring Executive Directors to retain 100% of the shareholding guideline for two years after leaving the Company.

3. Increasing the maximum annual bonus headroom to 200% of base salary to provide some additional flexibility but only in exceptional circumstances of recruitment.

We are proposing additional annual bonus headroom (maximum 200% of salary) in the Policy which would only be permitted to be used in exceptional circumstances of recruitment.

4. Introduction of an Environmental, Social, and Governance (ESG) metric into the senior annual Bonus Plan to align with our strategy to be industry leaders in sustainability.

Currently our senior annual Bonus Plan is based 100% on profit performance with no bonus payable until the previous year's profit is exceeded. Prior to the Remuneration Policy review we had received feedback from some shareholders that they would like to see additional measures introduced.

Following our review, we concluded that, given the increased complexity of the business, as well as the proposed increase in annual bonus levels, it would be appropriate to introduce another measure in order to better reflect overall performance for all our stakeholders.

We are therefore introducing an ESG measure into the senior annual Bonus Plan performance framework weighted at 10%. We anticipate that the ESG measure will vary each year adapting to our evolving priorities in this area. Our goal is to ensure that it has impact across the organisation. Our senior annual Bonus Plan cascades through our organisation (c.500 participants) and therefore we see this as an opportunity to signal and drive forward ESG priorities. For example, in future years we may include a target related to our climate priorities where we see opportunities for a target to drive forward a specific priority or initiative in a particular year.

In 2023, however, we will focus on safety which is identified as a current strategic priority taking into account our evolving capacity expansion. The proposed safety measure for 2023 is in relation to the whole population of eligible employees, and the extent to which the population:

1. Completes one specifically defined SHE leadership behaviour objective.
2. Completes specified face to face (or virtual) safety training.
3. Completes and documents at least one safety focused visit and conversation to demonstrate safety is a value through organisation engagement and risk management.

Payment schedule to be 100% pay out if 98% of eligible employees complete all three tasks and 50% pay out if 95% of eligible employees complete all three tasks. For clarity this is not an individual measure – if less than 95% of eligible employees complete the three tasks no payment to any employee will be made. In addition, we have also strengthened the safety underpin which applies to the senior annual Bonus Plan. The strengthened safety underpin requires the Committee to actively consider a number factors, including but not limited to compliance with the requirements or minimum standards set out in the Croda SHE Manual, any incidents resulting in a fatality, serious injury or material environmental impact, and progress during the year on SHE focus areas.

5. Introduction of additional flexibility into the senior annual Bonus Plan target setting framework

Our senior annual Bonus Plan profit targets have been set using a consistent and distinctive framework, focused on year-on-year sustainable growth rather than a range around the annual budget, and we intend to continue with this approach. However, we propose to introduce additional flexibility into the target setting framework taking into account the potential for increased volatility in profits which may arise from time to time (e.g. profit from our lipid system sales for our principal COVID-19 vaccine contract) to avoid disincentivising over performance. In normal circumstances, we will continue with an approach of setting bonus targets based on pre-determined growth percentages on prior year performance. However, in circumstances where the prior year profit is considered to be unusually high, bonus targets for the following year will not necessarily be set based on a simple formula of growth on prior year. Nevertheless, in all cases, targets will be set at the beginning of the year, in line with normal practice.

Other changes in implementation of the PSP framework

No substantive changes are proposed to our PSP framework, which will continue to be based on EPS, relative TSR and sustainability performance. We are however proposing a number of additional modifications:

ROIC underpin

A number of shareholders expressed a desire for a specific ROIC metric in either the short or long-term incentive plans. Our Discretion Framework does include ROIC, but taking onboard this feedback, going forward we have included ROIC as a specific underpin in our PSP. This will replace the previous EVA underpin.

> *Awards will be subject to a ROIC underpin such that vesting is subject to satisfactory ROIC performance over the three-year performance period, as determined by the Committee. In determining whether the underpin has been met, the Committee will consider a range of factors including, but not limited to, the intended time horizons for returns on capital deployed, and the achievement of Croda's long-term ROIC objective which is currently set at 2x cost of capital.*

ROIC will also remain part of the Discretion Framework for the senior annual Bonus Plan.

TSR comparator group

We have reviewed the bespoke comparator group against which relative TSR is measured to better reflect the strategic focus of the business following the divestment of the PTIC business.

The new comparator group more closely reflects Croda's pure play Consumer Care and Life Sciences ambitions and consists of Akzo Nobel, Ashland, Avantor, BASF, Catalent, Chr. Hansen, Clariant, Elementis, Evonik, Givaudan, IFF, Johnson Matthey, Kerry, DSM, Lonza, Merck, Novozymes, Solvay, Symrise, Synthomer, Tate & Lyle and Victrex.

NPP measure

Innovating sustainably is core to Croda's success, and therefore our established measure of innovation, New & Protected Products (NPP), will be retained within the PSP. It is however proposed that this measure is modified so that it is based on growth in NPP, rather than growth relative to non-NPP sales:

Current NPP metric	Proposed NPP metric
NPP sales to grow at twice the rate of non-NPP, subject to overall positive Group profit growth and a minimum average of 3% NPP growth per year (25% vesting), with payments being made on a sliding scale up to 5% growth per year (maximum vesting).	Subject to overall positive Group profit growth and a minimum average of 3% NPP growth per year (25% vesting), with payments being made on a sliding scale up to 7% growth per year (maximum vesting).

This modification has been made in order to simplify the NPP measure, reflect the importance of our non-NPP sales, especially those relating to sustainable products, and to reflect that the current relative measure could penalise management for a strong performance in non-NPP sales.

Other elements of PSP

EPS measure

Our EPS growth target will remain at 5% to 11% average growth over a three-year period. This target aligns to our ambitious strategic plan of consistent organic sales and margin growth and has long-term inflation assumptions built in. The Remuneration Committee retains discretion to adjust for the impact of acquisitions. We target mid single digit organic growth in Consumer Care and high single digit growth in Life Sciences, with underlying growth in Industrial Specialties at GDP levels but offset by a gradual exit from some supply agreements. With current margins maintained this would deliver an EPS growth of broadly 5%. With margin improvement targeted through better business mix and innovation, this drives EPS growth higher. EPS growth of 11% would represent over performance of our strategic plan. Overall, and in this context, the Committee considered that the targets remained proportional and stretching.

Sustainability measures

As an industry leader in sustainability, we will continue with sustainability measures for our 2023 awards. For this year measures will be aligned to our Climate and People Positive strategy:

- Climate Positive – Scope 3 emissions make up more than 85% of Croda's corporate emissions inventory and have the greatest impact on the carbon footprint we pass on to customers through our ingredients. Therefore to achieve the required emission reductions, it is imperative that we move to target reductions to our Scope 3 emissions. It is for this reason that our measure this year is strongly aligned to the specific actions which will support reducing our upstream Scope 3 emissions. Our target is based on (i) completion of net zero roadmaps to 2050 for technology platforms covering >90% of Scope 1, 2 and upstream Scope 3 emissions and (ii) completion of all actions arising from roadmaps in the period to end 2025.
- People Positive – a target aimed at improving Croda's Purpose and Sustainability Commitment (PSC) score, a measure of Croda's intentional actions to create a positive environment in which colleagues can successfully create sustainable innovation.

Summary of Executive Directors' remuneration for the year ending 31 December 2023

Key component	Implementation in 2023
Basic salary	Executive Directors' base salaries were reviewed during the final quarter of the financial year ended 31 December 2022. Salaries for 2023 are as follows:

	Salary at Jan 2023	Salary at Jan 2022	% Increase
Steve Foots	£745,116	£716,457	4%
Louisa Burdett	£520,000	N/A	N/A
Jez Maiden	£513,873	£494,108	4%

Commentary

- For 2023 there will be a general increase for our UK employees of 7%. In addition, a one-off supplement payment of £1,500 will be paid in two instalments in January and June 2023 to help address energy prices. The payment of a non-consolidated fixed amount has meant our employees on lower salaries have received a greater proportional benefit. Overall, the budget for cost-of-living increases for all UK employees has increased by over 9%.
- Recognising advice from our shareholders for restraint with regard to Executive pay, our Executive Directors have received an increase in salary of 4%. Increases awarded to our Executive Committee are also below that of the UK workforce.

Pension	20% of salary as pension supplement aligned to UK workforce.
Other benefits	Other benefits such as company cars or car allowances, fuel and travel allowances and health benefits are made available to Executive Directors.

Performance-related Annual Bonus Plan

Steve Foots 175% of salary **Louisa Burdett 150% of salary** **Jez Maiden* 150% of salary**

The targets for the awards are set out below:

Performance measure (weighting)	Threshold	Maximum
Bonusable Profit** (90%)	Equivalent to 2022 actual	2022 actual plus 10%
ESG metric (10%)	The proposed safety measure for 2023 is in relation to the whole population of eligible employees, and the extent to which the population: 1. Completes one specifically defined SHE leadership behaviour objective. 2. Completes specified face to face (or virtual) safety training. 3. Completes and documents one safety focused visit and conversation to demonstrate safety is a value through organisation engagement and risk management. Payment schedule to be 100% pay-out if 98% of eligible employees complete all three tasks and 50% pay-out if 95% of eligible employees complete all three tasks. For clarity this is not an individual measure – if less than 95% of eligible employees complete the three tasks no payment to any employee will be made.	

* In line with the bonus plan rules Jez Maiden will receive a pro-rated bonus award.

** Bonusable Profit is the growth in underlying profitability (defined for bonus purposes as Group EBITDA for continuing operations before exceptional items and any charges or credits under IFRS 2 Share-based Payments) less a notional interest charge on working capital employed during the year. Target is measured after providing for the cost of bonuses on a constant currency basis. For 2023 awards, and consistent with last year, the calculation will be adjusted for the divestment of the majority of our PTIC business and the lipid system sales for our principal COVID-19 vaccine contract.

Commentary

- Maximum award levels increased by 25ppts from last year.
- Introduction of an ESG metric into the senior annual Bonus Plan performance framework weighted at 10% alongside a strengthened safety underpin. The ESG metric will vary each year adapting to our evolving priorities in this area.
- When determining bonus outcomes, the Committee applies the Discretion Framework which includes a range of factors, see page 124.
- The Committee remains comfortable that the structure of the senior annual Bonus Plan does not encourage inappropriate risk-taking and that the mandatory deferral of one third of bonus into shares provides clear alignment with shareholders and fosters a longer-term link between annual performance and reward.
- Malus and clawback provisions apply.
- One third of any bonus paid will be deferred into shares for a three-year period.
- Full retrospective disclosure of targets and actual performance against these will be made in next year's Annual Report on Remuneration.
- The Committee considers the targets set for 2023 to be at least as demanding as in previous years and were set after taking due account of the Company's commercial circumstances and inflationary expectations.

Performance Share Plan

Steve Foots 250% of salary	Louisa Burdett 200% of salary

The targets for the awards are set out below:

Performance measure (weighting)	Threshold vesting	Maximum vesting
EPS[1] (35%)	5% p.a.	11% p.a.
TSR[2] (35%)	Median	Upper quartile

NPP (15%) Subject to overall positive Group profit growth and a minimum average of 3% NPP growth per year (25% vesting), with payments being made on a sliding scale up to 7% growth per year (maximum vesting).

Sustainability metrics (15%)

Climate Positive (7.5%) – completion of net zero roadmaps to 2050 for technology platforms covering 90% of our Scope 1, 2 and upstream Scope 3 emissions. In addition:

- All actions arising from the sector 2030 decarbonisation roadmap work with completion dates aligned with the end of 2025 to be completed, and;
- Croda to have submitted and received formal approval from SBTi for its corporate net zero target, so meeting the strict external criteria from SBTi, considered industry best practice.

Achievement of the above and roadmaps completed covering 90% of Croda's GHG emissions would result in maximum vesting.

Achievement of the above and roadmaps completed covering 75% of Croda's GHG emissions would result in a 50% vesting, with no vesting below this.

People Positive (7.5%) – a target aimed at improving Croda's Purpose and Sustainability Commitment (PSC) score, a measure of Croda's intentional actions to create a positive environment in which colleagues can successfully create sustainable innovation. Over the three-year performance period the target is an increase in the PSC score by 8 percentage points over the 2022 baseline[3], to achieve a Croda Employee Satisfaction (ESAT) score of 4.0 (Good). This will be underpinned by a continued high response rate by employees, set at 65% of global headcount[4]. Awards will be paid in the following defined ranges:

- Increase PSC score by 8ppts, and 65% response for max vesting
- Increase PSC score by 6ppts, and 65% response for 75% vesting
- Increase PSC score by 4ppts, and 65% response for 50% vesting
- Increase PSC score by 2ppts, and 65% response for 25% vesting, with no vesting below this.

Awards will be subject to a ROIC underpin such that vesting is subject to satisfactory ROIC performance over the three-year performance period, as determined by the Committee. In determining whether the underpin has been met, the Committee will consider a range of factors including, but not limited to, the intended time horizons for returns on capital deployed, and the achievement of Croda's long-term ROIC objective which is currently set at 2x cost of capital.

1. EPS growth p.a. is calculated on a simple average basis over the three-year period and therefore growth of 33% or more over three years is required for maximum vesting. The calculation of base EPS for EPS growth has been adjusted for the divestment of the majority of the PTIC business.
2. Updated TSR Group: Akzo Nobel, Ashland, Avantor, BASF, Catalent, Chr. Hansen, Clariant, Elementis, Evonik, Givaudan, IFF, Johnson Matthey, Kerry, DSM, Lonza, Merck, Novozymes, Solvay, Symrise, Synthomer, Tate & Lyle and Victrex
3. The PSC score uses a 5 point scoring methodology. Croda's PSC score for 2022 was 68% or 3.5 with an average participation rate of 77%. An increase in the PSC score of 8ppts would move the score to 75% or 4.
4. The number of responses to the survey also matters, and therefore, an underpin for vesting to occur is set at 65% of global headcount having responded to the survey. Global headcount to be calculated based on the in-quarter figures at the point that a survey is first deployed and should aim to include any new acquisitions, with discretion given for initial integration period into organisation defined as 12 months.

Commentary

- Maximum award levels have increased by 25ppts from last year.
- Jez Maiden will not receive an award in 2023 due to his planned retirement.
- ROIC underpin replaces the EVA underpin.
- Performance period 1 January 2023 to 31 December 2025.
- An additional two-year holding period will apply for any shares vesting.
- No change to the balance of sustainability metrics from last year. NPP and sustainability targets remain equally weighted at 15% of the total PSP. Sustainability targets aligned to key 2030 sustainability ambitions.
- When assessing outcomes, the Committee applies the Discretion Framework which considers, for example, the management of EVA and ROIC, health and safety and sales growth and may adjust awards if it considers appropriate.
- Malus and clawback provisions apply.

2) Remuneration Policy for shareholder approval (proposed Remuneration Policy in full)

This section sets out our Remuneration Policy for 2023 to 2026 which will be subject to shareholder approval at the 2023 Annual General Meeting (AGM).

Croda's proposed Remuneration Policy will be presented to shareholders at the Company's 2023 AGM on 26 April 2023 and if approved will take effect from the date of the AGM. It would be intended to operate until its expiration at the Company's 2026 AGM.

The Policy was developed over the course of 2022 and early 2023. The Committee undertook a thorough review of arrangements with a particular focus on alignment to Croda's forward strategy and aspirations. Input was received from the Chair and management while ensuring that conflicts of interest were suitably mitigated. The Committee also considered carefully corporate governance developments. Input was provided by the Committee's appointed independent advisers throughout the process.

Extensive shareholder consultation was undertaken during the second half of the year in good time for shareholder input to feed into the finalisation of proposals in early 2023.

The main changes to the Policy, as detailed on pages 108 & 109, are:

- Increased incentives in both normal PSP awards and the senior annual Bonus Plan for Executive Directors, an increase to the maximum annual bonus of 25% of base salary and an increase to the maximum PSP of 25% of base salary.
- Increased shareholding guidelines in line with the increased PSP opportunity.
- Extension of post-employment shareholding requirements to apply in full over the two years, rather than on a tapered basis during this period.
- Increased the maximum annual bonus headroom to 200% of base salary to provide some additional flexibility but only in exceptional circumstances of recruitment.
- Changes to facilitate the introduction of sustainability metrics into the senior annual Bonus Plan.

Remuneration Policy table

The table below sets out the main components of Croda's Remuneration Policy for Executive Directors:

Operation	Maximum opportunity	Framework used to assess performance and for the recovery of sums paid
Basic salary – to assist in the recruitment and retention of high-calibre Executives		
Normally reviewed annually with increases effective from 1 January. Base salaries will be set by the Committee, considering: • The performance and experience of the individual concerned • Any change in scope, role and/or responsibilities • Pay and employment conditions elsewhere in the Group • Rates of inflation and market-wide wage increases across international locations • The geographical location of the Executive Director • Rates of pay in relevant sector and pan-sector companies of a comparable size and complexity.	• Salaries may be increased each year in percentage of salary terms. • The Committee will be guided by the salary increase budget set in each region and across the workforce generally. • Increases beyond those linked to the region of the Executive Director or the workforce as a whole (in percentage of salary terms) may be awarded by the Committee at its discretion. For example, where there is a change in responsibility, experience or a significant increase in the scale of the role and/or size, value or complexity of the Group. • The Committee retains the flexibility to set the salary of a new hire at a discount to the market level initially, and to implement a series of planned increases in subsequent years, in order to bring the salary to the desired positioning, subject to individual performance.	• The Committee considers individual salaries taking due account of the relevant factors set out in this Policy, which includes individual performance.

Operation	Maximum opportunity	Framework used to assess performance and for the recovery of sums paid
Benefits – to provide competitive benefits to act as a retention mechanism and reward service		
The Group typically provides the following benefits: • Company car (or cash allowance) • Private fuel allowance • Private health insurance, life assurance and other insured benefits • Other ancillary benefits, including travel reimbursement, relocation expenses/arrangements (including tax thereon) as required. Additional benefits might be provided from time to time (for example in circumstances where an Executive Director is deployed to, or recruited from overseas). The Committee will consider whether the payment of any additional benefits is appropriate and proportionate when determining whether they are paid.	• The cost of benefits is not pre-determined and may vary from year to year based on the cost to the Group.	None.
Performance-related senior annual Bonus Plan – to incentivise and reward delivery of the Group's key annual objectives and to contribute to longer-term alignment with shareholders		
The senior annual Bonus Plan provides for payment of an annual bonus to Executive Directors and other senior employees of the Group, subject to certain performance conditions. Normally one third of any bonus payable is compulsorily deferred into shares for three years through the Deferred Bonus Share Plan (DBSP). The Committee has the discretion to permit DBSP awards to benefit from dividends on shares that vest. The balance of the bonus is paid in cash.	Group Chief Executive: 175% of salary. Other Executive Director: 150% of salary. In exceptional circumstances, and only in connection with recruitment, annual awards may be made up to 200% of salary. This maximum does not apply to the incumbent Executive Directors at the time the Policy is approved.	• The majority of the bonus will typically be based on challenging financial targets set in line with the Group's KPIs (for example profit growth targets). • For a minority of the bonus, targets related to other Group measures, such as sustainability, may be included where this is considered appropriate by the Committee. • For a profit measure, bonus normally starts to accrue once the threshold target is met, from 0% payable rising on a graduated scale to 100% for outperformance. Were an additional financial KPI metric to be introduced, the amount payable for threshold performance would not exceed 25% of maximum. • In relation to any sustainability measure, the structure of the target will vary based on the nature of the target set. • The Committee applies a Discretion Framework, which includes health, safety and environmental performance, when determining the actual overall level of individual bonus payments and it may adjust the bonus awards (including potentially reducing to zero) if it considers it appropriate to do so. • Bonuses paid are subject to provisions that enable the Committee to recover value overpaid through the withholding of variable pay previously earned or granted (malus) or through requesting a payment from an individual (clawback) in the event of a misstatement of results, an error in assessing the performance conditions, serious misconduct, serious reputational damage or material corporate failure. The provisions will operate for a three-year period following the date on which the bonus is paid.

Operation	Maximum opportunity	Framework used to assess performance and for the recovery of sums paid
Performance Share Plan (PSP) – to incentivise and reward the execution of business strategy over the longer term and to reward sustained growth in profit and shareholder value		
The PSP provides for awards of free shares (i.e., either conditional shares or nil-cost options) normally made annually which vest after three years subject to continued service and the achievement of challenging performance conditions. Shares are subject to a two-year post-vesting holding period. The Committee has the discretion to permit awards to benefit from the dividends paid on shares that vest.	Normal maximum opportunity of: • Group Chief Executive: 250% of salary. • Other Executive Director: 200% of salary. In exceptional circumstances (e.g. recruitment), awards may be granted up to 300% of salary (e.g. to compensate for value forfeited from a previous employer).	• Granted subject to a blend of challenging financial (e.g. EPS), shareholder return (e.g. relative TSR) and strategic targets (e.g. sustainability). The performance targets may also include an additional underpin (e.g. a ROIC underpin). • Targets will normally be tested over three years. • In relation to financial targets (e.g. EPS growth and TSR) 25% of awards subject to such targets will vest for threshold performance with a graduated scale operating through to full vesting for equalling, or exceeding the maximum performance targets (no awards vest for performance below threshold). In relation to strategic targets or underpin targets, the structure of the target will vary based on the nature of target set (e.g. for milestone strategic targets it may not always be practicable to set such targets using a graduated scale and so vesting may take place in full for strategic targets if the criteria are met in full). • Vesting is also dependent on application of the Discretion Framework, including satisfactory underlying financial performance of the Group over the performance period, and the Committee may adjust outcomes (including potentially reducing to zero) if it considers it appropriate to do so. • There are also provisions that enable the Committee to recover value overpaid through the withholding of variable pay previously earned or granted (malus) or through requesting a payment from an individual (clawback) in the event of a misstatement of results, an error in assessing the performance conditions, serious misconduct, serious reputational damage or material corporate failure. The provisions will operate for a three-year period following the date on which the PSP awards vest.

Operation	Maximum opportunity	Framework used to assess performance and for the recovery of sums paid
All-employee share plans – to encourage retention and long-term shareholding in the Company and to provide all employees with the opportunity to become shareholders in the Company on similar terms		
Periodic invitations are made to participate in the Group's Sharesave Scheme and Share Incentive Plan. Shares acquired through these arrangements have significant tax benefits in the UK subject to satisfying certain HMRC requirements. The plans can only operate on an all-employee basis. The plans operate on similar terms but on a non-tax favoured basis outside the UK as appropriate. In the event that Croda were to introduce an all-employee plan similar in nature to the current Sharesave and Share Incentive Plan, or where an Executive Director is located overseas, the Committee retains the discretion to allow Executive Directors to participate in all-employee share plans on the same basis as other employees.	• In relation to HMRC plans (or equivalent) the maximum participation level is as per HMRC limits. • For any other all-employee plan the maximum opportunity available to Executive Directors will be equivalent to the maximum applying to all employees.	• There are no post-grant targets currently applicable to the Group's Sharesave and Share Incentive Plan.
Pension – to provide competitive long-term retirement benefits and to act as a retention mechanism and reward service		
Pension benefits are typically provided either through (i) participation in the UK's defined benefit pension plan with a cash supplement provided above any pension salary cap; or (ii) a cash supplement provided in lieu of pension. In the event an Executive Director is located overseas, the Committee retains the discretion to offer pension benefits in line with local practice. Only basic salary is pensionable.	• In line with current pension benefits provided to all UK employees, career average revalued earnings scheme (CARE) with a maximum 1/60th accrual up to a capped salary plus cash allowance of 20% of salary above the cap; or cash allowance of 20% of salary. • Pension benefits for an overseas Executive Director would be aligned with workforce rates.	None.

Legacy arrangements

For the current CEO, and in line with other employees, there is a legacy capped defined benefit pension scheme. While there are no future accruals, the arrangement remains inflation-linked.

Senior annual Bonus Plan and Long-Term Incentive Policy

The Committee will operate the senior annual Bonus Plan, DBSP, PSP and all-employee plans according to their respective rules and in accordance with the Listing Rules and HMRC rules where relevant. The Committee retains discretion, consistent with market practice, in a number of regards to the operation and administration of these plans. These include the following:

- Who participates in the plans
- The timing of grant of award and/or payment
- The size of an award and/or payment
- The determination of vesting
- Dealing with a change of control (e.g. the timing and basis of testing performance targets), restructuring, or other corporate event
- Determination of a good/bad leaver for incentive plan purposes based on the rules of each plan and the appropriate treatment chosen
- Adjustments required in certain circumstances (e.g. rights issues, corporate restructuring and special dividends)
- The annual review of performance conditions for the senior annual Bonus Plan and PSP
- For DBSP, the extension of the length of the deferral period.

All discretions available under share plan rules will be available under this Policy, except where explicitly limited under this Policy.

The Committee retains the ability to adjust the targets and/or set different measures and alter weightings for the senior annual Bonus Plan and for the PSP if events occur (e.g. material divestment of a Group business or changes to accounting standards) which cause it to determine that an adjustment or amendment is appropriate so that the conditions achieve their original purpose.

The Committee may make minor amendments to the Remuneration Policy to aid its operation or implementation without seeking shareholder approvals (e.g. for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation).

The Committee reserves the right to make any remuneration payments and/or payments for loss of office (including exercising any discretions available to it in connection with such payments) notwithstanding that they are not in line with the policy set out above where the terms of the payment were agreed (i) before the 2014 AGM (the date the Company's first shareholder-approved Directors' Remuneration Policy came into effect); (ii) before this Policy came into effect, provided that the terms of the payment were consistent with the shareholder-approved Directors' Remuneration Policy in force at the time they were agreed; or (iii) at a time when the relevant individual was not a Director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a Director of the Company. For these purposes 'payments' includes the Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are 'agreed' at the time the award is granted.

Choice of performance measures and approach to target setting

Under the senior annual Bonus Plan, an underlying profit-based objective such as profit growth will be used as the primary performance metric. Such a measure will be used as it aligns to growth in underlying profitability of the Group. The current profit-based measure also incentivises the efficient use of working capital. Sustainability metrics align with our strategy to be industry leaders in sustainability. Other metrics may be used in the future where it is considered that they provide clear alignment with the evolving strategy of the Group.

In terms of long-term performance targets, PSP awards vest subject to:

- financial targets (e.g. EPS growth) that are informed by the Group's long-term financial ambitions (e.g. long-term targeted earnings growth);
- shareholder return targets (e.g. relative TSR) which provide clear alignment of interests between shareholders and Executives; and
- strategic targets (e.g. New and Protected Products (NPP) and sustainability targets) that align to our long-term strategic ambitions (e.g. commitment to being sustainability leaders, and to grow through innovation).

The Committee retains the discretion to adjust both the measures and weightings (including to 0%) for each PSP award, subject to the broad framework in the Policy table above.

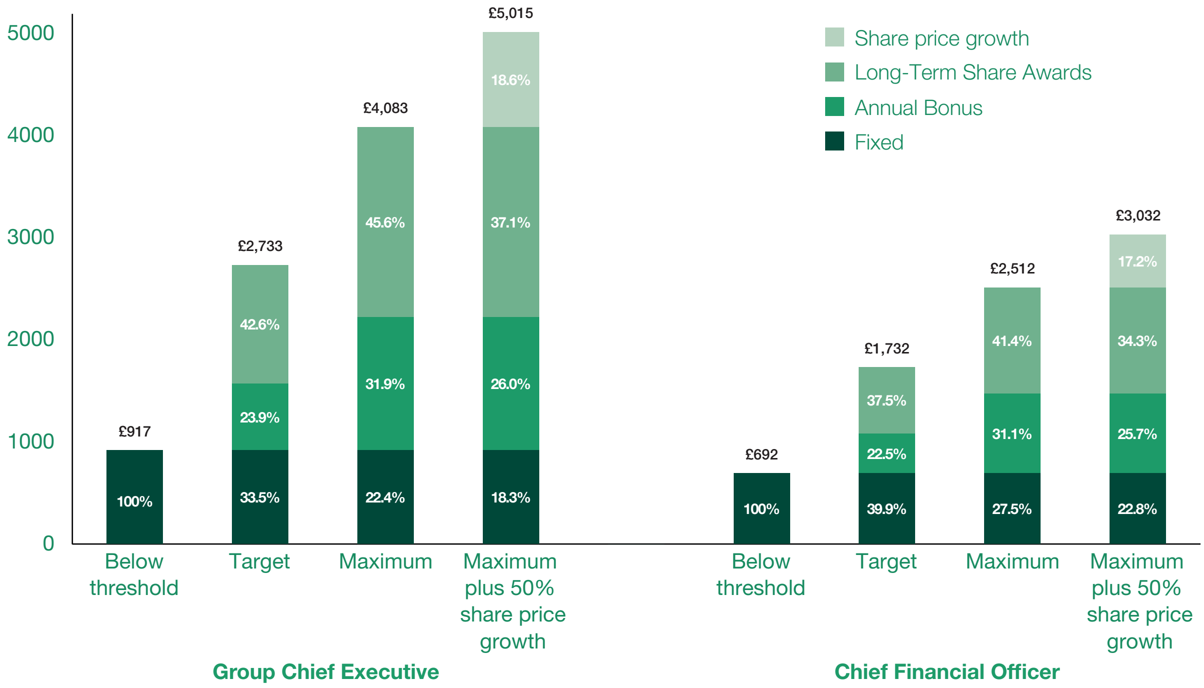
Financial and shareholder return targets (e.g. profit growth for the senior annual Bonus Plan and EPS growth and relative TSR for the PSP) are set based on sliding scales that take account of internal planning and external market expectations for the Group. In relation to strategic targets or underpin targets, the structure of the target will vary based on the nature of the target set. Targets and underpins may be set which provide for Committee judgement in assessing the extent to which they have been met.

In addition, prior to the determination of final outcomes, the Committee will apply its Discretion Framework to enhance the rigour and consistency of any payments and to ensure they truly align to overall Group performance and the wider stakeholder experience. While the Committee anticipates that any such discretion would normally result in a reduction, the Committee reserves the right to make an upwards adjustment if considered appropriate.

Only modest rewards are available for delivering threshold performance levels with maximum rewards requiring substantial out-performance of the challenging plans approved at the start of each year. The Committee may reduce (but not increase) the percentage of an award that is capable of vesting for threshold performance set out in the Remuneration Policy table.

Remuneration Report continued

Remuneration scenarios for Executive Directors



Assumptions:

- **Below threshold** = fixed pay only (base salary, benefits and pension)
- **On-target** = 50% payable of the 2023 annual bonus and 62.5% vesting of the 2023 PSP awards
- **Maximum** = 100% payable of the 2023 annual bonus, 100% vesting of the 2023 PSP awards
- **Maximum plus 50% share price growth** = as per maximum but including 50% share price growth of the PSP award

Salary levels (on which elements of the package are calculated) are based on those applying on 1 January 2023. The value of taxable benefits is based on an estimate of the cost of supplying those benefits for the year ended 31 December 2023. Pension is 20% of salary. The Executive Directors can participate in the all-employee share plans on the same basis as other employees. The value that may be received from participating in these schemes has been excluded from the graph above.

Recruitment and Promotion Policy

For Executive Director recruitment and/or promotion situations, the Committee will follow the guidelines below:

Remuneration element	Policy
Base salary	Base salary levels will be set in accordance with the Group's Remuneration Policy, taking into account the experience and calibre of the individual. The Committee retains the flexibility to set the salary of a new hire at a discount to the market level initially, and to implement a series of planned increases in subsequent years, in order to bring the salary to the desired positioning, subject to the individual's performance. Above market salaries may also be offered if the experience and calibre of the candidate is considered to justify such an approach being taken by the Committee.
Benefits	Benefits in accordance with the Remuneration Policy table. In addition, where necessary, the Committee may approve the payment of additional benefits to facilitate recruitment (e.g. relocation expenses).
Pension	Pension in accordance with the current policy. For an internal promotion, any legacy defined benefit pension arrangements would be considered on a case by case basis.
Annual bonus	The annual bonus would operate in accordance with the current policy, with a maximum opportunity no greater than the 200% of salary exceptional limit set out in the Policy table. For the first year the annual bonus would be pro-rated for the period of employment as appropriate.
Long-term incentives	Share awards will be granted in accordance with the current policy in terms of maximum opportunity and performance targets. An award may be made shortly after an appointment (subject to the Company not being in a prohibited period). For an internal hire, existing awards would continue over their original vesting period and remain subject to their terms as at the date of grant.
Buy-out awards	In the case of an external hire it may be necessary to buy-out incentive pay, benefit or other contractual arrangements (including in relation to the forfeiture of such amounts on leaving the previous employer). Any such buy-out would be provided for taking into account the form (cash or shares), timing and performance conditions of the remuneration being forfeited. Replacement share awards, if used, will be granted using the Company's existing share plans within the limits detailed in the Remuneration Policy table. Awards may also be granted outside of these schemes if necessary and as permitted under the Listing Rules.

Directors' service contracts and payments for loss of office

Executive Directors' service contracts are permanent and terminable by the Company on at least 12 months' notice and by the Director on at least six months' notice, save on retirement where the Director must give at least 12 months' notice to the Company.

In respect of termination, the Committee's policy is to deal with each case on its merits, in accordance with the law and any further policy adopted by the Committee at the time. In the event of early termination, other than for cause, the relevant Director's current salary and contractual benefits would be taken into account in calculating any liability of the Company.

The principal contractual benefits provided in addition to salary are the provision of a car or car allowance, private fuel allowance, pension, medical insurance, life assurance and, in the case of the new CFO, a travel allowance. Annual bonuses and long-term incentives are non-contractual and are dealt with in accordance with the rules of the relevant schemes.

The Committee's policy is for contracts to contain provisions which enable the Company to terminate contracts at any time with immediate effect. The Executive Director would be entitled to receive compensation equivalent to up to 12 months' salary plus the value of their pension benefits (currently valued at 20% of basic salary) and the value of other benefits, payable in a lump sum or in equal monthly instalments over the full notice period or, if less, the remainder of any notice period not yet completed. Such payments would normally discontinue or reduce to the extent that alternative employment is obtained.

An Executive Director's service contract may be terminated without notice for certain events such as gross misconduct. No payment or compensation beyond sums accrued up to the date of termination will be made if such an event occurs.

Payments may be made in respect of the Director's legal and/or professional advice fees in connection with their cessation of office or employment and/or fees for outplacement assistance. Payments may be made in respect of accrued but untaken holiday.

Remuneration Report continued

Other than in the event of a good leaver circumstance, at the discretion of the Committee, no bonus may be payable unless the individual remains employed and is not under notice at the payment date. In the event that an individual does cease employment as a good leaver, bonuses would become payable subject to performance assessment, and pro-rata based on the number of complete calendar days worked in the relevant year. A portion of any bonus payable will normally be deferred into shares in line with normal policy. Good leaver circumstances include circumstances such as death, injury, ill-health or disability, redundancy, transfer or sale of the employing company or business, retirement with the Company's agreement or other circumstances at the discretion of the Committee (reflecting the circumstances that prevail at the time).

The treatment for DBSP awards previously granted to an Executive Director will be determined based on the plan rules. DBSP awards will normally subsist, except in the circumstance where an individual is summarily dismissed. The default treatment is that deferred shares will be delivered at the normal time, although the Committee may permit the awards to vest earlier.

The treatment for PSP awards previously granted to an Executive Director will be determined based on the plan rules. The default treatment will be for outstanding awards to lapse on cessation of employment. In relation to awards granted under the PSP, in certain prescribed circumstances, such as death, injury, ill-health or disability, redundancy, transfer or sale of the employing company or business, retirement with the Company's agreement or other circumstances at the discretion of the Committee (reflecting the circumstances that prevail at the time) 'good leaver' status applies. If treated as a good leaver, awards will be eligible to vest subject to performance conditions, which will be measured over the performance period (unless the Committee permits the award to vest at an earlier date) and will be reduced pro-rata (unless the Committee considers it appropriate not to do so) to reflect the proportion of the period between grant and normal vesting date actually served.

Treatment of shares awarded under HMRC all-employee plans or equivalent will be in line with the share plan rules.

Treatment of incentive awards in the event of a change of control or similar corporate event will be in line with the relevant plan rules.

Shareholding guidelines

The Committee operates share ownership guidelines which apply to all Executive Directors and the Group Executive Committee. The Group Chief Executive is subject to a share ownership guideline of 250% of salary and the other Executive Directors to 200% of salary.

It is expected that the guideline will be met within a five-year time period from its adoption (or date of joining for new appointments) through a combination of share purchases and the retention of incentive shares. On the exercise of Sharesave options or the vesting of awards from the Company's long-term incentive plans, Executives are required to retain shares awarded representing 50% of the net of tax gain until the ownership target is met or exceeded. The Committee retains discretion to determine shares which count towards the share ownership guidelines.

Executive Directors will also normally be required to retain a shareholding for two years after leaving the Company. They will be required to retain 100% of their shareholding guideline (or the actual shareholding of relevant shares on leaving, if lower) for two years after leaving employment. This policy will apply only to awards that vest in 2020 and beyond. The Committee has the discretion to waive this requirement in certain circumstances (e.g. compassionate circumstances). Jez Maiden is due to step down from the Board at the Annual General Meeting on 26 April 2023 and retire on 31 May 2023. Following his departure he will be subject to the previous tapered two-year share retention requirements in the 2020 Policy.

External appointments

Executive Directors may accept external non-executive appointments with the prior approval of the Board. It is normal practice for Executive Directors to retain fees provided for non-executive director appointments.

Non-Executive Directors' letters of appointment

The Chair and Non-Executive Directors have letters of appointment for an initial fixed term of three years subject to earlier termination by either party on written notice. In each case, this term can be extended by mutual agreement. Non-Executive Directors have no entitlement to contractual termination payments. While not anticipated, the Policy allows flexibility to pay a notice payment if considered appropriate. The dates of the initial appointments of the Non-Executive Directors are set out in the Annual Report on Remuneration.

Non-Executive Directors' fees

The policy on Non-Executive Directors' fees is:

Operation	Maximum opportunity	Framework used to assess performance and for the recovery of sums paid
To provide a competitive fee which will attract those high calibre individuals who, through their experience, can further the interests of the Group through their stewardship and contribution to strategic development		
Fee levels are set by reference to the expected time commitments and responsibilities, and are periodically benchmarked against relevant market comparators, as appropriate, reflecting the size and nature of the role. The Chair and Non-Executive Directors are paid an annual fee and do not participate in any of the Company's incentive arrangements or receive any pension provision. The Policy provides flexibility for a portion of fees to be delivered as shares. The Non-Executive Directors receive a basic Board fee, with additional fees payable for chairmanship of the Company's key Committees and for performing the Senior Independent Director role. Additional fees may be payable for other additional responsibilities. All Non-Executive Directors are reimbursed for travel and related business expenses reasonably incurred in performing their duties (and associated tax on these expenses). The Chair's fee is determined by the Committee (during which the Chair has no part in discussions) and recommended by them to the Board. The Non-Executive Directors' fees are determined by the Chair and the Executive Directors.	Fee levels will be eligible for increases during the period that the Remuneration Policy operates to ensure they continue to appropriately recognise the time commitment of the role, increases to fee levels for Non-Executive Directors in general and fee levels in companies of a similar size and complexity.	None.

How the Executive Directors' Remuneration Policy relates to the wider Group

The Executive Directors' Remuneration Policy provides an overview of the structure that operates for the Group Executive Directors and those senior Executives forming the Group Executive Committee (noting, however, that there are some differences in PSP participation and application of holding periods and shareholding requirement, within this group).

The Committee is made aware of pay structures across the Group when setting the Remuneration Policy for Executive Directors. The key difference is that, overall, the Remuneration Policy for Executive Directors is more heavily weighted towards variable pay and share ownership, than for other employees.

Base salaries are operated under the same policy as detailed in the Remuneration Policy table with any comparator groups used as a reference point, being country and/or industry specific. The Committee considers the general basic salary increase for the broader Group and, in particular the UK-based employees when determining the annual salary review for the Executive Directors. The performance related bonus scheme operates on a tiered basis from 175% of salary down to 22% of salary across the most senior global grades. Outside of the most senior tiers of Executives, the PSP is not operated as this arrangement is reserved for those anticipated as having the greatest potential to influence Group level performance.

However, the Committee believes in wider employee share ownership and promotes this through the operation of the HMRC tax approved all-employee share schemes which are open to all UK employees. Other similar share schemes are offered in other jurisdictions where local securities laws allow.

Executive Director pensions are aligned with the UK workforce and are typically provided either through (i) participation in the UK's defined benefit pension plan with a cash supplement provided above any pension salary cap or (ii) a cash supplement provided in lieu of pension. The UK workforce defined benefit pension plan is a generous and inclusive benefit for our UK workforce.

How the views of employees are taken into account

The Group has a diverse workforce operating globally in 39 different countries, with various local pay practices. The President Human Resources updates the Committee periodically on feedback received on remuneration practices across the Group. In developing this Remuneration Policy, the Committee devoted time at the outset in considering the principles which apply to remuneration across the workforce. This included consideration of the 'One Croda' culture, as well as Croda's values and purpose. While the views of the global workforce were not explicitly sought during the process, alignment across the workforce was a key theme of the review.

How the views of shareholders are taken into account

In developing this Remuneration Policy, the Committee undertook an extensive shareholder consultation exercise, and the Chair of the Committee met with key shareholders to discuss the principles for the review and initial proposals. The Committee also considered emerging shareholder views in key governance areas. Feedback received during the consultation period was taken into account when developing the final Remuneration Policy and modifications were made to the proposed Policy. An overview of the shareholder consultation process is outlined on pages 102 & 103 of the 2022 Annual Report.

D. Report of the Remuneration Committee for the year ended 31 December 2022

Contents

1. How our reward strategy aligns to and supports the delivery of our business strategy

Over the last two years we have accelerated key elements of our strategy to transition to a dedicated Consumer Care and Life Sciences company. Across these markets, innovation and sustainability will be the core drivers of our future growth.

In developing and implementing our Remuneration Policy the Committee has been mindful to ensure that every element of reward directly aligns to our strategy, ensuring we provide and protect long-term shareholder value.

Element of reward	Link to strategy	Sustainability	Innovation	Growth	Long-term shareholder value
Senior annual Bonus Plan					
Profit	Clear and simple measure that supports our strategic objective of consistent bottom-line growth. One third of awards are deferred, further protecting shareholder value.			✓	✓
Sustainability	Sustainability is at the centre of Croda's strategy and therefore we have introduced for 2023 an ESG metric within the senior annual Bonus Plan. One third of awards are deferred, further protecting shareholder value.	✓			✓
Performance Share Plan					
Earnings per share (EPS)	A measure of earnings growth over a three-year period recognising that sustained growth can only come through relentless innovation.		✓	✓	✓
Total Shareholder Return (TSR)	Measured against our peers, a key indicator of long-term growth and shareholder value.		✓	✓	✓
New & Protected Products (NPP)	An established measure of innovation, the metric is growth of NPP, those products rewarding growth that is driven by innovation.	✓	✓	✓	✓
Sustainability	Since 2020 we have incorporated sustainability metrics directly linked to our ambitions to be Climate, Land and People Positive by 2030.	✓	✓	✓	✓
Underpins & Discretion Framework					
Safety, health and environment (SHE)	The SHE underpins ensure that rewards are not made at the expense of the safety, health and environment of our employees or the communities that we serve.	✓			✓

Element of reward	Link to strategy	Sustainability	Innovation	Growth	Long-term shareholder value
Financial underpins	The financial underpins including ROIC within our Discretion Framework ensure that reward reflects the overall financial health of the business.			✓	✓
Culture and ethics	The culture and ethics underpin ensures that reward reflects strong governance and the experience of all our stakeholders.	✓			✓
Other features					
Holding periods	Extends the period to five years before shares are released, further protecting shareholder value.				✓
Shareholding requirements	Ensures that our Executives' interests are aligned to shareholders.				✓
Malus and clawback	Allows incentive awards to be clawed back or reduced in the event of significant financial or personal misconduct.				✓

2. How our Remuneration Policy reflects the UK Corporate Governance Code

When developing the Remuneration Policy, the Committee was mindful of the UK Corporate Governance Code and considers that the executive remuneration framework appropriately addresses the following factors:

Factors	How these are addressed
Clarity	Our commitment to openness and transparency are reflected in our reward principles. The Committee is committed to providing open and transparent disclosure on executive remuneration for our stakeholders. Our arrangements are clearly disclosed and any changes to our Remuneration Policy and its operation are highlighted in a way that defines their alignment to both our strategic ambitions as well as the provisions of the UK Corporate Governance Code.
Simplicity	Our executive remuneration arrangements, as well as those throughout the global organisation, are simple in nature and well understood by both participants and shareholders. Our senior annual Bonus Plan, in which around 500 of our global employees participate, is primarily based on a single profit metric, with a simple key requirement that no bonus can be paid for this element until the previous year's profit is exceeded.
Risk	The Committee considers that the structure of incentive arrangements does not encourage inappropriate risk-taking. Performance is based on a balance of metrics which also reflect our broader stakeholders, for example inclusion of sustainability targets and health and safety underpins. We then take a holistic assessment of performance using our Discretion Framework. Annual bonus deferral, the PSP holding period and our shareholding guidelines provide a clear link to the ongoing performance of the business as well as alignment with shareholders. Executives will be rewarded for sustainable long-term shareholder return. Malus and clawback provisions also apply for both the senior annual Bonus Plan and PSP.
Predictability	Our Remuneration Policy contains details of maximum opportunity levels for each component of pay, with actual incentive outcomes varying depending on the level of performance achieved against specific measures.
Proportionality	Our Remuneration Policy directly aligns to our strategy and financial performance. The Committee considers performance from a range of perspectives. Poor financial performance is not rewarded.
Alignment to culture	Alignment to our 'One Croda' culture is clearly established in our Remuneration Policy. Our senior annual Bonus Plan has the same metrics for all participants. Our PSP metrics, and from 2023 our senior annual Bonus Plan ESG metric, reflect our commitment to sustainability. Pensions are also aligned across the workforce.

Remuneration Report continued

Our Discretion Framework

To enhance the rigour with which performance is reviewed the Committee has adopted a Discretion Framework which it applies when assessing bonus and long-term incentive plan outcomes.

As with all Board/Committee decisions (in line with section 172) we also reflect on the experience of all our stakeholders throughout the course of the plan periods.

What is the formulaic result following consideration of the existing underpins?

What is the single figure outcome?
Committee to consider year-on-year change and whether this mirrors the trend in performance

How does the outcome compare with wider shareholder experience?
Committee to consider Total Shareholder Return in both relative and absolute terms over a number of different periods

How does the outcome compare with overall Company performance?
Consider performance against other KPIs, for example

- ROIC and EVA
- Sales
- Profit growth
- Sustainability

Culture and conduct

- Culture
- Conduct
- Health and safety
- Systems and control

Are there any external headwinds or tailwinds which need to be considered?

Are there any other events that should be factored in?
Other events could be reputational/risk related or a change of accounting standards

As an additional reference point, are the bonus and PSP outcomes consistent?

Input from others?
Draw on input from other Committees as well as other management teams including HR, Legal, Internal Audit and Risk

Consider shareholder response to results

Compare with historical use of discretion

Does the outcome appear reasonable/fair, or should an adjustment be considered?

3. Reward in the wider employee context

Workforce engagement

We continue to develop our approach to workforce engagement. We believe it is important to our culture and our values to have an active dialogue with employees on topics such as reward, recognition, motivation, wellbeing, safety, and inclusion. Therefore, in 2022, we have broadened our engagement by building on established channels such as Pulse Surveys and the dedicated email for employees to contact the Chair of the Committee. The Culture Pulse Surveys engage across the organisation and create an opportunity to gain feedback on the listening groups held during the year, including those attended by the Chair of the Remuneration Committee. A survey on reward and recognition, that included questions on understanding total reward offered to employees, and whether employees felt valued was undertaken in February 2022. A summary of engagement activities undertaken to date is as follows:

Reward principles	Our reward principles, which were developed and approved during 2019, guide the way we recognise and remunerate all our global employees. These principles focus on total reward including intangible rewards and were strongly influenced by the results of our previous Global Employee Survey. These have been shared across the organisation.
Employee pulse surveys	In 2022 a number of pulse surveys covering a range of topics, including culture and reward, were undertaken and findings were shared with the Board as well as management to help guide decisions.
Listening groups	During 2022 the Chair of the Board and other Non-Executive Directors attended listening groups to better understand how employees were feeling on a range of different topics, including reward.
Dedicated email to Chair of Committee	A dedicated email address has been established for employees to send comments or questions to the Chair of the Remuneration Committee.
Overview of pay and policy decisions	Committee members are updated annually on global employees' terms and conditions and are made aware of any significant changes to policies and other pay-related matters.

How our Remuneration Policy relates to reward in the wider employee context

When making decisions about executive remuneration the Committee considers the pay and reward structures across the business. Annually, the President Human Resources provides the Committee with a review of workforce remuneration, and the Committee is updated periodically on any feedback received on remuneration practices across the Group.

One of the principles of Croda's culture is to drive 'One Croda', therefore, many of the remuneration structures that apply to Executives also apply further in the global organisation, as set out in the table on the next page. The key difference between the policy for Executive Directors compared to other employees is that remuneration for Executive Directors is more heavily weighted towards variable pay and share ownership.

Remuneration element	Who participates?	Details
Base pay	All employees	Pay is set in line with the market and closely monitored. Any comparator group used as a reference point is country and/or industry specific. We pay a 'Living Wage' globally.
Annual bonus	Executive Directors, Executive Committee, senior leaders and senior managers (c.500 employees globally)	Consistent senior annual Bonus Plan aligned to increase in annual profit and ESG priorities. Operates across the most senior global grades on a tiered basis from 175% of salary to 22% of salary from 2023 onwards. Deferral applies for Executive Directors and members of the Executive Committee.
	All other employees	Local schemes apply in many locations.
Free Share Plan	All employees who do not participate in the senior annual Bonus Plan (c.5,150 employees globally)	An award of free shares or the cash equivalent if the senior annual Bonus Plan pays out. For 2022 this will be 10 shares or the cash equivalent.
Performance Share Plan	Executive Directors, Executive Committee and senior leaders (c.70 employees globally)	Consistent PSP based on EPS, TSR and sustainability metrics, including NPP. Operates across the most senior global grades on a tiered basis from 250% of salary to 30% of salary from 2023 onwards.
Restricted Share Plan (RSP)	Selected employees generally not eligible for PSP	Discretionary awards can be granted annually to selected employees to reward exemplary performance.
All-employee share plans[1]	All employees	Employees can participate in our global Sharesave Scheme, subject to qualifying service, allowing everyone to save monthly and purchase discounted shares.
Pension (UK only)[2]	All employees	Defined benefit plan based on career average salary plus 20% cash supplement paid for salaries above the cap or to employees who are tax limited and have opted out of the pension scheme.
Healthcare (UK only)[3]	All employees	From 2022 all UK based employees benefit from membership of Bupa private healthcare provided free of charge for employees and subsidised for family members. In addition, employees are provided with triennial health assessments also with Bupa.

1. Sharesave or similar schemes are provided where local social security laws allow.
2. Other pension arrangements, aligned to local practice and legislation, are available in many of our locations.
3. A range of health care benefits are also available in many of our locations globally.

4. Sharing success across the business

The Committee believes in sharing success across the business and extending share ownership more widely across our employee base. This is promoted through the operation of a new 'Free Share Plan' and a number of all-employee share schemes.

Response to cost-of-living-crisis

In response to the cost-of-living crisis and concerns about accessing health care, we extended private health care though Bupa to all our UK employees, with the Company also contributing 50% towards the cost of adding their families to the plan. As part of this provision, we now offer triennial private medical assessments to all employees. In addition one off payments were made to support UK employees with increases to fuel costs.

In countries outside of the UK we also provided one off payments and off cycle increases to support the cost of living crisis.

Free Share Plan

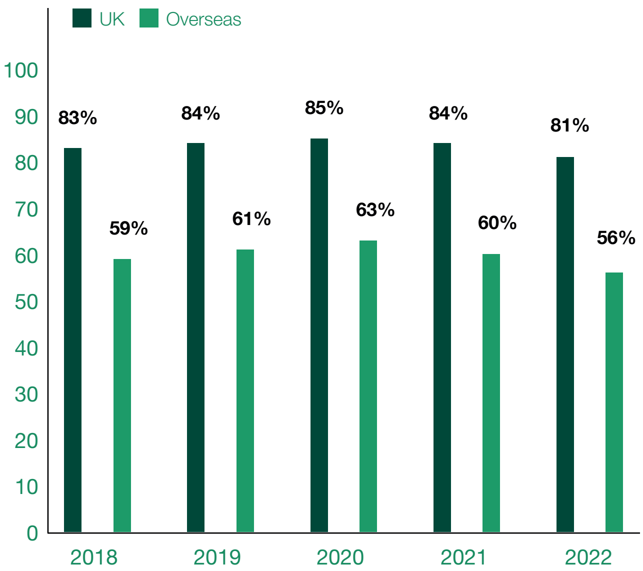
In 2021 we launched the 'Free Share Plan'. Under this new plan, all employees globally who are not eligible for the senior annual Bonus Plan are gifted Croda shares (or the cash equivalent) if the senior annual Bonus Plan pays out. Unlike other elements of remuneration this award is not set as a multiple of salary, instead it rewards all eligible employees at the same value.

The Free Share Plan was developed in response to findings from the Global Reward Survey in 2020 and aims to share success more widely across the business and encourage share ownership.

As the senior annual Bonus Plan paid out for 2022, all eligible employees will receive 10 Croda shares (or the cash equivalent) in May 2023 under the Free Share Plan. The value of the award is determined by the share price at vesting and based on the recent share price will be in the region of £684 (based on a share price of £68.42 on 13 February 2023).

All-employee share plans

Workforce participation in these plans has remained consistently strong and is driven by our culture of employees feeling a strong loyalty to the business.



Croda's strong share price performance has led to the all-employee share schemes being a strong benefit for employees.

Living Wage

We were pleased to announce in 2018 that we gained accreditation in the UK as a Living Wage Employer from the Living Wage Foundation. In 2023, we will continue to ensure that all our UK employees and regular contractors are paid at, or above, the rates advised by the Living Wage Foundation.

We are a Living Wage Employer

FAIRWAGE NETWORK

In addition, the business continues to pursue its Global Living Wage target, one of our sustainability KPIs linked to the UN SDGs. In 2020 we forged a partnership with the Fair Wage Network (FWN) to establish, using an independent and economically rigorous methodology, Living Wage levels across the world. In 2021, we compared our global wage levels to Living Wage comparators provided by the FWN and made all necessary adjustments to ensure that all our employees are now paid a Living Wage at a minimum.

We reviewed our Living Wage levels in 2022 and made any adjustments necessary in order to continue paying a Living Wage to all employees. We are now working with the Fair Wage Network to gain accreditation for our work and to ensure our progress stands up to external scrutiny. In 2022 we also began the process of ensuring all our regular contractors are paid a Living Wage and plan to achieve this milestone by the end of 2023.

More than just pay

Our employees and our culture remain central to the continued success of Croda. We continue to enhance our range of other workforce initiatives, including:

- We are proud of the training and development that we provide for employees and have set a target of ensuring all employees receive at least one week of training a year by the end of 2025. In 2022, our employees undertook over 145,000 hours of training with the average number of hours an employee completed being 26 hours.
- In 2021 we relaunched and redesigned our core company development programmes for senior leaders and future leaders with our values at their heart. 2022 was the first year many of these programmes have been able to run and all programmes have been positively received by employees.
- In 2021 we also launched an inclusion based global leadership programme, Phoenix Rising. In 2022 this programme ran for a second time with participants from all over the world. We also ran a series of leadership webinars on diversity & inclusive leadership.
- We recorded over 150 wellbeing activities which took place in 2022 and we continued with Employee Assistance Programmes in many of our countries. Each of our sites is tasked with ensuring at least four health and wellbeing events are run per year, with many sites running significantly more than this.

See pages 20 & 21 for further information on our culture including details on how we approach the recruitment, development and training of our workforce.

5. Promoting diversity & inclusion

Broad diversity, where different perspectives and experiences are able to create valuable innovation that improve lives, is critical to our long-term success as an innovative Company. We are committed to ensuring an inclusive workplace where everyone is able to have a successful and rewarding career.

Our D&I Roadmap has guided our work in 2022, with a focus on raising awareness and reward and recognition. Our Global Diversity and Inclusion Steering Committee and our regional and country-based committees have continued to challenge the business in 2022 by raising awareness on a variety of topics, including disability, transgender inclusion, and being an ally. They have also organised activities to support Black History Month, Pride, and Ramadan.

As of December 2022, we continue to meet the requirements of the Parker Review on ethnic diversity and have full gender balance on the Board.

Remuneration Report continued

6. Other disclosures

UK gender pay gap

The table below shows a summary of the gender pay gap for UK employees of Croda Europe Ltd:

	2018	2019	2020	2021	**2022**
Mean pay gap	27.7%	27.1%	18.7%	17.7%	**7.2%**
Median pay gap	23.1%	23.9%	19.2%	21.1%	**15.7%**
Mean bonus gap	63.1%	67.1%	64.4%	62.6%	**23.3%**
Median bonus gap*	33.3%	33.4%	0%	0%	**29.9%**

* The senior annual Bonus Plan and Croda Europe Discretionary Bonus Scheme did not pay out for 2019 (payable in 2020) or 2020 (payable in 2021). A small number of employees received a sales bonus but the median bonus for both female and male employees was zero giving a median bonus gap of 0%.

We are confident that our gender pay gap is not an equal pay issue but is a result of a lack of female representation across our business at senior levels and particularly in production roles which represent the bulk of the workforce between the 25th and 75th percentile. Addressing this issue will require a long-term approach but we have already begun work to increase the number of females working in production and in senior positions.

The number of women in leadership positions is now 38% (2021: 36%). We are also pleased to report that we have 59 (2021: 43) women working as process operators across 14 of our sites globally.

Over 2022 42% of hires and promotions to leadership positions were female.

Other actions taken to address the gender pay gap include:

- Ensuring we have a balanced shortlist for all positions that we are recruiting for; we have a target of achieving balanced shortlists for 80% of roles by the end of 2023.
- Further improving our talent and succession planning processes to help identify and nurture talent early in their career. In 2021 we relaunched our global talent development programmes and participants in 2022 have been gender balanced.
- Finding ways to reduce shift work (especially night work) and to examine the feasibility of part-time and job share arrangements in our production facilities.
- Changing the way we advertise production roles to ensure we reach a diverse population.
- Improving family-friendly policies; in 2019 we introduced a new Global Parental Leave Policy and in 2020 we launched new Flexible Working guidance. All locations have implemented this and have local policies in place.
- Continuing to invest in our STEM activities to encourage a wide range of applicants to apply for roles in our business.

More information is available on the Croda website.

UK CEO pay ratio

The table below sets out the ratio of the CEO's 'single figure' total remuneration to the 25th, 50th and 75th percentile full-time equivalent total remuneration of the Company's UK employees. The pay ratios are calculated on a Group-wide basis by reference to UK employees only.

Under the regulations, there are three methodologies that companies can choose to report their pay ratio, known as Option A, B and C. For 2022 we have chosen to continue to use the Government's preferred option, Option A. Using this methodology, we have determined the full-time equivalent total remuneration for all UK employees and have ranked this data to identify employees whose remuneration places them at the 25th, 50th and 75th percentile. The pay ratios are then calculated by comparing total remuneration for these three employees against our CEO 'single figure' total remuneration.

	Methodology	25th percentile	50th percentile	75th percentile
FY 2022	**A**	**119:1**	**88:1**	**71:1**
FY 2021*	A	103:1	81:1	67:1
FY 2020	A	48:1	37:1	31:1
FY 2019	A	57:1	44:1	37:1
FY 2018**	C	85:1	67:1	57:1

1. Calculations for the workforce exclude severance pay, notice pay, SIP repayments, fractional share payments, SAR payments and relocation expenses.
2. The calculations for the workforce exclude the value of the defined benefit pension plan due to the difficulty of calculating these figures for our complex historical pension arrangements.
3. Calculations of annual bonus for the workforce reflect an estimate at the time of the calculation of the ratio. The actual amounts paid to employees will be finalised in March 2023 and the ratio will be updated in next year's report to reflect the actual amounts paid. Note that for Executive Directors' this amount will not change.
4. Calculations for the workforce include amounts granted under the Restricted Share Plan and Free Share Plan. Unlike the PSP these figures will not be restated at vesting.
5. Excludes Non-Executive Directors, contractors and employees who left during the relevant year.
6. New starters, part-time employees and employees on long-term sick and maternity are included; their salary has been amended to reflect a full-time and full-year salary.

* The ratio for 2021 has been restated. This is to reflect the updated CEO 'single figure' total remuneration for 2021, which was due to the 2021 PSP award being updated to reflect the actual share price at vesting. Where relevant PSP calculations for the workforce have also been updated on the same basis. Annual bonus amounts for the workforce have also been updated to reflect the actual amounts paid in March 2022.

** The CEO pay ratio for 2018 was calculated using Option C, which enabled us to calculate, on an indicative basis, the total remuneration packages of three individual UK employees at the 25th, 50th and 75th percentile. Option C was used in 2018 because the full administrative process to enable us to calculate the equivalent total remuneration for UK employees was not in place.

The CEO pay ratio is calculated based on the total remuneration payable to the CEO, which could include payments under the senior annual Bonus Plan and PSP. The outcomes of these elements are directly linked to performance, with the value of the PSP also incorporating share price growth. It is therefore expected that the ratios will fluctuate significantly year-on-year to reflect Croda's performance. In respect of the 2022 figures, as this has been an outstanding year for performance both the senior annual Bonus Plan and PSP have paid out at maximum levels. As the PSP has paid out at a slightly higher level, from 97.4% in 2021 to 100% in 2022 the ratio has increased slightly.

Employee total remuneration

	Actual base salary 2022	Total remuneration 2022
75th percentile	£51,915	£57,178
50th percentile	£39,026	£46,169
25th percentile	£30,880	£34,287

We believe that our CEO pay ratio is consistent with our pay, reward and progression policies. The sharing of success has been a strong theme in 2022 and although the CEO pay ratios have widened, employees have also benefitted from a strong performing year. The 'Free Share Plan' launched in 2021 will pay out for 2022, rewarding our most junior employees proportionally the most. The annual bonus plans will pay out globally also.

7. Remuneration Committee year ended 31 December 2022

Responsibilities

The Committee determines and agrees with the Board the Company's Remuneration Policy and framework, which should:

- Support the Company's strategy and promote long-term sustainable success; and
- Ensure that the senior management of the Company are provided with appropriate incentives to encourage enhanced performance and are, in a fair and responsible manner, rewarded for their individual contributions to the success of the Company.

The Committee also determines the remuneration packages for all Executive Directors, members of the Executive Committee, including the Company Secretary, and the Chair of the Board and recommends and monitors the level and structure of remuneration for senior managers.

Key responsibilities

Detailed responsibilities are set out in the Committee's terms of reference, which can be found at croda.com/en-gb/investors/governance/board committees/remuneration-committee.

A summary is provided below:

- Determine and agree with the Board the framework or broad policy for the remuneration of the Company's Chair, the Group Chief Executive, the Executive Directors, the Company Secretary and other members of senior management
- In determining such policy, take into account factors which it deems necessary, including relevant legal and regulatory requirements, the provisions and recommendations of the UK Corporate Governance Code and associated guidance
- Review workforce remuneration and related policies and the alignment of incentives and rewards with culture, taking these into account when setting the Remuneration Policy for Directors
- Feedback to the Board on workforce reward, incentives and conditions in support of the Board's monitoring of whether the workforce policies and practices of the Company are aligned with its Purpose, values and strategy
- Review the ongoing appropriateness and relevance of the Remuneration Policy
- Establish the selection criteria, select, appoint and set the terms of reference for any remuneration consultants who advise the Committee and obtain reliable, up-to-date information about remuneration in other companies
- Oversee any major changes in employee benefits structures throughout the Group.

Key focus areas

Remuneration Policy
- Review of latest market and governance developments
- Discuss the Remuneration Policy for 2023 – 2026 and any proposed changes
- Review shareholder consultation feedback on the proposed changes to the Remuneration Policy
- Agree the proposed changes to Remuneration Policy

Remuneration outcomes for 2021 and approach for 2022:
- Remuneration outcomes for 2021, including vesting of 2019 PSP awards
- Establishing the senior annual Bonus Plan and PSP targets for 2022
- Granting of 2022 PSP awards and Restricted Share Plan awards

Wider workforce:
- Granting of the Free Share Plan
- Annual review of wider workforce remuneration

Remuneration approach for 2023:
- Approval of salary increase for the CEO and Group Finance Director effective 1 January 2023
- Approval of Chair fee increase effective 1 January 2023
- Agreeing terms for the new CFO

E. Directors' remuneration for the year ended 31 December 2022 – Audited information

In this section

1. Directors' remuneration for the year ended 31 December 2022

	Steve Foots		Jez Maiden	
	2022	2021	**2022**	2021
Salaries	**£716,457**	£682,340	**£494,108**	£470,579
Benefits[1]	**£22,402**	£24,939	**£20,064**	£20,126
Pension supplement[2]	**£143,291**	£136,218	**£98,822**	£94,116
Pension[3]	**–**	£417	**–**	–
Total fixed pay	**£882,150**	**£843,914**	**£612,994**	**£584,821**
Annual bonus	**£1,074,686**	£1,023,510	**£617,635**	£588,224
Long-term incentives[4A-B]	**£2,124,893**	£1,848,822	**£1,139,772**	£956,273
Other[5]	**£3,117**	£3,618	**£6,335**	£3,975
Total variable pay	**£3,202,696**	**£2,875,950**	**£1,763,742**	**£1,548,472**
Single total figure of remuneration	**£4,084,846**	**£3,719,864**	**£2,376,736**	**£2,133,293**

1. Benefits include benefit-in-kind for company car or cash allowance, benefit-in-kind for private medical insurance and private fuel allowance.
2. This represents the 20% of salary supplement. For January 2021 the supplement for Steve Foots was in relation to benefits provided above the salary pension cap.
3. For defined benefit pensions the amount included is the additional value accrued during the year, calculated using HMRC's methodology for the purposes of income tax using a multiplier of 20. Steve Foots was only an active member of the Croda Pension Scheme for one month in January 2021.
4. A. The PSP awards granted in March 2020 reached the end of their performance period on 31 December 2022. The awards will vest at 100% of maximum (see page 131). The values included in the table above are based on the three-month average price to 31 December 2022 of 6738.6p. Of these values, £604,834 and £324,427 is attributable to share price growth for Steve Foots and Jez Maiden, respectively. These values will be updated in next year's Annual Report based on the share price at vesting which will take place on 25 March 2023.
   B. The PSP award included in the 2021 single figure (the 2019-21 PSP award) has been updated to reflect the actual share price at vesting of 6904p. Of these values, £588,610 and £288,932 is attributable to share price growth for Steve Foots and Jez Maiden, respectively.
5. Represents the value received in the year from participation in all-employee share schemes. Steve Foots and Jez Maiden received 25 and 26 matching shares respectively as part of the Share Incentive Plan (SIP) with a transaction value of £1,768 and £1,846. Steve Foots and Jez Maiden also participated in the 2022 Sharesave Scheme and were granted 98 and 326 shares respectively at a discounted rate of 5509p. The share price on the date of grant was 6886p representing a 20% discount.

Annual bonus

The annual bonus for Executive Directors in 2022 was calculated by reference to the amount by which the profit for the year, after adjustment for the divestment of our PTIC business and the lipid system sales for our principal COVID-19 vaccine contract, exceeded the profit for 2021 (the 'Bonusable Profit'). The maximum pay-out target would have been met even if PTIC profits had been excluded from the calculations.

	Threshold target	Maximum target	Actual	Bonus outcome (% of maximum)
Bonusable Profit	£422.7m	£465.0m	£472.2m	100%

The Remuneration Committee has discretion to reduce (including to zero) the amount of any payment under the scheme if it considers the safety, health or environment (SHE) performance is in serious non-compliance with the Croda SHE policy statement document of minimum standards. In addition, the Committee can also reduce any payment (including to zero) if it considers the underlying business performance of the Company is not sufficient to support the payment of any bonus. The Committee also applies the Discretion Framework, a rigorous framework for the application of judgement and discretion, when reviewing awards (see page 124).

The Committee used the Discretion Framework to satisfy itself that performance was robust and sustainable. The Committee therefore determined that 100% of the senior annual Bonus Plan was payable.

One third of the bonus payable will be deferred into shares for three years. The awards vest unless the recipient has been dismissed for cause. There are no performance conditions attached.

PSP

PSP awards vesting in March 2023

The PSP awards granted in March 2020 reached the end of their three-year performance period on 31 December 2022.

Measure	Weighting	Threshold	Maximum	Actual performance	Out-turn (% of max element)
Relative TSR versus bespoke peer group[1]	35%	Median (50th percentile)	Upper quartile (75th percentile)	94.4 percentile	100%
Adjusted annual average EPS growth over three years[2]	35%	5% p.a.	11% p.a.	15.8% p.a.	100%
NPP	20%	NPP sales to grow at twice the rate of non-NPP, subject to overall positive Group profit growth and a minimum average of 3% NPP growth per year, with payments being made on a sliding scale up to 5% growth per year.		NPP sales 2.24x non-NPP sales and overall NPP growth of 17.4%	100%
Sustainability metric 1	5%	Development of decarbonisation roadmaps[3], covering all scope 1 and 2 emissions to define how we will achieve our targets across all our geographically dispersed and complex footprint. The achievement of this target in full would be a 5% pay-out with a 2.5% pay-out for a better than 95% achievement.		All roadmaps completed	100%
Sustainability metric 2	5%	Measurable reductions in scope 1 and 2 emissions. Target of 30,000 tonnes against an adjusted 2018 baseline of 232,000 tonnes. Following the discovery of a calculation error the 2018 baseline of 232,000 tonnes was reduced to 208,328[4] tonnes but the target reduction of 30,000 tonnes was not reduced, making it harder to achieve. The achievement for this target in full would be a 5% pay-out with a 2.5% pay-out for a better than 75% achievement.		39,335 tonnes	100%
				Total out-turn	100%

1. TSR peer group constituents: AkzoNobel, Albemarle, Ashland, BASF, Clariant, Koninklijke DSM, Eastman Chemicals, Elementis, Evonik Industries, Givaudan, Johnson Matthey, Kemira, Lanxess, Novozymes, Solvay, Symrise, Synthomer, Victrex.
2. EPS growth p.a. is calculated on a simple average basis over the three-year period. The calculation of the EPS growth has been adjusted for the divestment of the majority of the PTIC business. The mechanics of the adjustments were independently recalculated by KPMG under agreed-upon procedures standard (ISRS 4400) (advice delivered to the Company and not constituting assurance or an opinion). The outcome was not impacted by this adjustment.
3. Decarbonisation Roadmap: A plan for a site, charting emissions reduction through for example, maximising use of renewable energy, novel process technologies and energy efficiency measures. The quality assessment process was validated externally by Accenture who also performed sampling to validate the outcome assessments.
4. The revised 2018 baseline has been independently verified by Carbon Smart, as has the breakdown of emissions per site. Adjustments have been made for acquisitions and divestment of our PTIC business.

EVA Underpin

The PSP awards granted in March 2020 were subject to an EVA underpin such that an improvement in EVA over the three-year PSP performance period was required. EVA in the final year exceeded EVA in the year prior to the start of the performance period and therefore no adjustment to the awards is required as a result of EVA performance.

Remuneration Report continued

As well as considering the EPS, TSR and NPP and sustainability targets, under the rules of the PSP, the Remuneration Committee is obliged to consider the underlying performance of the Company over the performance period, which it did using the Discretion Framework on page 124. On review, the Committee considered the outcome of the PSP consistent with overall Company performance over the three-year performance period.

The forecast vesting value of the awards made in March 2020, subject to the above performance targets, is included in the 2022 single figure table on page 130. Any shares vesting will be subject to a two-year holding period.

Gains made on exercise of share options and PSP

The gains are calculated according to the market price of Croda International Plc ordinary shares on the date of exercise, although the shares may have been retained.

Executive Director	Exercise date	Shares exercised	Scheme	Exercise price	Market price	Gain (before tax)
Steve Foots	14 Mar-22	26,779	PSP	0	6904p	£1,848,822
	14 Mar-22	2,526	DBSP	0	6904p	£174,395
	06 Dec-22	138	Sharesave	3898p	6968p	£4,237
	15 Mar-21	11,161	PSP	0	6205p	£692,540
	15 Mar-21	5,581	DBSP	0	6205p	£346,301
	22 Mar-21	174	Sharesave	3092p	6257p	£5,507
	01 Nov-21	173	Sharesave	4144p	9432p	£9,148
Jez Maiden	14 Mar-22	13,851	PSP	0	6904p	£956,273
	14 Mar-22	1,449	DBSP	0	6904p	£100,039
	01 Nov-22	230	Sharesave	3898p	6758.2p	£6,579
	15 Mar-21	5,773	PSP	0	6205p	£358,215
	15 Mar-21	3,207	DBSP	0	6205p	£198,994
	01 Nov-21	217	Sharesave	4144p	9432p	£11,475

PSP awards granted in 2022

The PSP awards granted on 22 March 2022 were as follows:

Executive Director	Number of PSP shares awarded	Basis of award granted (% of salary)	Face/maximum value of awards at grant date[1]	% of award vesting at threshold (maximum)	Performance period
Steve Foots	21,649	225%	£1,611,985	25% (100%)	01.01.22 – 31.12.24
Jez Maiden	11,612	175%	£864,630	25% (100%)	01.01.22 – 31.12.24

1. Face value/maximum value is calculated based on a share price of 7446p, being the average mid-market share price of the three dealing days prior to the date of grant.

The 2022 PSP awards are subject to a performance condition which is split into three parts: 35% EPS, 35% TSR, and 30% sustainability metrics, including NPP. Performance targets were disclosed in full last year, see page 96 of our Annual Report and Accounts 2021. Vesting will take place on a sliding scale. An EVA underpin applies across the entire award, also detailed on page 96 of our Annual Report and Accounts 2021.

Any shares vesting will be subject to a two-year holding period.

All-employee share plans

Executive Directors are invited to participate in the HMRC tax-approved UK Sharesave Scheme and the Croda Share Incentive Plan (SIP) in line with, and on the same terms as, the wider UK workforce.

SIP

Details of shares purchased and awarded to Executive Directors under the SIP are shown in the table below. A brief description of the SIP is set out in note 23 on page 199.

Executive Director	SIP shares held 01.01.22	Partnership shares acquired in year	Matching shares awarded in year	Total shares 31.12.22*	SIP shares that became unrestricted in the year	Total unrestricted SIP shares held at 31.12.22
Steve Foots	5,842	25	25	5,892	70	5,610
Jez Maiden*	481	26	26	541	35	277

There have been no changes in the interests of any Director between 31 December 2021 and the date of this report, except for the purchase of five SIP shares and the award of five matching shares by Steve Foots and the purchase of four SIP shares and the award of four matching shares by Jez Maiden during January and February 2023.

* Jez Maiden also had eight additional shares acquired through the Dividend Reinvestment Plan.

Sharesave

Details of awards made under the UK Sharesave Scheme are set out below:

Date of grant	Earliest exercise date	Expiry date	Face value*	Exercise price	Number at 01.01.22	Granted in year	Exercised in year	Cancelled in year	Number at 31.12.22
Steve Foots									
12 September 2019	01 November 2022	30 April 2023	£6,723	3898p	138	–	138	–	–
10 September 2020	01 November 2023	30 April 2024	£6,724	4804p	112	–	–	–	112
16 September 2021	01 November 2024	30 April 2025	£8,975	7327p	98	–	–	–	98
15 September 2022	01 November 2025	30 April 2026	£6,748	5509p	–	98	–	–	98
					348	**98**	**138**	**–**	**308**
Jez Maiden									
12 September 2019	01 November 2022	30 April 2023	£11,206	3898p	230	–	230	–	–
16 September 2021	01 November 2024	30 April 2025	£11,173	7327p	122	–	–	122	–
15 September 2022	01 November 2025	30 April 2026	£22,448	5509p	–	326	–	–	326
					352	**326**	**230**	**122**	**326**

During 2022, the highest mid-market price of the Company's shares was 9994p and the lowest was 5946p. The year-end closing price was 6604p. The year-end mid-market price was 6663p.

* Face value is calculated using the market value on the day before the date of grant, multiplied by the number of shares awarded.

2. Pension

The pension rights that accrued during the year in line with the policy on such benefits as set out in the Policy Report were as follows:

Executive Director	Normal retirement date under the CPS	Total accrued pension at 31.12.22 (p.a.)	Single remuneration pension figure 2022	Single remuneration pension figure 2021	Single remuneration pension figure 2022 excluding supplement
Steve Foots	14 September 2033	£134,606	£143,291	£136,635	–
Jez Maiden	N/A	–	£98,822	£94,116	–

* Neither Steve Foots or Jez Maiden were active members of the Croda Pension Scheme in 2022. Steve Foots was only an active member of the Croda Pension Scheme for one month in 2021. The single remuneration pension figure for 2022 therefore only relates to the pension supplement of 20% of salary.

Croda has a number of different pension plans in the countries in which we operate. Pension entitlements for Executive Directors are tailored to local market practice, length of service and the participant's age. In 2016, a Career Average Revalued Earnings (CARE) scheme was introduced with a cap applied to pension benefits; at this time the cap was set at £65,000. The cap is increased each year in line with inflation, and from April 2023 will be £76,614. Employees who earn in excess of the pension cap or who cannot be members of the plan due to tax limitations receive a pension supplement. For Executive Directors this supplement is up to 20% of salary in line with the wider UK workforce.

Steve Foots' historic pension provision

Steve Foots was a member of the Croda Pension Scheme up to 31 January 2021. Steve Foots accrued pension benefits under the Croda Pension Scheme up to this date with a CARE accrual rate of 1/60th and an entitlement to retire at age 60. From 6 April 2011 onwards, pension benefits accruing were based on a capped salary. This cap was £187,500 until April 2014 at which point it reduced to £150,000, and due to annual allowance regulations and changes to the pension scheme, reduced to £37,500 in April 2016 (reduced from the scheme cap of £65,650 due to annual allowance regulations) and reduced again in April 2020 to £15,000 following new annual allowance regulations. If Steve Foots retires before the age of 60, a reduction will be applied to the element of his pension accrued before 6 April 2006, unless he is retiring at the Company's request. In the event of death, a pension equal to two thirds of the Director's pension would become payable to the surviving spouse. Steve Foots' pension in payment is guaranteed to increase in line with the rate of inflation up to a maximum of 10% per annum for benefits accrued before 6 April 2006, and in line with inflation up to a maximum of 2.5% per annum for benefits accrued from 6 April 2006 onwards.

Steve Foots is entitled to death-in-service benefits from an Excepted Life Policy. Steve Foots elected to opt out of the Croda Pension Scheme from 31 January 2021 and therefore only now receives a pension supplement of 20% of salary.

Jez Maiden's pension provision

Jez Maiden has elected not to join the Croda Pension Scheme and was therefore paid a pension supplement of 20% of salary in 2022. He is entitled to death-in-service benefits from an Excepted Life Policy.

3. Payments for cessation of office

There were no payments for loss of office during the year under review.

4. Payments to past Directors

There were no payments to past Directors during the year under review.

5. Transition of Chief Financial Officer

Jez Maiden will retire as Group Finance Director of Croda in 2023 and will be succeeded by Louisa Burdett as Chief Financial Officer.

Joining arrangement for Louisa Burdett

Louisa Burdett was appointed on a salary of £520,000 and will receive a pension supplement of 20% of salary aligned to the UK workforce. In addition she will also receive a travel allowance to facilitate travel to Croda's offices in Yorkshire.

Louisa Burdett will participate in both the senior annual Bonus Plan and PSP on the same basis as Jez Maiden, which, subject to approval of the new Remuneration Policy will have maximum opportunities of 150% of salary and 200% of salary, respectively, for 2023.

There was no sign-on bonus or buy-out.

Remuneration arrangements for Jez Maiden on his retirement

Remuneration arrangements for Jez Maiden on his retirement were in line with the Directors' Remuneration Policy. He will continue to receive his salary, pension supplement and benefits up until the date of his departure. Jez Maiden was not a member of the Croda Pension Scheme, and so no pension is payable.

For 2023, Jez Maiden will remain eligible for a bonus under the senior annual Bonus Plan, which will be pro-rated for the period he is employed during the year. This will be paid at the normal time subject to the satisfaction of performance. Jez Maiden will not receive a PSP award in 2023.

In respect of outstanding share awards, these will subsist. For awards granted under the Deferred Bonus Share Plan and vested PSP awards that remain subject to a holding period, these will continue and will be released at the normal time. Outstanding PSP awards will vest in line with their original vesting dates, subject to the satisfaction of the original performance conditions, and the two-year holding period will continue to apply. Outstanding PSP awards will be pro-rated to reflect the period during which Jez Maiden was employed by the Group.

Outstanding shares and options under the SIP and UK Sharesave Scheme will be treated in accordance with the appliable plan rules.

In line with the 2020 Directors' Remuneration Policy, Jez Maiden will be required to retain a shareholding for two years post-employment. The post-employment shareholding requirement applies in respect of up to 100% of his in-employment guidelines for the first year post-employment, applicable in respect of all shares vested from 2020, tapering down to 0% over the second year. The Company will operate mechanisms to enforce the requirement.

There will be no payments for loss of office.

6. Share interests

The interests of the Directors who held office at 31 December 2022 are set out in the table below:

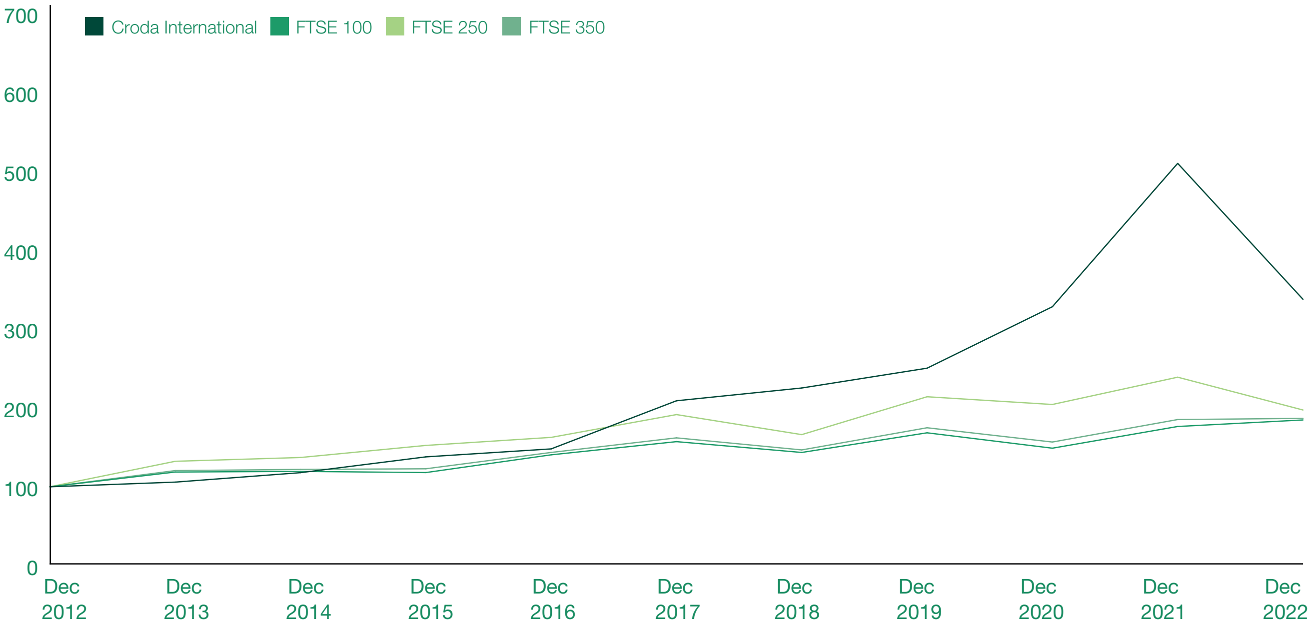
	Legally owned[1]					SIP			% of salary held under shareholding guideline
	31.12.21	31.12.22	PSP (unvested)	DBSP (unvested)	Sharesave (unvested)	Restricted	Unrestricted	Total 31.12.22	
Executive Director									
Steve Foots	173,115	188,756	77,604	4,650	308	282	5,610	277,210	>225% target
Jez Maiden	21,106	23,296	41,626	2,672	326	264	277	68,461	>175% target
Non-Executive Director									
Roberto Cirillo	–	–	–	–	–	–	–	–	–
Jacqui Ferguson	76	76	–	–	–	–	–	76	–
Anita Frew	9,425	9,425	–	–	–	–	–	9,425	–
Helena Ganczakowski	361	361	–	–	–	–	–	361	–
Keith Layden	60,339	60,339	–	–	–	–	–	60,339	–
John Ramsay	2,000	2,836	–	–	–	–	–	2,836	–
Julie Kim	60	60	–	–	–	–	–	60	–
Nawal Ouzren*	–	–	–	–	–	–	–	–	–

* Nawal Ouzren appointed 1 February 2022, holding on appointment Nil.
1. Including connected persons.

Post-employment shareholding requirements also apply for two years after leaving employment. The policy applies to shares from awards that vest from 2020. From adoption of the new 2023 policy, the post-employment shareholding requirements will be set at 100% of the in-employment guideline to be retained for the entire two year period following leaving. Jez Maiden's post-employment shareholding requirement will follow the current policy of 100% of the in-employment guideline for the first year after leaving employment, tapering to 0% by the end of year two. The Committee is implementing structures to ensure that post-employment shareholding requirements are adhered to, via our third-party share plan administrator.

7. Performance graph (unaudited information)

Ten year Total Shareholder Return chart



Source: Refinitiv Datastream

Remuneration Report continued

8. Ten-year remuneration figures for Group Chief Executive (unaudited information)

The total remuneration figure includes the annual bonus and long-term incentive awards which vested based on performance in those years. The annual bonus and long-term incentive award percentages show the pay-out for each year as a percentage of the maximum.

	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	**2022**
Total remuneration (£)	1,427,156	769,414	1,374,046	2,404,441	3,570,251	3,311,700	1,693,242	1,543,377	3,719,864	**4,084,846**
Annual bonus (%)	0%	0%	76.4%	100%	78.4%	36.2%	0%	0%	100%	**100%**
Long-term incentives vesting (%)	81.8%	0%	0%	43%	100%	100%	56.2%	40%	97.4%	**100%**

The 2021 total remuneration figure has been updated to reflect the value of the 2021 PSP award at vesting.

9. Board Chair and other Non-Executive Directors' fees 2022 and 2023 (unaudited information)

The fees paid to the Non-Executive Directors (including chairing of Committees) and to the Senior Independent Director were reviewed in January 2023 and increased by 4%, in line with the Executive Directors. These changes took effect from 1 January 2023. The revised fee structure for the Board Chair and other Non-Executive Directors for 2022 is detailed below.

Position	2022 fee £	**2023 fee £**
Board Chair (all-inclusive fee)	319,104	**331,868**
Non-Executive Director base fee	67,066	**69,749**
Additional fees		
Senior Independent Director	11,142	**11,588**
Committee Chairs (Audit and Remuneration)	16,226	**16,875**

10. Non-Executive Directors' remuneration

The remuneration of Non-Executive Directors for the year ended 31 December 2022 payable by Group companies is detailed below; this table reflects actual payments in 2022.

		Non-Executive Director fees £	Benefits[1] £	Total £
Anita Frew	**2022**	**319,104**	**4,030**	**323,134**
	2021	303,909	11	303,920
Helena Ganczakowski[2]	**2022**	**89,025**	**1,537**	**90,562**
	2021	89,937	456	90,393
Jacqui Ferguson[2]	**2022**	**72,475**	**3,090**	**75,565**
	2021	63,873	169	64,042
Roberto Cirillo	**2022**	**67,066**	**5,157**	**72,223**
	2021	63,873	903	64,776
Keith Layden	**2022**	**67,066**	**4,311**	**71,377**
	2021	63,873	89	63,962
John Ramsay	**2022**	**83,291**	**6,569**	**89,860**
	2021	79,326	794	80,120
Julie Kim[3, 4]	**2022**	**61,477**	**3,055**	**64,532**
	2021	–	11,142	11,142
Nawal Ouzren[5]	**2022**	**61,477**	**2,121**	**63,598**
	2021	–	–	–

1. The benefits relate to Directors undertaking business travel on behalf of Croda and ensuring the Directors are not out of pocket for related tax.
2. Helena Ganczakowski was replaced by Jacqui Ferguson as the Chair of the Remuneration Committee on 1 September 2022 and the fees for both were pro-rated accordingly.
3. Julie Kim was appointed to the Board on 1 September 2021 and voluntarily decided to waive her fees for 2021 and January 2022.
4. The benefits figure for Julie Kim relates to the undertaking of long-haul business travel and ensuring she is not out of pocket for the related tax.
5. Nawal Ouzren was appointed to the Board on 1 February 2022.

Non-Executive Directors' appointment

The effective dates of the letters of appointment for the Board Chair and each Non-Executive Director who served during 2022 are shown in the table below:

Non-Executive Director	Original appointment date	Expiry date of current term
Anita Frew	05 March 2015	24 April 2024
Roberto Cirillo	26 April 2018	26 April 2024
Jacqui Ferguson	01 September 2018	01 September 2024
Helena Ganczakowski	01 February 2014	26 April 2023
Keith Layden	01 May 2017	01 May 2023
John Ramsay	01 January 2020	01 January 2026
Julie Kim	01 September 2021	01 September 2024
Nawal Ouzren	01 February 2022	01 February 2025

11. Service contracts and outside interests (unaudited information)

The Executive Directors have service contracts as follows:

Executive Director	Contract date	Termination provision
Steve Foots	16 September 2010	by the Company 12 months, by the Director 6 months
Louisa Burdett	08 November 2022	by the Company 12 months, by the Director 6 months
Jez Maiden	09 October 2014	by the Company 12 months, by the Director 6 months

External directorships

Executive Directors are permitted to accept external appointments with the prior approval of the Board. It is normal practice for Executive Directors to retain fees provided for Non-Executive roles. Jez Maiden was appointed as a Non-Executive Director of Intertek Group in May 2022.

12. Remuneration Committee attendance and advisers (unaudited information)

The following Directors served as members of the Committee during 2022:

- Jacqui Ferguson (Chair from 1 September 2022)
- Helena Ganczakowski (Chair until 1 September 2022)
- Roberto Cirillo
- John Ramsay
- Julie Kim
- Nawal Ouzren

See page 88
for details of attendance at meetings during the year.

In addition, the Committee invites individuals to attend meetings to ensure that decisions are informed and take account of pay and conditions in the wider Group. During 2022, invitees included other Directors and employees of the Group and the Committee's advisers (see page 138), including Anita Frew (Company Chair), Steve Foots (Group Chief Executive), Jez Maiden (Group Finance Director), Keith Layden (Non-Executive Director), Tracy Sheedy (Group HR Director), Tom Brophy (Group General Counsel and Company Secretary) and Caroline Farbridge (former Deputy Company Secretary).

Attendees at Committee meetings are excluded from discussions that determine their own remuneration.

Summary of Remuneration Committee meetings

January 2022	Approved Chair fee increase for 2021 Reviewed the draft Directors' Remuneration Report Considered the sustainability targets for 2022 PSP awards Reviewed the EVA underpin PSP metric Reviewed remuneration governance trends
February 2022	Reviewed the draft Directors' Remuneration Report Reviewed the 2021 bonus baseline calculation Approved the calculation of the 2021 senior annual Bonus Plan award Approved the senior annual Bonus Plan targets for 2022 Approved the vesting outcome for the 2019 PSP awards Approved the PSP targets for 2022 and the grant of PSP awards for 2022 Approved the vesting of the 2019 RSP awards and the grant of RSP awards for 2022 Approved the vesting of the 2021 Free Share Plan Reviewed the update on ABI headroom limits as they apply to the business Reviewed share ownership guidelines Reviewed the Committee's Terms of Reference
May 2022	Received an update on shareholder voting in respect of the Directors' Remuneration Report Considered adjustments to incentives following the sale of the majority of the PTIC businesses Reviewed an update on PSP sustainability targets Gave authority for UK employees to join the UK Sharesave Scheme and non-UK employees to join the International Sharesave Scheme Agreed dividend enhancement to the Deferred Bonus Share Plan Approved early vesting of the PSP and RSP awards for 2020 and 2021 for employees transferring out of the business following the sale of the majority of the PTIC businesses
November 2022	Discussed outline policy changes Reviewed shareholder consultation feedback in respect of proposed changes to the Remuneration Policy Reviewed proposed sustainability targets for the 2023 PSP Reviewed changes to the Group bonus scheme rules Agreed dividend enhancement to the Deferred Bonus Share Plan Gave authority for the execution of actions in relation to the 2019 Sharesave maturity
December 2022	Reviewed initial draft of the Chair's letter for inclusion in the Directors' Remuneration Report Reviewed shareholder consultation feedback Reviewed the proposed adjustment to PSP targets following the sale of the majority of the PTIC businesses Reviewed proposed sustainability targets for the 2023 PSP Reviewed proposed targets for the 2023 senior annual Bonus Plan and PSP award Approved salary increases for the Group Chief Executive and Executive Committee Approved increases to the Executive Committee Car and Fuel Allowances Considered the Committee's effectiveness review Agreed the agenda programme for 2023

In addition to the above scheduled meetings, three additional meetings were held on 21 January 2022, 21 July 2022 and 20 September 2022.

Remuneration Committee advisers (unaudited information)

Deloitte LLP were retained as the appointed adviser to the Committee for the whole of 2022 having been appointed in October 2017, following a tender and selection process led by the Chair and including Committee members. As well as providing advice in relation to Executive remuneration and Non-Executive fees, Deloitte LLP also provide advice to the Group in relation to global employer services, global business tax services, indirect tax and M&A.

Deloitte LLP is a signatory to the Remuneration Consultants Group Code of Conduct. The lead engagement partner has no other connection with the Company or individual Directors. The total fees paid to Deloitte LLP for its services during the year in relation to Executive remuneration and Non-Executive fees were £109,720 (excluding VAT). The Committee regularly reviews the external adviser's relationship and is comfortable that the advice it is receiving remains objective and independent.

13. Other disclosures (unaudited information)

Percentage change in remuneration levels

The following chart shows the movement in salary/fees, benefits and annual bonus for each of the Group's Directors between the current and previous financial year compared with that of the average employee of the Group's parent Company. The movement for the average UK employee is also provided for additional reference given the small number of employees employed by the Group parent Company.

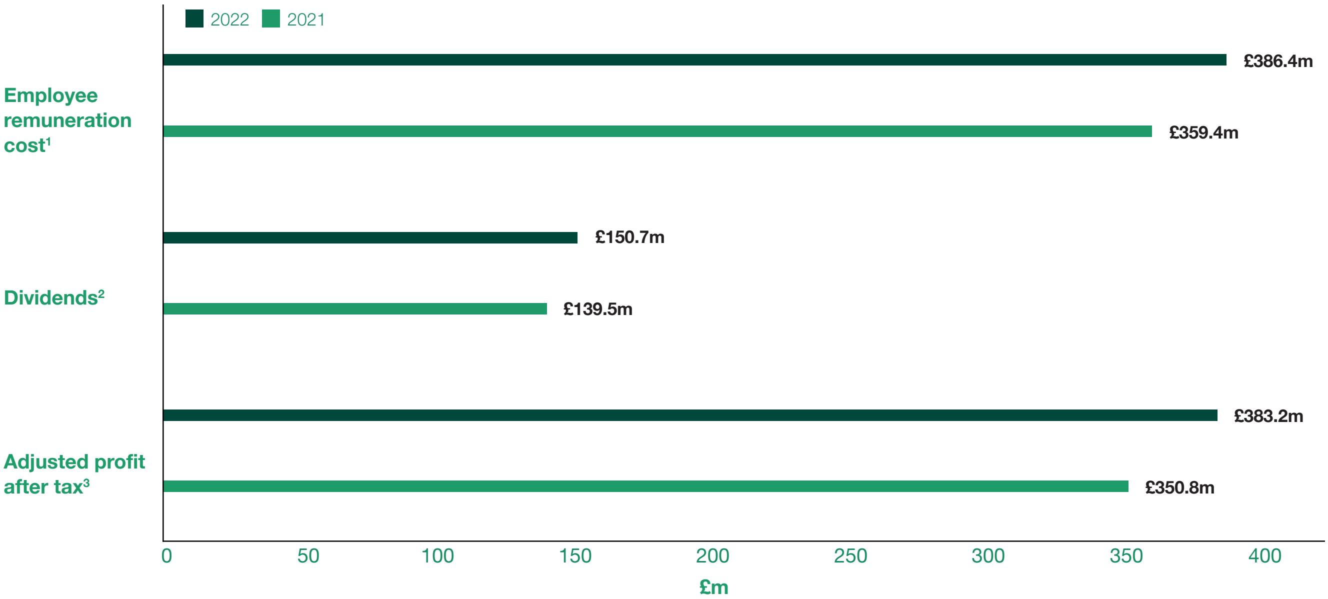
		% change in salary/fees	% change in benefits[1]	% change in bonus[2,3]
Average employee of the Group's parent Company[4]	**2022**	**6.46%**	**27.95%**	**17.32%**
	2021	-5.12%	-25.04%	–
	2020	3.66%	-0.06%	0.00%
Average UK employee[4]	**2022**	**5.54%**	**46.21%**	**5.46%**
	2021	0.68%	-8.63%	–
	2020	3.43%	-3.27%	27.96%
Executive Directors				
Steve Foots	**2022**	**5.00%**	**-10.17%**	**5.00%**
	2021	1.00%	-25.87%	–
	2020	2.00%	0.50%	0.00%
Jez Maiden	**2022**	**5.00%**	**-0.31%**	**5.00%**
	2021	1.00%	0.04%	–
	2020	2.00%	2.29%	0.00%
Non-Executive Directors				
Dame Anita Frew DBE	**2022**	**5.00%**	**–**	**–**
	2021	1.00%	–	–
	2020	2.00%	-100.00%	–
Helena Ganczakowski[5,6]	**2022**	**-1.01%**	**–**	**–**
	2021	4.84%	–	–
	2020	11.41%	-100.00%	–
Keith Layden	**2022**	**5.00%**	**–**	**–**
	2021	1.00%	–	–
	2020	2.00%	-100.00%	–
Roberto Cirillo	**2022**	**5.00%**	**–**	**–**
	2021	1.00%	–	–
	2020	2.00%	-100.00%	–
Jacqui Ferguson[6]	**2022**	**13.47%**	**–**	**–**
	2021	1.00%	–	–
	2020	2.00%	-100.00%	–
John Ramsay[5,7]	**2022**	**5.00%**	**–**	**–**
	2021	7.50%	–	–
	2020	–	–	–
Julie Kim[8]	**2022**	**–**	**–**	**–**
	2021	–	–	–
	2020	–	–	–
Nawal Ouzren[9]	**2022**	**–**	**–**	**–**
	2021	–	–	–
	2020	–	–	–

1. The benefits for Non-Executive Directors relate to the undertaking of business travel on behalf of Croda and ensuring the Directors are not out of pocket for related tax. No taxable business travel expenses were claimed by Non-Executive Directors in 2020 due to the COVID-19 pandemic and therefore there are no comparable figures to give a % change in 2021. In 2022, Non-Executive Directors travel returned to pre-pandemic levels, however, reflective of the low levels of travel in the prior year, the % change figures are not meaningful. These are 35,311% for Dame Anita Frew DBE, 471% for Roberto Cirillo, 1,726% for Jacqui Ferguson, 238% for Helena Ganczakowski, 4,744% for Keith Layden, 727% for John Ramsey and -73% for Julie Kim. For a full breakdown of the benefits for non-Executive Directors see page 136.
2. Bonus including annual bonus, DBSP and sales bonus.
3. The senior annual Bonus Plan and Croda Europe Discretionary Bonus Scheme did not pay out for 2019 or 2020 and therefore there is no comparable figure to give a % change in 2021 for Executive Directors or the Average employee of the Group's parent Company. For the Average UK employee, the % change in 2020 relates to only a small number of employees who received a sales bonus. As the senior annual Bonus Plan and Croda Europe Discretionary Bonus Scheme paid out in full for 2021, the bonus received by the Average UK employee in 2021 is significantly higher and as such the % change is not meaningful.
4. Excluding Executive Directors and Non-Executive Directors.
5. In 2020 Helena Ganczakowski was appointed as the Senior Independent Director and John Ramsay was appointed as the Chair of the Audit Committee. Their fees were pro-rated accordingly.
6. Helena Ganczakowski was replaced by Jacqui Ferguson as the Chair of the Remuneration Committee on 1 September 2022 and the fees for both were pro-rated accordingly.
7. John Ramsay was appointed to the Board on 1 January 2020 and therefore has no comparable remuneration figures for 2019.
8. Julie Kim was appointed to the Board on 1 September 2021 and voluntarily decided to waive her fees for 2021 and January 2022, she therefore has no comparable remuneration figures for 2020 or 2021.
9. Nawal Ouzren was appointed to the Board 1 February 2022 and therefore has no comparable remuneration figures for 2021.

Remuneration Report continued

Relative importance of the spend on pay

The chart below shows the movement in spend on staff costs versus that in dividends and adjusted profit after tax.



1. Employee remuneration costs, as stated in the notes to the Group accounts on page 177. These comprise all amounts charged against profit in respect of employee remuneration for the relevant financial year, less redundancy costs and share-based payments, both of which can vary significantly from year to year.
2. Dividends are the amounts payable in respect of the relevant financial year.
3. Adjusted profit after tax is profit for the relevant year adjusted for exceptional items, acquisition costs, amortisation of intangible assets arising on acquisition and the tax thereon.

14. Statement of voting (unaudited information)

	Remuneration Policy 2020 AGM		Annual Report on Remuneration 2022 AGM	
	number of votes	% of votes	number of votes	% of votes
Votes cast in favour	97,230,580	97.55%	102,924,327	94.95%
Votes cast against	2,445,834	2.45%	5,476,013	5.05%
Total votes cast	99,676,414	100%	108,400,340	100%
Withheld	152,926		144,054	

I will be available at the AGM to respond to any questions shareholders may raise on the Committee's activities.

On behalf of the Board

Jacqueline Ferguson

Jacqui Ferguson, Chair of the Remuneration Committee

27 February 2023

Directors' report

Other disclosures

Pages 70 to 144 inclusive, together with the sections of the Annual Report and Accounts incorporated by reference, constitute a Directors' Report that has been drawn up and presented in accordance with applicable English company law; the liabilities of the Directors in connection with that report are subject to the limitations and restrictions provided by that law.

Research and development

Research and development activities are undertaken with the prospect of gaining new scientific or technical knowledge and understanding.

Dividends

The Directors are recommending a final dividend of 61.0p per share (2021: 56.5p). If approved by shareholders, total dividends for the year will amount to 108.0p per share (2021: 100.0p). Details of dividends are shown in note 8 on page 177; details of the Company's Dividend Reinvestment Plan can be found on page 211. The Company has established various Employee Benefit Trusts (EBTs) in connection with the obligation to satisfy future share awards under employee share incentive schemes. The trustees of the EBTs have waived their rights to receive dividends on certain Ordinary Shares of the Company held in the EBTs. Such waivers represent less than 1% of the total dividend payable on the Company's Ordinary Shares. Further details of the EBTs can be found in note 24 on page 200.

Directors

The Company's Articles of Association (Articles) give the Directors power to appoint and replace Directors. Under the terms of reference of the Nomination Committee, any appointment must be recommended by the Nomination Committee for approval by the Board of Directors. The present Directors of the Company are shown on pages 72 and 73.

In line with the 2018 UK Corporate Governance Code, each Director will be standing for election or re-election at the AGM, with the exception of Jez Maiden and Helena Ganczakowski who will retire at the AGM. Details of the Directors' service contracts are given in the Directors' Remuneration Report on page 119.

Apart from the share option schemes, long-term incentive schemes and service contracts, no Director had any beneficial interest in any contract to which the Company or a subsidiary was a party during the year. A statement indicating the beneficial and non-beneficial interests of the Directors in the share capital of the Company, including share options, is shown in the Directors' Remuneration Report on page 135.

The Directors are responsible for managing the business of the Company and may exercise all the powers of the Company subject to the provisions of relevant statutes, the Company's Articles and any directions given by special resolution.

Directors' indemnities

The Company maintains Directors' and Officers' liability insurance that gives appropriate cover for any legal action brought against its Directors. The Company has also granted indemnities to each of its Directors and the Company Secretary, which represent 'qualifying third party indemnity provisions' (as defined by Section 234 of the Companies Act 2006), in relation to certain losses and liabilities that the Directors or Company Secretary may incur to third parties in the course of acting as Directors or the Company Secretary or as employees of the Company or of any associated company.
In addition, such indemnities have been granted to other officers of the Company who are Directors of subsidiary companies within the Group. Such indemnities were in place during 2022 and at the date of approval of the Group financial statements.

Share capital

At the date of this report, 142,536,884 Ordinary Shares of 10.609756p each have been issued and are fully paid up and quoted on the London Stock Exchange. At the date of this Report, the Company has issued and fully paid up 21,900 7.5% Cumulative Preference Shares, 498,434 6.6% Cumulative Preference Shares and 615,562 5.9% Cumulative Preference Shares, all of £1 each (the Preference Shares). The rights and obligations attached to the Company's Ordinary Shares and Preference Shares are set out in the Articles. The Articles are available on the Company's website www.croda.com or copies can be obtained from Companies House in the UK or by writing to the Company Secretary. There are no restrictions on the voting rights attached to the Company's Ordinary Shares or on the transfer of securities in the Company. The 7.5% Cumulative Preference Shares do not confer on the holders any right to receive notice of or to be present or to vote at any general meeting of the Company unless the cumulative preferential dividend on such shares is more than 12 calendar months in arrears. The 6.6% and 5.9% Cumulative Preference Shares do not confer on the holders any right to receive notice of or to be present or to vote at any general meeting of the Company, unless the cumulative preferential dividend on such shares is more than six calendar months in arrears or the business of the general meeting includes the consideration of a resolution for reducing the share capital of the Company, to sell the undertaking of the Company or to alter the Articles. No person holds securities in the Company that carry special rights with regard to control of the Company. The Company is not aware of any agreements between holders of securities that may result in restrictions on the transfer of securities or on voting rights.

Power to issue or buy back shares

At the 2022 AGM, authority was given to the Directors to allot unissued shares in the Company up to a maximum amount equivalent to approximately one third of the issued share capital, excluding shares held in treasury, for general purposes, plus up to a further one third of the Company's issued share capital, excluding shares held in treasury, but only in the case of a rights issue.

Directors' report continued

A further special resolution passed at that meeting granted authority to the Directors to allot equity securities in the Company for cash, without regard to the pre-emption provisions of the Companies Act 2006. Both of these authorities expire on the date of the 2023 AGM, that is 26 April 2023, and so the Directors propose to renew them for a further year.

Substantial shareholdings

As at 31 December 2022 in accordance with DTR 5 the holders of notifiable interests in the Company's share capital are shown in the table below.

	Number of shares	% of issued capital
BlackRock, Inc.	8,534,795	6.62%
Massachusetts Financial Services Company	6,970,021	4.99%
Norges Bank	5,597,132	4.01%
Royal Bank of Canada	5,093,443	3.65%

Employees

Diversity: We are committed to the principle of equal opportunity in employment and to ensuring that no applicant or employee receives less favourable treatment on the grounds of any protected characteristic or is disadvantaged by conditions or requirements that cannot be shown to be justified. Group human resources policies are clearly communicated to all of our employees and are available through the Company intranet.

Recruitment and progression: It is established policy throughout the business that decisions on recruitment, career development, promotion and other employment related issues are made solely on the grounds of individual ability, achievement, expertise and conduct.

We give full and fair consideration to applications for employment from people with disabilities, having regard to their particular aptitudes and abilities. Should an employee become disabled during their employment with the Company, they are fully supported by our Occupational Health provision. Efforts are made to continue their employment with reasonable adjustments being made to the workplace and role where feasible. Retraining is provided if necessary.

Development and learning: The Company recognises that the key to future success lies in the skills and abilities of its dedicated global workforce. The continuous development of all of our employees is key to meeting the future demands of our customers, especially in relation to enhanced creativity, innovation and customer service.

Involvement: We are committed to ensuring that employees share in the success of the Group. Owning shares in the Company is an important way of strengthening involvement in the development of the business and bringing together employees' and shareholders' interests. In 2022, 84% of our UK employees and 60% of our non-UK employees participated in one of our all-employee share plans, indicating employees' continued desire to be involved in the Company.

Employees are kept informed of matters of interest to them in a variety of ways, including the Company magazine, Croda Way; quarterly updates; the Company intranet, Connect; team briefings, podcasts, webinars, Yammer and Croda Now email messages. These communications help achieve a common awareness of the financial and economic factors affecting the performance of Croda and of changes within the business. We are committed to providing employees with opportunities to share their views and provide feedback on issues that are important to them. The Directors maintain oversight of employee matters through the Board and Committee meeting processes and information flows, including regular updates on employee matters and employee feedback received through employee engagement surveys. How the Directors engaged with employees and considered their interests when taking key decisions is further detailed on pages 78 to 81.

Non-financial reporting directive

The Companies, Partnerships and Groups (Accounts and Non-Financial Reporting) Regulations 2016 (the Regulations) require companies to disclose non-financial information necessary to provide investors and other stakeholders with a better understanding of a company's development, performance, position and impact of its activity. Throughout this Annual Report the Directors have disclosed a mix of financial and non-financial KPIs which they believe best reflect the Group's strategic priorities, and which will help to convey an understanding of the culture of the business and the drivers which contribute to the ongoing success of the Company. Please see the non-financial information statement on page 69 which sets out where stakeholders can find information relating to non-financial matters.

Mandatory XBRL tagging

The Board reviewed the process that had been developed to ensure that the primary financial statements and the notes to the financial statements, had been tagged in line with required taxonomy.

Other disclosures

Certain information that is required to be included in the Directors' Report can be found elsewhere in this document as referred to below, each of which is incorporated by reference into the Directors' Report:

- Information on greenhouse gas emissions can be found on page 65.
- Information on energy consumption can be found on page 65.
- Information on energy efficiency can be found on page 65.
- Information on gas emissions, energy consumption and energy efficiency - other disclosures can be found on page 65.
- For the purposes of Listing Rule (LR) 9.8.6R(8) the information on climate-related financial disclosures consistent with the TCFD recommendation and the TCFD recommended disclosure can be found on pages 60 to 68.
- Further details of the actions which the Group is taking to reduce emissions can also be found in the Sustainability Report and at www.croda.com.
- An indication of likely future developments in the Group's business can be found throughout the Strategic Report, starting on page 1.

- The long-term viability statement can be found on page 59.
- Information on the appropriateness of adopting the going concern basis of the accounts can be found on page 164.
- Our approach to risk management can be found on pages 52 to 54.
- Details of the services provided to shareholders can be found on pages 211 and 212 and on the Company's website.
- An indication of the Company's overseas branches are on pages 208 to 210.

There have been no events affecting the Company since the financial year end to report to shareholders in accordance with the Accounts Regulations and Disclosure Guidance and Transparency Rules.

For the purposes of Listing Rule (LR) 9.8.4R, the information required to be disclosed by LR 9.8.4R can be found in the table below.

All the information cross referenced above is incorporated by reference into the Directors' Report.

References in this document to other documents on the Company's website, such as the Sustainability Report, are included as an aid to their location and are not incorporated by reference into any section of the Annual Report and Accounts.

Independent auditor

Our auditor, KPMG, have indicated their willingness to continue in office and, on the recommendation of the Audit Committee, a resolution regarding their re-appointment and remuneration will be submitted to the AGM on 26 April 2023.

Audit information

The Directors confirm that, so far as they are aware, there is no relevant audit information of which the Company's auditor is unaware, and that they have each taken all the steps they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

Articles of Association

Unless expressly specified to the contrary in the Articles, the Company's Articles may be amended by a special resolution of the Company's shareholders.

A copy of the Articles is available at www.croda.com

Significant contracts and change of control

The Group has borrowing facilities which may require the immediate repayment of all outstanding loans together with accrued interest in the event of a change of control. The rules of the Company's employee share plans set out the consequences of a change in control of the Company on participants' rights under the plans. Generally, such rights will vest and become exercisable on a change of control subject to the satisfaction of performance conditions. None of the Executive Directors' service contracts contain provisions that are affected by a change of control and there are no other agreements that the Company is party to that take effect, alter or terminate in the event of a change of control of the Company, which are considered to be significant in terms of their potential impact on the Group. The Company does not have any contractual or other arrangements that are essential to the business of the Group.

Political donations

No donations were made for political purposes during the year (2021: £nil).

Financial risk management

The Group's exposure to and management of capital, liquidity, credit, interest rate and foreign currency risks are contained in note 20 on pages 193 and 194.

Capitalised interest

The Group's policy for capitalising borrowing costs directly attributable to the purchase or construction of fixed assets is set out on page 169.

Listing Rule (LR) 9.8.4R information

Section	Topic	Page reference
(1)	Capitalised interest	Page 143
(2)	Publication of unaudited financial information	Not applicable
(3)	Smaller related party transactions	Not applicable
(4)	Details of long term incentive schemes established specifically to recruit or retain a Director	Not applicable
(5) (6)	Waiver of emoluments by a Director	Page 136
(7) (8)	Allotments of equity securities for cash	Not applicable
(9)	Participation in a placing of equity securities	Not applicable
(10)	Contracts of significance	Page 143
(11) (14)	Controlling shareholder disclosures	Not applicable
(12) (13)	Dividend waiver	Page 141

Directors' report continued

Statement of Directors' responsibilities in respect of the Annual Report and the financial statements

The Directors are responsible for preparing the Annual Report and the Group and parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent Company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with international accounting standards in conformity with the requirements of the UK-adopted international accounting standards and applicable law and have elected to prepare the parent Company financial statements in accordance with UK accounting standards and applicable law, including FRS 101 Reduced Disclosure Framework.

Under Company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent Company and of the Group's profit or loss for that period. In preparing each of the Group and parent Company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable, relevant, reliable and prudent;
- for the Group financial statements, state whether they have been prepared in accordance with international accounting standards in conformity UK-adopted international accounting standards;
- for the parent Company financial statements, state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the parent Company financial statements;
- assess the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic Report, Directors' Report, Directors' Remuneration Report and Corporate Governance Statement that complies with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

In accordance with Disclosure Guidance and Transparency Rule 4.1.14R, the financial statements will form part of the annual financial report using the single electronic reporting format under the TD ESEF Regulation. The auditor's report on these financial statements provides no assurance over the ESEF format.

Responsibility statement of the Directors in respect of the annual financial report

We confirm that to the best of our knowledge:

- the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- the Strategic Report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

We consider the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

The Directors' Report and the Strategic Report, including the sections of the Annual Report and Accounts incorporated by reference, is the 'management report' for the purposes of the Financial Conduct Authority Disclosure Guidance and Transparency Rules (DTR 4.1.8R). It was approved by the Board on 27 February 2023 and is signed on its behalf by

Tom Brophy, Group General Counsel and Company Secretary

27 February 2023

KPMG LLP's Independent Auditor's Report

To the members of Croda International Plc

1. Our opinion is unmodified

In our opinion:

- the financial statements of Croda International Plc give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 December 2022, and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with UK-adopted international accounting standards;
- the Parent Company financial statements have been properly prepared in accordance with UK accounting standards, including FRS101 Reduced Disclosure Framework; and
- the Group and Parent Company financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

What our opinion covers

We have audited the Group and Parent Company financial statements of Croda International Plc ("the Company") for the year ended 31 December 2022 (FY22) included in the Annual Report and Accounts, which comprise:

Group (Croda International Plc and its subsidiaries)	Parent Company (Croda International Plc)
Group Income Statement;	Company Balance Sheet;
Group Statement of Comprehensive Income;	Company Statement of Changes in Equity; and
Group Balance Sheet;	Notes A to O to the Parent Company financial statements, including the accounting policies on page 204.
Group Statement of Cash Flows;	
Group Statement of Changes in Equity; and	
Notes 1 to 29 to the Group financial statements, including the accounting policies on pages 164 to 171.	

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion and matters included in this report are consistent with those discussed and included in our reporting to the Audit Committee.

We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities.

KPMG LLP's Independent Auditor's Report continued

2. Overview of our audit

Factors driving our view of risks

Our audit plan for FY22 was impacted by the divestment of the majority of the Performance Technologies and Industrial Chemicals businesses ("PTIC") which affected our risk assessment. We identified the significant judgement in relation to whether the PTIC divestment constituted a discontinued operation as a significant risk of fraud and error. Further, we identified the overall PTIC divestment accounting to be a key audit matter due to the complexities involved, allocation of resources in the audit and directing the efforts of the engagement.

The carrying amounts of both the Fragrances and Flavours CGUs are sensitive to key assumptions. There is an impairment risk due to the current trading performance compared to the original acquisition projections and associated management bias linked to this. Therefore, we identified goodwill valuation, in relation to these CGUs, to be a significant risk of fraud and error.

The UK defined benefit scheme is still open to future accrual and new members, and small changes in the assumptions and estimates with respect to the obligation would have a significant effect on the financial position of the Group. As part of our risk assessment, we removed the US defined benefit pension scheme from the scope of our assessed significant risk, because the potential range of reasonable outcomes is lower than materiality.

Key Audit Matters	Vs FY21	Item
Divestment of majority of the Performance Technologies and Industrial Chemicals businesses ("PTIC")	+	4.1
Fragrances and Flavours goodwill valuation	▲	4.2
Valuation of UK defined benefit pension scheme liabilities	▼	4.3

Audit committee interaction

During the year, the Audit Committee met five times. KPMG are invited to attend all Audit Committee meetings and are provided with an opportunity to meet with the Audit Committee in private sessions without the Executive Directors being present. For each Key Audit Matter, we have set out communications with the Audit Committee in section 4, including matters that required particular judgement for each.

The matters included in the report of the Audit Committee on page 96 are materially consistent with our observations of those meetings.

Our independence

We have fulfilled our ethical responsibilities and remain independent of the Group in accordance with UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities.

Apart from the matters noted below, we have not performed any non-audit services during the year ended 31 December 2022 or subsequently which are prohibited by the FRC Ethical Standard.

During 2023, we identified that certain KPMG member firms had provided preparation of local GAAP financial statement services and, in some cases, foreign language translation of those financial statements over the period 2019 to 2022 to entities not in scope for the group audit. The services, which have been terminated, were administrative in nature and did not involve any management decision-making or bookkeeping. The work was undertaken after the group audit opinion was signed by KPMG LLP for each of the impacted financial years and had no direct or indirect effect on Croda International Plc's consolidated financial statements.

In our professional judgment, we confirm that based on our assessment of the breach, our integrity and objectivity as auditor has not been compromised and we believe that an objective, reasonable and informed third party would conclude that the provision of this service would not impair our integrity or objectivity for any of the impacted financial years. The Audit Committee concurred with this view.

We were first appointed as auditor by the shareholders for the year ended 31 December 2018. The period of total uninterrupted engagement is for the 5 financial years ended 31 December 2022.

The Group engagement partner is required to rotate every 5 years. As these are the second sets of the Group's financial statements signed by Ian Griffiths, he will be required to rotate off after the FY25 audit.

The average tenure of partners responsible for component audits as set out in section 7 below is 3.5 years, with the shortest being 1 and the longest being 5.

Total audit fee	£2.2m
Audit related fees (including interim review)	£0.2m
Other services	£0.0m
Non-audit fee as a % of total audit and audit related fee %	1.9%
Date first appointed	25 April 2018
Uninterrupted audit tenure	5 years
Next financial period which requires a tender	2028
Tenure of Group engagement partner	2 years
Average tenure of component signing partners	3.5 years

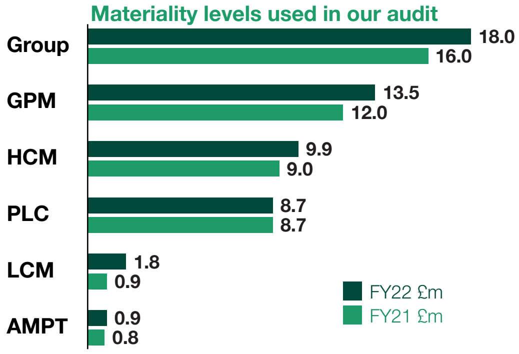
Materiality (item 6 below)

The scope of our work is influenced by our view of materiality and our assessed risk of material misstatement.

We have determined overall materiality for the Group financial statements as a whole at £18m (FY21: £16m) and for the Parent Company financial statements as a whole at £8.7m (FY21: £8.7m).

Consistent with FY21, we determined that Group normalised profit before tax from continuing operations ("PBT") remains the benchmark for the Group. As such, we based our Group materiality on normalised PBT of £379.7m (FY21: £328.6m), of which it represents 4.7% (FY21: 4.9%).

Materiality for the Parent Company financial statements was determined with reference to a benchmark of Parent Company total assets of which it represents 0.3% (FY21: 0.3%).



Group	Group Materiality
GPM	Group Performance Materiality
HCM	Highest Component Materiality
PLC	Parent Company Materiality
LCM	Lowest Component Materiality
AMPT	Audit Misstatement Posting Threshold

Group scope (item 7 below)

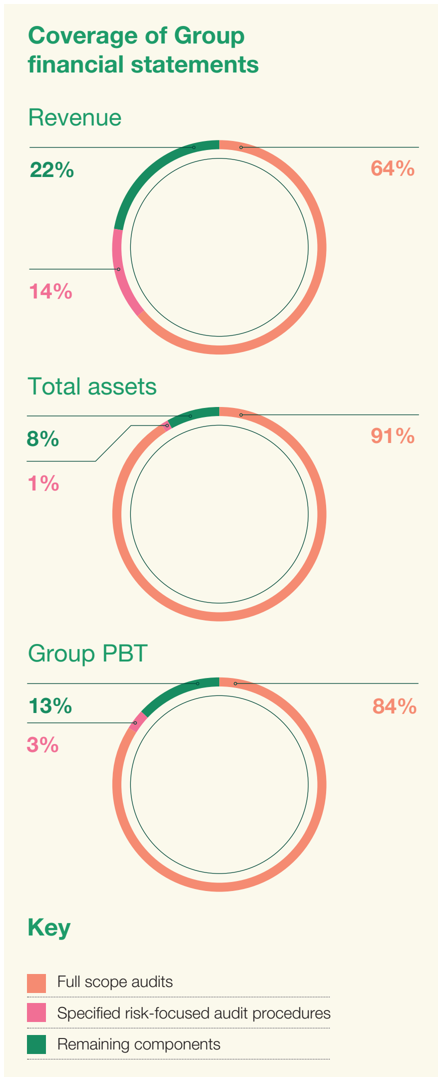
We have performed risk assessment and planning procedures to determine which of the Group's components are likely to include risks of material misstatement to the Group financial statements, the type of procedures to be performed at these components and the extent of involvement required from our component auditors around the world.

Of the Group's 87 (FY21: 87) reporting components, we subjected 11 (FY21: 10) to full scope audits for Group purposes and 4 (FY21: 6) to specified risk-focused audit procedures as these are not individually significant but were included in the scope of our Group reporting work in order to provide further coverage over the Group's results.

The components within the scope of our work accounted for the percentages illustrated opposite.

In addition, we have performed Group level analysis on the remaining components to determine whether further risks of material misstatement exist in those components.

We consider the scope of our audit, as communicated to the Audit Committee, to be an appropriate basis for our audit opinion.



KPMG LLP's Independent Auditor's Report continued

The impact of climate change on our audit

In planning our audit, we have considered the potential impact of climate change on the Group's business and its financial statements. The Group is monitoring Climate Positive targets and Science Based targets in line with limiting global warming to 1.5ºC by 2030, and to be climate net zero by 2050. During the year, the Group rebaselined its metrics to reflect the impact of the PTIC divestment and decided not to alter its 2030 targets and developed externally validated decarbonisation plans for its manufacturing sites and major office locations. Climate change initiatives impact the Group in a variety of ways including opportunities and risks relating to bio-based raw material supply, operational and supply chain decarbonisation and emerging regulatory requirements such as carbon taxes. Further information is provided on pages 60 to 68.

The Group considered the impact of climate change and the Group's targets in the preparation of the financial statements, including an evaluation of critical accounting estimates and judgements. The Group concluded that this did not have a material effect on the consolidated financial statements, as described on page 164 and 165. As part of our audit, we have made enquiries of management to understand the extent of the potential impact of climate change risks on the Group's financial statements, including their assessment of critical accounting estimates and judgements, and the effect on our audit. We have performed a risk assessment to evaluate the potential impact, including the goodwill impairment assessment, the estimates made regarding useful economic lives of property, plant and equipment, and the valuation of certain unquoted pension assets.

We held discussions with our own climate change professionals to challenge our risk assessment. Taking into account the nature of the industry in which the Fragrances and the Flavours CGUs operates, the expected remaining useful lives of property, plant and equipment, and the nature of unquoted pension assets, we assessed that there is not a significant impact on our audit for this financial year.

There was no significant impact of climate on our key audit matters. We have read the Group's disclosure on TCFD in the front half of the annual report as set out on pages 60 to 68 and considered consistency with the financial statements and our audit knowledge.

3. Going concern, viability and principal risks and uncertainties

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Group or the Parent Company or to cease their operations, and as they have concluded that the Group's and the Parent Company's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Going concern

We used our knowledge of the Group, its industry, and the general economic environment to identify the inherent risks to its business model and analysed how those risks might affect the Group's and Parent Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Group's and Parent Company's available financial resources and metrics relevant to debt covenants over this period were:

- The impact on the Group's cashflows from the agreement to acquire Solus Biotech on a debt-free, cash-free basis.
- Non completion of the Solus Biotech transaction within agreed timelines which could trigger a partial repayment of the USPP bonds.

We also considered less predictable but realistic second order impacts, such as regulatory incidents, site incidents and impact of product quality issues leading to a product recall or loss of revenue which could result in a rapid reduction of available financial resources.

We considered whether these risks could plausibly affect the liquidity or covenant compliance in the going concern period by assessing the degree of downside assumption that, individually and collectively, could result in a liquidity issue, taking into account the Group's current and projected cash and facilities (a reverse stress test). We also assessed the completeness of the going concern disclosure on page 164.

Accordingly, based on those procedures, we found the Directors' use of the going concern basis of preparation without any material uncertainty for the Group and Parent Company to be acceptable. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the above conclusions are not a guarantee that the Group or the Parent Company will continue in operation.

Our conclusions

- We consider that the Directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate;
- We have not identified, and concur with the Directors' assessment that there is not, a material uncertainty related to events or conditions that, individually or collectively, may cast significant doubt on the Group's or Parent Company's ability to continue as a going concern for the going concern period;
- We have nothing material to add or draw attention to in relation to the Directors' statement on page 164 to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Parent Company's use of that basis for the going concern period, and we found the going concern disclosure on page 164 to be acceptable; and
- The same statement is materially consistent with the financial statements and our audit knowledge.

Disclosures of emerging and principal risks and longer-term viability

Our responsibility	Our reporting
We are required to perform procedures to identify whether there is a material inconsistency between the Directors' disclosures in respect of emerging and principal risks and the viability statement, and the financial statements and our audit knowledge. Based on those procedures, we have nothing material to add or draw attention to in relation to: – the Directors' confirmation within the long-term viability statement on page 59 that they have carried out a robust assessment of the emerging and principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity; – the Principal Risks disclosures describing these risks and how emerging risks are identified and explaining how they are being managed and mitigated; and – the Directors' explanation in the long-term viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions. We are also required to review the long-term viability statement set out on page 59 under the Listing Rules. Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Parent Company's longer-term viability.	We have nothing material to add or draw attention to in relation to these disclosures. We have concluded that these disclosures are materially consistent with the financial statements and our audit knowledge.

4. Key audit matters

What we mean

Key audit matters are those matters that, in our professional judgment, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on:

- the overall audit strategy;
- the allocation of resources in the audit; and
- directing the efforts of the engagement team.

We include below the key audit matters in decreasing order of audit significance together with our key audit procedures to address those matters and our results from those procedures. These matters were addressed, and our results are based on procedures undertaken, for the purpose of our audit of the financial statements as a whole. We do not provide a separate opinion on these matters.

KPMG LLP's Independent Auditor's Report continued

4.1 Divestment of the majority of the Performance Technologies and Industrial Chemicals businesses (Group and Parent Company)

Financial statement elements		Our assessment of risk vs FY21	Our results
Gain on business disposal	**FY22** Group £356.0m Parent Company £6.5m	+ We have identified this area as risk for the first time in FY22	FY22: Acceptable

Description of the key audit matter

Accounting treatment

During the period the Group divested the majority of the Performance Technologies and Industrial Chemicals businesses ("PTIC").

There is judgement involved in determining whether the divested business represents a discontinued operation, and specifically whether it meets the definition of a separate major line of business and a component of the entity as defined in relevant accounting standards. If the disposed of business met that definition then the results of that business, and the gain result on disposal, would be presented separately from the results of continuing operations for the current and comparative period.

The result of continuing operations is a management performance metric and reflects the manner in which results of the Group are interpreted. This gives rise to a significant judgement in the income statement presentation of the results related to PTIC that is susceptible to error and fraud.

Calculation error

The divestment of the majority of the PTIC business is a material transaction outside of the normal course of business and affected a number of components across several geographical jurisdictions. The appropriate identification of the component assets and liabilities, and the allocation of the proceeds across these components is an area of higher complexity relative to other areas of the audit and requires additional auditor effort. Controls over such an unusual transaction are not routinely in place which also led to a higher degree of substantive work.

Our response to the risk

Our procedures to address the risk included:

- **Accounting analysis:** critically assessed the conclusions reached by management in respect of the assessment as to whether the business met the definition of a separate major line of business and a component of the entity relative to the requirements of the relevant accounting standards for the Group.
- **Tests of details:** assessed the accuracy of the calculation of the Group and Parent Company gain on disposal. Compared the divested assets and liabilities to the approved completion accounts.
- **Our taxation and valuation expertise:** involvement of our own valuation and taxation specialists in evaluating the allocation of proceeds and the appropriateness of the resulting taxation charge arising on the gain on disposal for the Group and Parent Company.
- **Assessing transparency:** considered adequacy of the Group's disclosures in respect of the discontinued operations judgement made.

We performed the tests above rather than seeking to rely on any of the Group's controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described.

Communications with the Croda International Plc Audit Committee

Our discussions with and reporting to the Audit Committee included:

- Our approach to the audit of the divestment of the majority of PTIC, including the involvement of our taxation and valuation specialists.
- Our conclusions on the appropriateness of the divestment being accounted for within continuing operations, rather than as a discontinued operation.
- The adequacy of the disclosures relating to this critical accounting judgement.

Areas of particular auditor judgement

We identified the following as the area of particular auditor judgement:

- Whether PTIC was a separate major line of business and a component of the group when assessed against the requirements of the relevant accounting standards.

Our results

Based on the risk identified and the procedures that we performed, we found the gain on disposal relating to PTIC and the related disclosures to be acceptable and in accordance with accounting standards.

Further information in the Annual Report and Accounts: See the Report of the Audit Committee on page 101 for details on how the Audit Committee considered this key audit matter as an area of significant attention, page 164 for the accounting policy and Note 28 of the financial statements for disclosures.

4.2 Fragrances and Flavours goodwill valuation

Financial statement elements			Our assessment of risk vs FY21	Our results
Goodwill: £844.6m (FY21: £852.0m), although this specific risk is only associated with the Fragrances (£269.3m) and Flavours (£94.4m) Cash Generating Units.	**FY22** £363.7m	FY21 £379.1m	▲ Risk is increased due to potential management bias in their assessment of goodwill recoverability as a result of trading performance being lower than original projections produced at a time of acquisition.	FY22: Acceptable FY21: Acceptable

Description of the key audit matter

- The value in use calculation for the Fragrances and Flavours CGUs (acquired through the Iberchem acquisition in FY20), which represents the estimated recoverable amount, is subjective due to the inherent uncertainty involved in forecasting and discounting estimated future cash flows (specifically the key assumptions such as EBITDA combined annual growth rate, discount rates and terminal growth rates applied).
- Estimation uncertainty is elevated as a result of the goodwill impairment charge booked for Flavours in the year, and current trading performance being lower than original cash flow projections produced at the time of the acquisition.
- The effect of this matter is that, as part of our risk assessment, we determined that impairment assessments in respect of the goodwill allocated to Fragrances and Flavours Cash Generating Units have a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole. The financial statements (note 12) disclose the sensitivities estimated by the Group.

Our response to the risk

Our procedures to address the risk included:

- **Assessing methodology:** we obtained the discounted value in use cash flow models and assessed the methodology, principles and integrity of the models.
- **Our valuation expertise:** we involved our own valuation specialists to assist us in challenging the appropriateness of the discount rate assumption.
- **Benchmarking assumptions:** we challenged the Group’s forecast assumptions for cash flow projections, including the rate of sales growth and operating profit growth in the short to medium term, the long-term growth rates and the appropriateness of discount rates, with reference to internally and externally derived sources.
- **Historical comparisons:** we assessed the Group’s historical forecasting accuracy by comparing forecasts from prior years with actual results in those years.
- **Sensitivity analysis:** we performed breakeven analysis on the key assumptions including the discount rate and long-term growth rates.
- **Assessing transparency:** we considered the adequacy of the Group’s disclosures in respect of impairment testing and whether disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions properly reflect the risks inherent in the valuations of goodwill.

We performed the tests above rather than seeking to rely on any of the Group’s controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described.

Communications with the Croda International Plc Audit Committee

Our discussions with and reporting to the Audit Committee included:

- Our approach to the audit of the Fragrances and Flavours goodwill valuation, including our planned substantive procedures, the involvement of our valuation specialists and the extent of our control reliance.
- Our conclusions on the appropriateness of the methodology and key assumptions used.
- The adequacy of the disclosures, particularly as they relate to the sensitivity of the key assumptions.

Areas of particular auditor judgement

We identified the following as the area of particular auditor judgement:

- The appropriateness of the model, and in particular key assumptions used in the model including EBITDA combined annual growth rate, discount rates and terminal growth rates.

Our results

Based on the risk identified and our procedures performed, we found the Fragrances and Flavours goodwill valuation and related disclosures to be acceptable (FY21: acceptable).

Further information in the Annual Report and Accounts: See the Report of the Audit Committee on page 101 for details on how the Audit Committee considered this key audit matter as an area of significant attention, page 166 for the accounting policy and Note 12 of the financial statements for disclosures.

KPMG LLP's Independent Auditor's Report continued

4.3 Valuation of UK defined benefit pension scheme liabilities

Financial statement elements	FY22	FY21	Our assessment of risk vs FY21	Our results
Gross defined benefit obligations £850.1m (FY21: £1,309m); although this specific risk is only associated with the UK scheme £726.2m (FY21: £1,162.6m)	£726.2m	£1,289.4m	▼ As part of our FY22 risk assessment, we removed the US scheme from the scope of the assessed significant risk. This is due to the potential range of reasonable outcomes being lower than our materiality.	FY22: Acceptable FY21: Acceptable

Description of the key audit matter

- The Group has a defined benefit pension scheme in the UK that is material in the context of the overall balance sheet and the results of the Group.
- Significant estimates, including the discount rate, the inflation rate and the mortality rate, are made in valuing the Group's defined benefit pension obligations (before deducting the scheme assets). The UK scheme is also still open to future accrual and new members, and small changes in the assumptions and estimates with respect to the obligation would have a significant effect on the financial position of the Group. The Group engages external actuarial specialists to assist them in selecting appropriate assumptions and calculate the obligations.
- The effect of these matters is that, as part of our risk assessment, we determined that the valuation of the defined benefit obligations has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole, and possibly many times that amount. The financial statements (note 11) disclose the sensitivity estimated by the Group.

Our response to the risk

Our procedures to address the risk included:

- **Benchmarking assumptions:** we challenged key assumptions applied (discount rate, inflation rate, and mortality rate) with the support of our own actuarial specialists, including a comparison of key assumptions against market data.
- **Actuary's credentials:** we assessed the competence, capabilities, and objectivity of the Group's actuarial expert.
- **Sensitivity analysis:** we assessed the sensitivity of the defined benefit obligation to changes in key assumptions.
- **Assessing transparency:** we considered adequacy of the Group's disclosures in respect of the sensitivity of the gross obligation to changes in key assumptions.

We performed the tests above rather than seeking to rely on any of the Group's controls because the nature of the balance is such that we would expect to obtain audit evidence primarily through the detailed procedures described.

Communications with the Croda International Plc Audit Committee

Our discussions with and reporting to the Audit Committee included:

- Our approach to the audit of UK defined benefit pension scheme obligations, including the involvement of our actuarial specialists.
- Our conclusions on the appropriateness of key assumptions used.
- The adequacy of the disclosures, particularly as it relates to the sensitivity of the key assumptions.

Areas of particular auditor judgement

We identified the following as the area of particular auditor judgement:

- The appropriateness of the valuation of UK defined benefit pension scheme liabilities and in particular, the selection of key assumptions used in the valuation (the discount rate, the inflation rate and the mortality rate).

Our results

Based on the risk identified and the procedures performed, we found the valuation of the defined benefit pension scheme obligation to be acceptable (FY21 result: acceptable).

Further information in the Annual Report and Accounts: See the Report of the Audit Committee on page 101 for details on how the Audit Committee considered this key audit matter as an area of significant attention, page 168 for the accounting policy and Note 11 of the financial statements for disclosures.

We continue to perform procedures over recoverability of the Parent Company's investment in subsidiaries and intercompany debtors. However, as the relative importance of this matter has reduced in the current period due to the disposal of the PTIC businesses, we have not assessed this as one of the matters of most significance to our current year audit and, therefore, it is not separately identified in our report this year.

5. Our ability to detect irregularities, and our response

Fraud - Identifying and responding to risks of material misstatement due to fraud

Fraud risk assessment	To identify risks of material misstatement due to fraud ("fraud risks") we assessed events or conditions that could indicate an incentive or pressure to commit fraud or provide an opportunity to commit fraud. Our risk assessment procedures included: – Enquiring of Directors, the Audit Committee and inspection of policy documentation as to the Group's high-level policies and procedures to prevent and detect fraud, including the internal audit function, as well as whether they have knowledge of any actual, suspected or alleged fraud. – Reading Board, Nomination Committee, Remuneration Committee and Audit Committee minutes, and whistleblowing logs. – Considering remuneration incentive schemes (annual Bonus Plan and Performance Share Plan) and performance targets for management, including the EPS growth target. – Using our own forensic specialists to assist us in identifying fraud risks. This included holding a fraud risk assessment discussion with the audit team and assisting us in designing procedures to identify fraud risks.
Risk communications	We communicated identified fraud risks throughout the audit team and remained alert to any indications of fraud throughout the audit. This included communication from the Group audit team to full scope and specified risk-focused component audit teams of relevant fraud risks identified at the Group level and requesting these component audit teams to report to the Group audit team any instances of fraud that could give rise to a material misstatement at the Group level.
Fraud risks	As required by auditing standards, we perform procedures to address the risk of management override of controls, in particular the risk that management may be in a position to make inappropriate accounting entries. We do not believe there is a fraud risk related to revenue recognition because revenue transactions have low individual value with high volume, are routine and process driven and do not involve judgement or estimation. This reduces the opportunities for fraudulent activity. We also identified fraud risks related to Fragrances and Flavours CGUs as trading performance was behind compared to the original trading projections produced at the time of acquisition, we identified management bias in the assessment of goodwill recoverability in Fragrances and Flavours CGUs. In addition, we also identified a fraud risk in relation to the income statement presentation related to the divestment of PTIC as certain management performance metrics are based on the result of continuing operations. Further detail is set out in the key audit matter disclosures in section 4 of this report.
Procedures to address fraud risks	We performed procedures including: – Identifying journal entries to test for all full scope and specified risk-focused components based on risk criteria by the Group audit team. Component audit teams were instructed to test the identified entries to supporting documentation. These included those posted by senior finance management or other high-risk users and those posted to unusual account combinations. – Assessing whether the judgements made in making accounting estimates and related accounting treatment are indicative of a potential bias.

Laws and regulations - Identifying and responding to risks of material misstatement relating to compliance with laws and regulations

Laws and regulations risk assessment	We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience, through discussion with the Directors and other management (as required by auditing standards), and from inspection of the Group's regulatory and legal correspondence and discussions with the Directors and other management of the policies and procedures regarding compliance with laws and regulations.
Risk communications	We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit. This included communication from the Group audit team to all full scope and specified risk-focused component audit teams of relevant laws and regulations identified at the Group level, and a request for these component auditors to report to the Group team any instances of non-compliance with laws and regulations that could give rise to a material misstatement at the Group level.
Direct laws context and link to audit	The potential effect of these laws and regulations on the financial statements varies considerably. The Group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies' legislation), distributable profits legislation, pensions legislation, and taxation legislation, and we assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.
Most significant indirect law/regulation areas	The Group is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the Group's licence to operate. We identified the following areas as those most likely to have such an effect: GDPR compliance, health and safety and product liability, competition, anti-bribery and corruption, intellectual property, employment law, tax, trade compliance laws and environmental legislation, recognising the nature of the Group's activities. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the Directors and other management and inspection of regulatory and legal correspondence, if any. Therefore, if a breach of operational regulations is not disclosed to us or evident from relevant correspondence, an audit will not detect that breach.

Context

Context of the ability of the audit to detect fraud or breaches of law or regulation	Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there remained a higher risk of non-detection of fraud, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. Our audit procedures are designed to detect material misstatement. We are not responsible for preventing non-compliance or fraud and cannot be expected to detect non-compliance with all laws and regulations.

6. Our determination of materiality

The scope of our audit was influenced by our application of materiality. We set quantitative thresholds and overlay qualitative considerations to help us determine the scope of our audit and the nature, timing and extent of our procedures, and in evaluating the effect of misstatements, both individually and in the aggregate, on the financial statements as a whole.

£18m
(FY21: £16m)
Materiality for the Group financial statements as a whole

What we mean

A quantitative reference for the purpose of planning and performing our audit.

Basis for determining materiality and judgements applied

Materiality for the Group financial statements as a whole was set at £18m (FY21: £16m). This was determined with reference to a benchmark of the normalised Group profit before tax from continuing operations ("PBT").

Consistent with FY21, we determined that Group materiality benchmark applied remains the main benchmark for the Group. We normalised by adding back adjustments that do not represent the normal, continuing operations of the Group and by averaging over 3 (FY21: 3) years. The items we adjusted for were exceptional PTIC gain, goodwill impairment and property, plant and equipment impairment (FY21 items we adjusted were exceptional curtailment gains) as disclosed in note 3. We selected 3 (FY21: 3) years to average PBT to account for the fluctuations in the Group's performance due to the impact of COVID19. As such, we based our Group materiality on Group normalised PBT of £379.7m (FY21: £328.6m).

Our Group materiality of £18m was determined by applying a percentage to the normalised PBT. When using a benchmark of PBT to determine overall materiality, KPMG's approach for listed entities considers a guideline range 3% - 5% of the measure. In setting overall Group materiality, we applied a percentage of 4.7% (FY21: 4.9%) to the benchmark.

Materiality for the Parent Company financial statements as a whole was set at £8.7m (FY21: £8.7m), determined with reference to a benchmark of Parent Company total assets, of which it represents 0.3% (FY21: 0.3%).

£13.5m
(FY21: £12m)
Performance materiality

What we mean

Our procedures on individual account balances and disclosures were performed to a lower threshold, performance materiality, so as to reduce to an acceptable level the risk that individually immaterial misstatements in individual account balances add up to a material amount across the financial statements as a whole.

Basis for determining performance materiality and judgements applied

We have considered performance materiality at a level of 75% (FY21: 75%) of materiality for the Group financial statements as a whole to be appropriate.

The Parent Company performance materiality was set at £6.5m (FY21: £6.5m), which equates to 75% (FY21: 75%) of materiality for the Parent Company financial statements as a whole.

We applied this percentage in our determination of performance materiality based on the number and level of identified misstatements and control deficiencies during the prior period.

£0.9m
(FY21: £0.8m)
Audit misstatement posting threshold

What we mean

This is the amount below which identified misstatements are considered to be clearly trivial from a quantitative point of view. We may become aware of misstatements below this threshold which could alter the nature, timing and scope of our audit procedures, for example if we identify smaller misstatements which are indicators of fraud.

This is also the amount above which all misstatements identified are communicated to Croda International Plc's Audit Committee.

Basis for determining the audit misstatement posting threshold and judgements applied

We set our audit misstatement posting threshold at 5% (FY21: 5%) of our materiality for the Group financial statements. We also report to the Audit Committee any other identified misstatements that warrant reporting on qualitative grounds.

The overall materiality for the Group financial statements of £18m (FY21: £16m) compares as follows to the main financial statement caption amounts:

	Total Group Revenue		Group Profit Before Tax		Total Group Assets	
	FY22	FY21	**FY22**	FY21	**FY22**	FY21
Financial statement Caption	£2,089.3m	£1,889.6m	£780.0m	£411.5m	£3,611.9m	£3,293.4m
Group Materiality as % of caption	0.9%	0.8%	2.3%	3.9%	0.5%	0.5%

KPMG LLP's Independent Auditor's Report continued

7. The scope of our audit

Group scope

What we mean

How the Group audit team determined the procedures to be performed across the Group.

The Group has 87 (FY21: 87) reporting components. In order to determine the work performed at the reporting component level, we identified those components which we considered to be of individual financial significance and those remaining components on which we required procedures to be performed to provide us with the evidence we required in order to conclude on the Group financial statements as a whole.

We determined individually financially significant components as those contributing at least 5% (FY21: 5%) of total assets or 10% (FY21: 10%) of total revenue or 10% (FY21: 10%) of the Group profit before tax. We selected total assets, total revenue, and profit before tax because these are the most representative of the relative size of the components. We identified 5 (FY21: 6) components as individually financially significant components and performed full scope audits on these components.

The components within the scope of our work accounted for the following percentages of the Group's results, with the prior year comparatives indicated in brackets:

Scope	Number of components	Range of materiality applied
Full scope audit	11 (10)	£1.8m - £9.9m (£0.9m - £9m)
Specified audit procedures	4 (6)	£1.8m - £2.7m (£0.9m – £1.5m)

The remaining 22% (FY21: 22%) of total Group revenue, 18% (FY21: 16%) of total profits and losses that made up Group profit before tax and 8% (FY21: 12%) of total Group assets is represented by 72 (FY21: 71) reporting components, none of which individually represented more than 2% (FY21: 2%) of any of total Group revenue, total profits and losses that made up Group profit before tax or total Group assets. For these components, we performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these.

The work on 11 of the 15 components (FY21: 12 of the 16 components) was performed by component auditors and the rest, including the audit of the Parent Company, was performed by the Group team.

The Group team has also performed audit procedures on the following areas on behalf of the components:

- Understanding of IT is gained centrally on behalf of components that are on the centralised ERP system and findings are shared with relevant component teams.
- The Group team adopted a centralised approach to testing revenue, purchases, and journal entries. Data and analytics routines were performed for 13 components, and the Group team assessed the outputs of these routines before sending outputs to component auditors and instructing them to test transactions meeting certain criteria.
- The Group team has centrally inspected the PTIC sale and purchase agreement, involved valuation specialists and performed audit procedures on the gain on transaction.

The Group team communicated the results of these procedures to the component teams.

The Group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group team approved the component materialities, as detailed in the table above, having regard to the mix of size and risk profile of the Group across the components.

The scope of the audit work performed was predominately substantive as we placed limited reliance upon the Group's internal control over financial reporting.

Group audit team oversight

What we mean

The extent of the Group audit team's involvement in component audits.

In working with component auditors, we:

- Held planning calls with component audit teams to discuss the significant areas of the audit relevant to the components, including the key audit matter in respect of divestment of the majority of the PTIC businesses.
- Issued Group audit instructions to component auditors on the scope of their work, including specifying the minimum procedures to perform in their audit of revenue, cash and journals.
- Visited two (FY21: none) components in-person in Spain and the US as the audit progressed to understand and challenge the audit approach. Organised regular video conferences with the partners and directors of the Group and component audit teams. At these visits and video conferences, the findings reported to the Group team were discussed in more detail, and any further work required by the Group team was then performed by the component audit teams.
- Inspection of component audit teams' key work papers (in person and/or using remote technology capabilities) to evaluate the quality of execution of the audits of the components with particular focus on work related to significant risk and assessed the appropriateness of conclusion and consistencies between reported findings and work performed.

8. Other information in the annual report

The Directors are responsible for the other information presented in the Annual Report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

All other information

Our responsibility	Our reporting
Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge.	Based solely on that work we have not identified material misstatements or inconsistencies in the other information.

Strategic Report and Directors' Report

Our responsibility and reporting	Our reporting
Based solely on our work on the other information described above we report to you as follows: – we have not identified material misstatements in the Strategic Report and the Directors' Report; – in our opinion the information given in those reports for the financial year is consistent with the financial statements; and – in our opinion those reports have been prepared in accordance with the Companies Act 2006.	We have nothing to report in these respects.

Directors' Remuneration Report

Our responsibility	Our reporting
We are required to form an opinion as to whether the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.	In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Corporate governance disclosures

Our responsibility	Our reporting
We are required to perform procedures to identify whether there is a material inconsistency between the financial statements and our audit knowledge, and: – the Directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy. – the section of the annual report describing the work of the Audit Committee, including the significant issues that the Audit Committee considered in relation to the financial statements, and how these issues were addressed; and – the section of the annual report that describes the review of the effectiveness of the Group's risk management and internal control systems.	Based on those procedures, we have concluded that each of these disclosures is materially consistent with the financial statements and our audit knowledge.
We are also required to review the part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified by the Listing Rules for our review.	We have nothing to report in this respect.

Other matters on which we are required to report by exception

Our responsibility	Our reporting
Under the Companies Act 2006, we are required to report to you if, in our opinion: – adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or – the Parent Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or – certain disclosures of Directors' remuneration specified by law are not made; or – we have not received all the information and explanations we require for our audit.	We have nothing to report in these respects.

KPMG LLP's Independent Auditor's Report continued

9. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page 144, the Directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group and Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

The Company is required to include these financial statements in an annual financial report prepared using the single electronic reporting format specified in the TD ESEF Regulation. This auditor's report provides no assurance over whether the annual financial report has been prepared in accordance with that format.

10. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Ian Griffiths
for and on behalf of KPMG LLP, Statutory Auditor

Chartered Accountants
15 Canada Square
London
E14 5GL

27 February 2023

Group Consolidated Statements

Group Income Statement

for the year ended 31 December 2022

	Note	2022 Adjusted £m	2022 Adjustments £m	2022 Reported Total £m	2021 Adjusted £m	2021 Adjustments £m	2021 Reported Total £m
Revenue	1	**2,089.3**	**–**	**2,089.3**	1,889.6	–	1,889.6
Cost of sales		**(1,103.7)**	**–**	**(1,103.7)**	(950.7)	–	(950.7)
Gross profit		**985.6**	**–**	**985.6**	938.9	–	938.9
Operating costs	2	**(470.5)**	**(70.4)**	**(540.9)**	(470.3)	(30.4)	(500.7)
Operating profit	3	**515.1**	**(70.4)**	**444.7**	468.6	(30.4)	438.2
Gain on business disposal	28	**–**	**356.0**	**356.0**	–	–	–
Financial costs	4	**(24.1)**	**(1.7)**	**(25.8)**	(24.9)	(3.3)	(28.2)
Financial income	4	**5.1**	**–**	**5.1**	1.5	–	1.5
Profit before tax		**496.1**	**283.9**	**780.0**	445.2	(33.7)	411.5
Tax	5	**(112.9)**	**(13.8)**	**(126.7)**	(94.4)	5.7	(88.7)
Profit after tax for the year		**383.2**	**270.1**	**653.3**	350.8	(28.0)	322.8
Attributable to:							
Non-controlling interests		**4.0**	**–**	**4.0**	2.0	–	2.0
Owners of the parent		**379.2**	**270.1**	**649.3**	348.8	(28.0)	320.8
		383.2	**270.1**	**653.3**	350.8	(28.0)	322.8

Adjustments relate to exceptional items, amortisation of intangible assets arising on acquisition and the tax thereon. Details are disclosed in note 3.

Earnings per 10.61p ordinary share	Note	Pence		Pence	Pence		Pence
Basic	7	**272.0**		**465.8**	250.0		230.0
Diluted	7	**271.4**		**464.8**	249.5		229.5

Group Statement of Comprehensive Income

for the year ended 31 December 2022

	Note	2022 £m	2021 £m
Profit after tax for the year		**653.3**	322.8
Other comprehensive income/(expense):			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of post-retirement benefit obligations	11	**88.9**	40.6
Tax on items that will not be reclassified	5	**(22.4)**	(8.3)
		66.5	32.3
Items that have been or may be reclassified subsequently to profit or loss:			
Currency translation		**104.2**	(61.1)
Reclassification of currency translation		**(14.8)**	–
Cash flow hedging	20	**2.8**	3.7
Reclassification of cash flow hedging	20	**(6.5)**	–
Cost of hedging reserve	20	**–**	(6.0)
Reclassification of cost of hedging reserve	20	**6.0**	–
Tax on items that may be reclassified	5	**(0.4)**	0.4
		91.3	(63.0)
Other comprehensive income/(expense) for the year		**157.8**	(30.7)
Total comprehensive income for the year		**811.1**	292.1
Attributable to:			
Non-controlling interests		**4.4**	2.1
Owners of the parent		**806.7**	290.0
		811.1	292.1
Arising from:			
Continuing operations		**811.1**	292.1

Group Balance Sheet

at 31 December 2022

	Note	2022 £m	2021 £m
Assets			
Non-current assets			
Intangible assets	12	**1,253.2**	1,271.6
Property, plant and equipment	13	**964.5**	988.1
Right of use assets	14	**96.9**	87.9
Investments	16	**3.4**	3.3
Deferred tax assets	6	**10.3**	13.5
Retirement benefit assets	11	**123.2**	35.3
		2,451.5	2,399.7
Current assets			
Inventories	17	**464.0**	443.0
Trade and other receivables	18	**375.8**	337.9
Cash and cash equivalents	20	**320.6**	112.8
		1,160.4	893.7
Liabilities			
Current liabilities			
Trade and other payables	19	**(320.0)**	(358.0)
Borrowings and other financial liabilities	20	**(121.9)**	(50.9)
Lease liabilities	14	**(12.9)**	(12.2)
Provisions	21	**(6.1)**	(5.5)
Current tax liabilities		**(26.9)**	(33.3)
		(487.8)	(459.9)
Net current assets		**672.6**	433.8
Non-current liabilities			
Borrowings and other financial liabilities	20	**(401.8)**	(794.6)
Lease liabilities	14	**(79.2)**	(78.3)
Other payables	19	**(4.5)**	(12.3)
Retirement benefit liabilities	11	**(23.1)**	(27.4)
Provisions	21	**(11.5)**	(3.6)
Deferred tax liabilities	6	**(172.9)**	(151.4)
		(693.0)	(1,067.6)
Net assets		**2,431.1**	1,765.9
Equity			
Ordinary share capital	22	**15.1**	15.1
Preference share capital	20	**–**	1.1
Share capital		**15.1**	16.2
Share premium account		**707.7**	707.7
Reserves		**1,692.8**	1,029.2
Equity attributable to owners of the parent		**2,415.6**	1,753.1
Non-controlling interests in equity	25	**15.5**	12.8
Total equity		**2,431.1**	1,765.9

The financial statements on pages 159 to 201 were signed on behalf of the Board who approved the accounts on 27 February 2023.

Dame Anita Frew DBE
Chair

Jez Maiden
Group Finance Director

Group Statement of Cash Flows

for the year ended 31 December 2022

	Note	**2022 £m**	2021 £m
Cash generated from operating activities			
Cash generated by operations	ii	**462.2**	479.0
Interest paid		**(23.2)**	(19.8)
Tax paid		**(130.8)**	(111.5)
Net cash generated from operating activities		**308.2**	347.7
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired	27	**–**	(48.9)
Payment of contingent consideration		**(13.7)**	(9.2)
Purchase of property, plant and equipment	13	**(141.2)**	(153.0)
Receipt of government grant		**6.1**	–
Purchase of other intangible assets	12	**(11.2)**	(5.7)
Proceeds from sale of property, plant and equipment		**1.7**	0.2
Proceeds from business disposal, net of cash in disposed business		**583.6**	–
Tax paid on business disposals		**(4.6)**	–
Cash paid against non-operating provisions	21	**(1.2)**	(1.1)
Interest received		**5.1**	1.5
Net cash generated from/(used in) investing activities		**424.6**	(216.2)
Cash flows from financing activities			
New borrowings		**232.6**	320.2
Repayment of borrowings		**(614.4)**	(282.6)
Payment of lease liabilities	14	**(17.4)**	(14.4)
Acquisition of non-controlling interests		**(1.4)**	(0.7)
Net transactions in own shares		**(7.3)**	(2.4)
Dividends paid to equity shareholders	8	**(144.4)**	(132.5)
Dividends paid to non-controlling interests		**–**	(0.2)
Net cash used in financing activities		**(552.3)**	(112.6)
Net movement in cash and cash equivalents	i,iii	**180.5**	18.9
Cash and cash equivalents brought forward		**94.3**	77.8
Exchange differences	iii	**6.8**	(2.4)
Cash and cash equivalents carried forward		**281.6**	94.3
Cash and cash equivalents carried forward comprise:			
Cash at bank and in hand		**320.6**	112.8
Bank overdrafts		**(39.0)**	(18.5)
		281.6	94.3

Group Cash Flow Notes

for the year ended 31 December 2022

(i) Reconciliation to net debt

	Note	**2022 £m**	2021 £m
Net movement in cash and cash equivalents	iii	**180.5**	18.9
Net movement in borrowings and other financial liabilities	iii	**399.2**	(23.2)
Change in net debt from cash flows		**579.7**	(4.3)
Loans in acquired businesses		**–**	(5.7)
Non-cash movement in lease liabilities		**(13.4)**	(24.1)
Non-cash preference shares reclassification		**(1.1)**	–
Exchange differences		**(37.2)**	11.4
		528.0	(22.7)
Net debt brought forward		**(823.2)**	(800.5)
Net debt carried forward	iii	**(295.2)**	(823.2)

(ii) Cash generated by operations

	Note	**2022 £m**	2021 £m
Adjusted operating profit		**515.1**	468.6
Exceptional items	iv	**(36.1)**	3.9
Amortisation of intangible assets arising on acquisition		**(34.3)**	(34.3)
Operating profit		**444.7**	438.2
Adjustments for:			
Depreciation and amortisation		**120.7**	113.3
Fair value movement on contingent consideration		**(6.1)**	(6.2)
Impairments on intangible assets and property, plant and equipment		**42.2**	1.1
Loss on disposal and write-offs of intangible assets and property, plant and equipment		**0.2**	5.8
Net provisions charged	21	**1.6**	1.6
Share-based payments		**(11.0)**	29.1
Non-cash pension expense		**4.5**	–
Share of loss of associate		**–**	0.7
Cash paid against operating provisions	21	**(0.8)**	(2.1)
Movement in inventories		**(98.1)**	(140.9)
Movement in receivables		**(43.3)**	(53.2)
Movement in payables		**7.6**	91.6
Cash generated by operations		**462.2**	479.0

(iii) Analysis of net debt

	2022 £m	Cash flow £m	Exchange movements £m	Other non-cash £m	2021 £m
Cash and cash equivalents	**320.6**	199.3	8.5	–	112.8
Bank overdrafts	**(39.0)**	(18.8)	(1.7)	–	(18.5)
Movement in cash and cash equivalents		180.5	6.8	–	
Borrowings repayable within one year	**(82.9)**	121.9	(6.3)	(166.1)	(32.4)
Borrowings repayable after more than one year	**(401.8)**	259.9	(32.1)	165.0	(794.6)
Lease liabilities	**(92.1)**	17.4	(5.6)	(13.4)	(90.5)
Movement in borrowings and other financial liabilities		399.2	(44.0)	(14.5)	
Total net debt	**(295.2)**	579.7	(37.2)	(14.5)	(823.2)

Included within other non-cash movements are £8.9m of lease liabilities recognised in the year.

(iv) Cash flow on exceptional items

The total cash outflow during the year in respect of exceptional items, including those recognised in prior years' income statements but excluding business disposal and contingent consideration, was £1.0m (2021: £16.0m). Details of exceptional items can be found in note 3 on pages 173 and 174.

Group Statement of Changes in Equity

for the year ended 31 December 2022

	Note	Share capital £m	Share premium account £m	Other reserves £m	Retained earnings £m	Non-controlling interests £m	Total equity £m
At 1 January 2021		16.2	707.7	19.3	842.6	9.3	1,595.1
Profit after tax for the year		–	–	–	320.8	2.0	322.8
Other comprehensive (expense)/income		–	–	(63.1)	32.3	0.1	(30.7)
Total comprehensive (expense)/income for the year		–	–	(63.1)	353.1	2.1	292.1
Transactions with owners:							
Dividends on equity shares	8	–	–	–	(132.5)	–	(132.5)
Share-based payments		–	–	–	12.7	–	12.7
Transactions in own shares		–	–	–	(2.4)	–	(2.4)
Total transactions with owners		–	–	–	(122.2)	–	(122.2)
Changes in ownership interests:							
Acquisition of a subsidiary with a non-controlling interest		–	–	–	–	1.6	1.6
Acquisition of a non-controlling interest		–	–	–	(0.5)	(0.2)	(0.7)
Issue of share capital		–	–	–	–	0.2	0.2
Dividends paid to non-controlling interests		–	–	–	–	(0.2)	(0.2)
Total changes in ownership interests		–	–	–	(0.5)	1.4	0.9
Total equity at 31 December 2021		**16.2**	**707.7**	**(43.8)**	**1,073.0**	**12.8**	**1,765.9**
At 1 January 2022		16.2	707.7	(43.8)	1,073.0	12.8	1,765.9
Profit after tax for the year		–	–	–	649.3	4.0	653.3
Other comprehensive income		–	–	90.9	66.5	0.4	157.8
Total comprehensive income for the year		–	–	90.9	715.8	4.4	811.1
Transactions with owners:							
Dividends on equity shares	8	–	–	–	(144.4)	–	(144.4)
Share-based payments		–	–	–	8.3	–	8.3
Transactions in own shares		–	–	–	(7.3)	–	(7.3)
Total transactions with owners		–	–	–	(143.4)	–	(143.4)
Changes in ownership interests:							
Acquisition of a non-controlling interest		–	–	–	0.3	(1.7)	(1.4)
Total changes in ownership interests		–	–	–	0.3	(1.7)	(1.4)
Preference share capital reclassification		(1.1)	–	–	–	–	(1.1)
Total equity at 31 December 2022		**15.1**	**707.7**	**47.1**	**1,645.7**	**15.5**	**2,431.1**

Other reserves include the Capital Redemption Reserve of £0.9m (2021: £0.9m), the Hedging Reserve of £nil (2021: £3.0m), the Cost of Hedging Reserve of £nil (2021: £(4.9)m) and the Translation Reserve of £46.2m (2021: £(42.8)m). During the year the Group's preference share capital has been reclassified from equity to borrowings and other financial liabilities.

Group Accounting Policies

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of preparation

The consolidated financial statements have been prepared under the historical cost convention, in accordance with applicable law and UK-adopted international accounting standards. A summary of the more important Group accounting policies is set out below.

Going concern

The consolidated financial statements have been prepared on a going concern basis which the Directors believe to be appropriate for the following reasons:

At 31 December 2022 the Group had £1,122m of committed debt facilities available from its banking group, USPP bondholders and lease providers, with principal maturities between 2023 and 2030, of which £579.3m (2021: £334.4m) was undrawn, together with cash balances of £320.6m (2021: £112.8m).

The Directors have reviewed the liquidity and covenant forecasts for the Group's going concern assessment period covering at least 12 months from the date of approval of the financial statements. Based on these forecasts, the Group continues to have significant liquidity headroom and strong financial covenant headroom under its debt facilities.

A reverse stress testing scenario has been performed which assesses that adjusted operating profit would need to fall by over 90% to trigger an event of default as at 30 June 2024, before considering additional unmodelled actions to conserve cash. The Directors do not consider this a plausible scenario. The Directors have also considered the impact on the Group from the agreement to acquire Solus Biotech for total consideration of approximately £232m. This acquisition will be funded by the reinvestment of PTIC disposal proceeds and will have no material impact on Croda's leverage and a limited impact on its liquidity. The Directors have also considered the unlikely scenario that if the full reinvestment of PTIC disposal proceeds was not made within the agreed timelines with the USPP bondholders, certain future financial covenant restrictions could trigger a partial repayment of the USPP bonds. In this event any potential repayment could be funded from cash balances and other existing debt facilities. The Directors are therefore satisfied that the Group has sufficient resources to continue in operation for a period of not less than 12 months from the date of approval of the financial statements. Accordingly, the consolidated financial statements have been prepared on a going concern basis.

Climate change

The Group has long recognised the scale of the climate emergency and considers this to offer both opportunities and risks in the future. The Group's current climate change strategy focuses on reducing its carbon footprint and increasing its use of bio-based raw materials, whilst the benefits in using its ingredients will enable more carbon to be saved than were emitted through operations and supply chain.

The impact of climate change has been considered in the preparation of these financial statements across a number of areas, including; our review of property, plant and equipment remaining useful lives and our evaluation of critical accounting estimates and judgements which are detailed below, consistent with the risks and opportunities set out on pages 66 to 68. None of these risks had a material effect on the consolidated financial statements of the Group. The Group will continue developing its assessment of the impact that climate change has on the assets and liabilities recognised and presented in its financial statements.

Critical accounting judgements and key sources of estimation uncertainty

The Group's significant accounting policies under UK-adopted international accounting standards have been set by management with the approval of the Audit Committee. The application of these policies requires estimates and assumptions to be made concerning the future and judgements to be made on the applicability of policies to particular situations. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Under UK-adopted international accounting standards an estimate or judgement may be considered critical if it involves matters that are highly uncertain or where different estimation methods could reasonably have been used, or if changes in the estimate that would have a material impact on the Group's results are likely to occur from period to period.

The critical accounting judgement required when preparing the Group's accounts is as follows:

(i) Business disposal – The Group completed the divestment of the majority of its Performance Technologies and Industrial Chemicals ('PTIC') business to a wholly owned subsidiary of Cargill Inc. on 30 June 2022. The Group's assessment that the disposal group does not meet the definition of a separate major line of business or geographical area of operations, and therefore is not a discontinued operation, is a key judgement. The key considerations in forming this conclusion were:

- The Group is not exiting a geographical area of operations; Croda will remain active in all territories in which the divested business operates.
- Whilst the majority of the PTIC business is being divested, a significant proportion remains with Croda via the retained Industrial Specialties product portfolio, supply agreements and retained production capabilities.
- The complex carve-out requirements of the disposal mean that the operations and cash flows of the divested business cannot be distinguished clearly from the remaining Croda Group.

Croda Sipo in which Croda has a 65% shareholding was excluded from the transaction that completed on 30 June 2022. The Group's assessment that Sipo is not available for sale in its present condition is a key judgement in determining that Sipo is not classified as an asset held for sale at 31 December 2022. The sale of Sipo to Cargill Inc. is subject to reaching agreement with our partner to also sell its stake, which now appears unlikely to occur in the near term.

The critical accounting estimates and assumptions required when preparing the Group's accounts are as follows:

(i) Post-retirement benefits – as disclosed in note 11, the Group's principal retirement benefit schemes are of the defined benefit type. Year end recognition of the liabilities under these schemes and the valuation of assets held to fund these liabilities require a number of significant assumptions to be made, relating to key financial market indicators such as inflation and expectations on future salary growth and asset returns. These assumptions are made by the Group in conjunction with the schemes' actuaries and the Directors are of the view that any estimation should be appropriate and in line with consensus opinion. The critical accounting estimate specifically relates to the Group's UK scheme, given the size of the liabilities and their sensitivity to underlying assumptions. Small changes in these assumptions could result in a material adjustment to carrying values in the next financial year.

(ii) Goodwill impairment – Management are required to undertake an annual test for impairment of indefinite lived assets such as goodwill. Accordingly, the Group tests annually whether goodwill has suffered any impairment by comparing the carrying value of the underlying Cash Generating Units ('CGUs') to their recoverable amount calculated by detailed value in use calculations. These value in use calculations require the use of estimates to enable the calculation of the net present value of cash flow projections of the relevant CGU. The critical assumptions are as follows:

- Terminal value growth in EBITDA (calculated as operating profit before depreciation and amortisation) – set for each CGU with reference to the long-term growth rate for the market and territory in which the CGU operates but not exceeding the Group's long-term average growth rate, estimated at 3%.
- Selection of appropriate market participant real post-tax discount rates to reflect the specific nature of the CGU.
- Specific risk adjusted, real term cash flow projections including key assumptions on revenue growth and operating margins – generally over a five-year period unless the profile of a particular CGU warrants a longer period.

An impairment of £34.6m was recorded in relation to goodwill arising on the acquisition of Iberchem's Flavours business. The assumptions selected and associated sensitivity analysis are disclosed in note 12.

Excluding the Flavours CGU, recoverable amounts currently exceed carrying values including goodwill; however, testing did identify that reasonable possible changes in key assumptions would cause the recoverable amount of the Fragrances CGU to be less than the carrying value. The assumptions selected and associated sensitivity analysis are disclosed in note 12.

Due to the nature of the Fragrances and Flavours businesses, including their low carbon footprint, the key assumptions were not materially impacted by the climate change risks and opportunities set out in the Annual Report on pages 66 to 68. The Group's other annual impairment tests were not considered to be materially impacted by the climate change risks and opportunities.

Given the size of the goodwill balances for the Fragrances and Flavours CGUs and the carrying values' sensitivity to underlying assumptions, small changes in these assumptions could result in a material adjustment to carrying values in the next financial year.

Changes in accounting policy

(i) The Group adopted the following new accounting policies on 1 January 2022 to comply with amendments to IFRS. The accounting pronouncements, none of which had a material impact on the Group's financial reporting on adoption, are:

- Annual Improvements to IFRS Standards 2018-2020;
- Amendments to IAS 16 'Property, Plant and Equipment: Proceeds before Intended Use';
- Amendments to IAS 37 'Onerous Contracts- Cost of Fulfilling a Contract'; and
- Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 'Interest Rate Benchmark Reform - Phase 2'.

(ii) The IASB has issued the following pronouncements for annual periods beginning on or after 1 January 2023 or 1 January 2024:

- Amendments to IFRS 3 'Reference to the Conceptual Framework';
- IFRS 17 'Insurance Contracts' and Amendments to IFRS 17 'Insurance Contracts';
- Amendments to IAS 1 'Classification of Liabilities as Current or Non-Current';
- Amendments to IAS 1 'Disclosure of Accounting Policies';
- Amendments to IAS 1 'Non-current Liabilities with Covenants';
- Amendment to IAS 8 'Definition of Accounting Estimates'; and
- Amendments to IFRS 16 'Lease Liability in a Sale and Leaseback'; and
- Amendment to IAS 12 'Deferred Tax related to Assets and Liabilities arising from a Single Transaction'.

The Group is assessing the impact of these new standards and the Group's financial reporting will be presented in accordance with these standards from 1 January 2023 or 1 January 2024 as applicable.

Group Accounting Policies continued

Group accounts

General information

Croda International Plc is a public limited company, which is listed on the London Stock Exchange and incorporated and domiciled in the United Kingdom. It is registered in England and Wales and the address of its registered office can be found on 212.

Subsidiaries

Subsidiaries are all entities over which the Parent Company has control. The Parent controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The Group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Group. Acquisition costs are expensed as incurred.

Identifiable assets acquired, and liabilities and contingent liabilities assumed, in a business combination are measured initially at their fair values at the acquisition date, irrespective of the extent of any minority interest. The excess of the cost of acquisition over the Group's share of identifiable net assets acquired is recorded as goodwill.

Intra-Group transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated.

Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

Transactions with non-controlling interests

The Group treats transactions with non-controlling interests as transactions with the equity owners of the Group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded as equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

Intangible assets

Goodwill

On acquisition of a business, fair values are attributed to the net assets acquired. Goodwill arises where the fair value of the consideration given for a business exceeds such net assets. Goodwill arising on acquisitions is capitalised and carried at cost less accumulated impairment losses. Goodwill is subject to impairment review, both annually and when there are indications that the carrying value may not be recoverable. For the purpose of impairment testing, assets are grouped at the lowest levels for which there are separately identifiable cash flows, known as CGUs. Goodwill is allocated to the CGU that is expected to benefit from the synergies of the acquisition. For goodwill balances where the relevant group of CGUs exceeds the size of the Group's operating segments, impairment testing is performed at the operating segment level.

If the recoverable amount of the CGU is less than the carrying value of the goodwill, an impairment loss is recognised immediately against the goodwill value. The recoverable amount of the CGU is the higher of fair value less costs to sell and value in use. Fair value less costs to sell is measured on a market-based approach using prices and other relevant information generated by market transactions. Value in use is estimated with reference to estimated risk adjusted future post-tax cash flows in real terms discounted to net present value using a market participant real post-tax discount rate that reflects the time value of money and size risk premium specific to the CGU. Post-tax calculations, rather than pre-tax, are used as they are considered more accurate. For disclosure purposes, pre-tax discount rates are then back-solved using the equivalent pre-tax cash flows, and therefore there is no material difference between the calculations on a pre-tax or post-tax basis. Where required, specific risks associated with the CGU are adjusted through changes to the future cash flow projections. The Group uses growth estimates that track below the Group's historical growth rates unless the profile of a particular CGU warrants a different treatment.

Other intangible assets arising on acquisition

On acquisition, intangible assets other than goodwill are recognised if they can be identified through being separable from the acquired entity or arising from specific contractual or legal rights.

Once recognised, such intangible assets will be initially valued using an appropriate methodology. There were no acquisitions in 2022. For acquisitions in 2021 the following intangible asset types recognised and valuation methodologies applied were:

- Technology processes (relief-from-royalty and replacement cost)
- Customer relationships (income approach)
- Trade names and brands (relief-from-royalty)

Following initial recognition, the asset will be written down on a straight-line basis over its useful life, which range from 7 to 15 years for technology processes and from 6 to 20 years for trade names, brands and customer relationships. Useful lives are regularly reviewed to ensure their continuing relevance.

Research and development

Research expenditure, undertaken with the prospect of gaining new scientific, technical or commercial knowledge and understanding, is charged to the income statement in the year in which it is incurred. Internal development expenditure, whereby research findings are applied to a plan for the production of new or substantially improved products or processes, is charged to the income statement in the year in which it is incurred unless it meets the recognition criteria of IAS 38 'Intangible Assets'. Development uncertainties typically mean that such criteria are not met, most commonly because the Group can only demonstrate the existence of a market at a late stage in the product development cycle, at which point the material element of project spend has already been incurred and charged to the income statement. This includes, for example, substantiating potential product claims for use by our customers. Until the desired outcome of such work can be proven, at an economic production cost, the market for a product cannot be said to exist. Furthermore, the Group does not have the ability to reliably measure the development expenditure attributable to all projects during development.

Where, however, the recognition criteria are met, intangible assets are capitalised and amortised over their useful economic lives from product launch.

Intangible assets relating to products in development are subject to impairment testing at each balance sheet date or earlier upon indication of impairment. Any impairment losses are written off to the income statement.

Computer software

Cloud computing arrangements are assessed and classified as either service contracts or intangible assets. Computer software licences that meet the definition of an intangible asset, covering a period of greater than a year, are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives which range from 3 to 7 years.

Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer and excludes intra-Group sales. The Group recognises revenue on completion of contractual performance obligations, generally when it transfers control over a product or service to a customer.

Sale of goods

The principal activity from which the Group generates revenue is the supply of products to customers from its various manufacturing sites and warehouses, and in some limited instances from consignment inventory held on customer sites. Products are supplied under a variety of standard terms and conditions, and in each case, revenue is recognised when contractual performance obligations between the Group and the customer are satisfied. This will typically be on dispatch or delivery. When sales discount and rebate arrangements result in net variable consideration, appropriate provisions are recognised as a deduction from revenue at the point of sale. The Group typically uses the expected value method for estimating rebates, reflecting that such contracts have similar characteristics and a range of possible outcomes. The Group recognises revenue to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue will not be required.

Interest and dividend income

Interest income is recognised on a time-proportion basis using the effective interest method.

Dividend income is recognised when the right to receive payment is established.

Government grants

The Group recognises government grant income related to assets when the grant becomes receivable and deducts the income from the cost of the associated asset. Government grant income is recognised separately in the Group Statement of Cash Flows.

Group Accounting Policies continued

Segmental reporting

An operating segment is a group of assets and operations engaged in providing products and services that are subject to risks or returns that are different from those of other segments. Operating segments presented in the financial statements are consistent with the internal reporting provided to the Group's Chief Operating Decision Maker, which has been identified as the Group Executive Committee.

Employee benefits

Pension obligations

The Group accounts for pensions and similar benefits under IAS 19 'Employee Benefits' (revised). In respect of defined benefit plans (pension plans that define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation), obligations are measured at discounted present value whilst plan assets are recorded at fair value. The assets and liabilities recognised in the balance sheet in respect of defined benefit pension plans are the net of plan obligations and assets. A scheme surplus is only recognised as an asset in the balance sheet when the Group has the unconditional right to future economic benefits in the form of a refund or a reduction in future contributions. For those schemes where an accounting surplus is currently recognised, the Group expects to recover the value through reduced future contributions. No allowance is made in the past service liability in respect of either the future expenses of running the schemes or for non-service-related death in service benefits which may arise in the future. The operating costs of such plans are charged to operating profit and the finance costs are recognised as financial income or an expense as appropriate.

Service costs are spread systematically over the lives of employees and financing costs are recognised in the periods in which they arise. Remeasurements are recognised in the statement of comprehensive income. Payments to defined contribution schemes (pension plans under which the Group pays fixed contributions into a separate entity) are charged as an expense as they fall due.

Other post-retirement benefits

Some Group companies provide post-retirement healthcare benefits to their retirees. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using an accounting methodology similar to that for defined benefit pension plans. Remeasurements are recognised in the statement of comprehensive income. These obligations are valued annually by independent qualified actuaries.

Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed to either (i) terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal or (ii) providing termination benefits as a result of an offer made to encourage voluntary redundancy.

Share-based payments

The Group operates a number of cash and equity settled, share-based incentive schemes. These are accounted for in accordance with IFRS 2 'Share-based Payments', which requires an expense to be recognised in the income statement over the vesting period of the options. The expense is based on the fair value of each instrument which is calculated using the Black Scholes or binomial model as appropriate. Any expense is adjusted to reflect expected and actual levels of options vesting for non-market-based performance criteria.

Currency translations

Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Sterling, which is the Company's functional and presentation currency.

Transactions and balances

Monetary assets and liabilities are translated at the exchange rates ruling at the end of the financial period. Exchange profits or losses on trading transactions are included in the Group income statement except when deferred in equity as qualifying cash flow hedges and qualifying net investment hedges.

Group companies

The results and financial position of all the Group entities that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

(i) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

(ii) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and

(iii) all resulting exchange differences are recognised as a separate component of equity.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities, and of borrowings and other currency instruments designated as hedges of such investments, are taken to shareholders' equity.

When a foreign operation is sold, such exchange differences are recognised in the income statement as part of the gain or loss on sale.

Taxation

The charge for taxation is based on the profit for the year and takes into account taxation deferred because of temporary differences between the treatment of certain items for taxation and for accounting purposes. Temporary differences arise on differences between the carrying value of assets and liabilities in the financial statements and their tax base and primarily relate to the difference between tax allowances on tangible fixed assets and the corresponding depreciation charge, and upon the net pension fund deficit. Full provision is made for the tax effects of these differences. No provision is made for unremitted earnings of foreign subsidiaries where there is no commitment to remit such earnings.

Similarly, no provision is made for temporary differences relating to investments in subsidiaries since realisation of such differences can be controlled and is not probable in the foreseeable future. Deferred tax assets are recognised, using the balance sheet liability method, to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

All taxation is calculated on the basis of the tax rates and laws enacted or substantively enacted at the balance sheet date.

Income statement presentation

Adjusted results are stated before exceptional items and amortisation of intangible assets arising on acquisition, and tax thereon. The Board believes that the adjusted presentation (and the columnar format adopted for the Group income statement) assists shareholders by providing a basis upon which to analyse business performance and make year-on-year comparisons. The same measures are used by management for planning, budgeting and reporting purposes and for the internal assessment of operating performance across the Group. The adjusted presentation is adopted on a consistent basis for each half year and full year results.

Exceptional items

Exceptional items are those items that in the Directors' view are required to be separately disclosed by virtue of their size or incidence to enable a full understanding of the Group's financial performance. In the current year exceptional items relate to the gain on business disposal, discount unwind and fair value adjustment in respect of contingent consideration, goodwill impairment and property, plant and equipment impairment. Exceptional items in the prior year related to discount unwind and fair value adjustment in respect of contingent consideration, a pension curtailment gain (arising from transfer of the Dutch scheme to a collective defined contribution arrangement), acquisition costs and fees incurred in preparation of the disposal of part of the PTIC business. Details can be found in note 3 on pages 173 and 174.

Property, plant and equipment

Property, plant and equipment is stated at historical cost less depreciation, with the exception of assets acquired as part of a business combination. Cost includes the original purchase price of the asset and the costs attributable to bringing the asset to its working condition for its intended use. The Group's policy is to write off the difference between the cost of all property, plant and equipment, except freehold land, and their residual value on a straight-line basis over their estimated useful lives.

Reviews are made annually of the estimated remaining lives and residual values of individual productive assets, taking account of commercial and technological obsolescence, the impact of climate change as well as normal wear and tear, and adjustments are made where appropriate. Under this policy it becomes impractical to calculate average asset lives exactly. However, the total lives range from approximately 15 to 40 years for land and buildings, and 3 to 25 years for plant and equipment. All individual assets are reviewed for impairment when there are indications that the carrying value may not be recoverable. The Group's 'plant and equipment' asset class predominantly relates to the value of plant and equipment at the Group's manufacturing facilities. Consequently, the Group does not seek to analyse out of this class other items such as motor vehicles and office equipment.

Impairment of non-financial assets

The Group assesses at each year end whether an asset may be impaired. If any evidence exists of impairment, the estimated recoverable amount is compared to the carrying value of the asset and an impairment loss is recognised where appropriate. The recoverable amount is the higher of an asset's value in use and fair value less costs to sell. In addition to this, goodwill is tested for impairment at least annually. Non-financial assets other than goodwill which have suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

Leases

When entering into a new contract, the Group assesses whether it is, or contains, a lease. A lease conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

The Group recognises a right of use asset and a lease liability at the lease commencement date. The right of use asset is initially measured at cost, and subsequently at cost less any accumulated depreciation and impairment losses, adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date and discounted using the interest rate implicit in the lease or, more typically, the Group's incremental borrowing rate (when the implicit rate cannot be readily determined).

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee or changes in the Group's assessment of whether a purchase, extension or termination option is reasonably certain to be exercised.

The Group adopts recognition exemptions for short-term (less than 12 months) and low value leases and elects not to separate lease components from any associated fixed non-lease components.

The Group classifies payments of lease liabilities (principal and interest portions) as part of financing activities. Payments of short-term, low value and variable lease components are classified within operating activities.

Group Accounting Policies continued

Derivative financial instruments

The Group uses derivative financial instruments where deemed appropriate to hedge its exposure to interest rates and short-term currency rate fluctuations. The Group's accounting policy is set out below.

Derivative financial instruments are recorded initially at cost. Subsequent measurement depends on the designation of the instrument as either: (i) a hedge of the fair value of recognised assets or liabilities or a firm commitment (fair value hedge); or (ii) a hedge of highly probable forecast transactions (cash flow hedge).

(i) Fair value hedge

Changes in the fair value of derivatives, for example interest rate swaps and foreign exchange contracts, that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

(ii) Cash flow hedge

The Group designates the spot element of forward foreign exchange contracts to hedge its currency risk and applies a hedge ratio of 1:1. The forward elements of the forward exchange contracts are excluded from the designation of the hedging instrument and are separately accounted for as a cost of hedging, which is recognised in equity in a cost of hedging reserve. The Group's policy is for the critical terms of the forward exchange contracts to align with the hedged item.

The Group determines the existence of an economic relationship between the hedging instrument and the hedged item based on the current amount and timing of the respective cash flows. The Group assesses whether the derivative designated in each hedging relationship is expected to be and has been effective in offsetting changes in the cash flows of the hedged item using the hypothetical derivative method. In these hedge relationships, the main sources of ineffectiveness are changes in the time or amount of the hedged transactions.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognised in equity. The gain or loss relating to the ineffective portion is recognised immediately in the income statement. Amounts accumulated in equity are recycled in the income statement in the periods when the hedged item will affect profit or loss (for instance when the forecast sale that is hedged takes place). However, when the forecast transaction that is hedged results in the recognition of a non-financial asset (for example inventory) or a liability, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the asset or liability.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the income statement.

When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value of any derivative instruments that do not qualify for hedge accounting are recognised immediately in the income statement.

Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the period of the borrowings using the effective interest method. Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Trade and other payables

Trade and other payables are recognised initially at fair value. With the exception of contingent consideration and forward foreign exchange contracts, trade and other payables are subsequently measured at amortised cost using the effective interest method. Contingent consideration is measured at fair value based on the present value of the expected future payments, discounted using a risk-adjusted discount rate. Continent consideration is remeasured at fair value at each reporting date and subsequent changes in fair value and associated discount unwind are recognised in the income statement. Forward foreign exchange contracts are initially recognised at cost and subsequently measured at fair value on a mark-to-market basis.

Inventories

Inventories are stated at the lower of cost and net realisable amount on a first in first out basis. Cost comprises all expenditure, including related production overheads, incurred in the normal course of business in bringing the inventory to its location and condition at the balance sheet date. Net realisable amount is the estimated selling price in the ordinary course of business less any applicable variable selling costs. Provision is made for obsolete, slow moving and defective inventory where appropriate. Profits arising on intra-group sales are eliminated in so far as the product remains in Group inventory at the year end.

Trade and other receivables

Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost, using the effective interest method, less impairment losses. A provision for impairment of trade receivables is recognised based on lifetime expected losses, but principally comprises balances where objective evidence exists that the amount will not be collectible. Such amounts are written down to their estimated recoverable amounts, with the charge being made to operating expenses.

Cash and cash equivalents

Cash and cash equivalents comprise cash balances and short-term deposits. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the statement of cash flows. Cash and bank overdrafts are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts, there is an intention to settle on a net basis and interest is charged on a net basis.

Environmental, site restoration and other provisions

The Group is exposed to environmental liabilities relating to its operations. Provisions are made immediately where a legal or constructive obligation is identified, can be quantified and it is regarded as more likely than not that an outflow of resources will be required to settle the obligation. The Group does consider the impact of discounting when establishing provisions and provisions are discounted when the impact is material and the timing of cash flows can be estimated with reasonable certainty.

Share capital

Investment in own shares

(i) Employee share ownership trusts – shares acquired by the trustees of the employee share ownership trust (the Trustees), funded by the Company and held for the continuing benefit of the Company are shown as a reduction in equity attributable to owners of the parent. Movements in the year arising from additional purchases by the Trustees of shares or the receipt of funds due to the exercise of options by employees are accounted for within reserves and shown as a movement in equity attributable to owners of the parent in the year. Administration expenses of the trusts are charged to the Company's income statement as incurred.

(ii) Treasury shares – where any Group company purchases the Company's equity share capital as treasury shares, the consideration paid, including any directly attributable incremental costs (net of income taxes), is deducted from equity attributable to the Company's equity holders until the shares are cancelled, reissued or disposed of. Where such shares are subsequently sold or reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the Company's equity holders.

Dividends

Dividends on ordinary share capital are recognised as a liability when the liability is irrevocable. Accordingly, final dividends are recognised when approved by shareholders and interim dividends are recognised when paid.

Investments

Investments in equity securities are measured at fair value, with movements in the fair value being recognised in the income statement or equity on an instrument-by-instrument basis. Investments in associates are initially recorded at cost and subsequently adjusted for the Group's share of results. Investments are subject to impairment testing at each balance sheet date or earlier upon indication of impairment.

Notes to the Group Accounts

1. Segmental analysis

The Group's sales, marketing and research activities are organised into three global market sectors, being Consumer Care, Life Sciences and Industrial Specialties. These are the segments for which summary management information is presented to the Group's Executive Committee, which is deemed to be the Group's Chief Operating Decision Maker. A review of each sector can be found within the Strategic Report on pages 34 to 42.

There is no material trade between segments. Segmental results include items directly attributable to a specific segment as well as those that can be allocated on a reasonable basis.

	2022 £m	Restated 2021 £m
Income statement		
Revenue		
Consumer Care	**897.8**	763.0
Life Sciences	**682.3**	572.3
Industrial Specialties	**509.2**	554.3
Total Group revenue	**2,089.3**	1,889.6
Adjusted operating profit		
Consumer Care	**204.7**	188.5
Life Sciences	**229.4**	208.5
Industrial Specialties	**81.0**	71.6
Total Group operating profit (before exceptional items and amortisation of intangible assets arising on acquisition)	**515.1**	468.6
Exceptional items and amortisation of intangible assets arising on acquisition[1]	**(70.4)**	(30.4)
Total Group operating profit	**444.7**	438.2

1 Relates to Consumer Care £60.2m (2021: £20.5m), Life Sciences £9.1m (2021: £7.5m) and Industrial Specialties £1.1m (2021: £2.4m)

Following the divestment of the majority of the Performance Technologies and Industrial Chemicals business as announced in the 2022 Interim Statement, the retained business now forms a new Industrial Specialties sector. Accordingly, the Group has combined the previously reported segment information for the year ended 31 December 2021 for both Performance Technologies and Industrial Chemicals and shown as Industrial Specialties. This is aligned with the information that is regularly reported to the Group's Executive Committee.

In the following table, revenue has been disaggregated by sector and destination. This is the primary management information that is presented to the Group's Executive Committee.

	Europe, Middle East & Africa £m	North America £m	Latin America £m	Asia £m	**Total £m**
Revenue 2022					
Consumer Care	353.2	232.5	91.2	220.9	**897.8**
Life Sciences	297.5	186.1	89.8	108.9	**682.3**
Industrial Specialties	220.0	111.3	23.1	154.8	**509.2**
Total Group revenue	870.7	529.9	204.1	484.6	**2,089.3**
Revenue 2021 (Restated)					
Consumer Care	300.3	210.9	68.6	183.2	**763.0**
Life Sciences	266.3	167.2	60.9	77.9	**572.3**
Industrial Specialties	258.7	115.1	24.8	155.7	**554.3**
Total Group revenue	825.3	493.2	154.3	416.8	**1,889.6**

	2022 £m	Restated 2021 £m
Depreciation and amortisation (before amortisation of intangible assets arising on acquisition)		
Consumer Care	**40.4**	31.7
Life Sciences	**26.7**	22.1
Industrial Specialties	**19.3**	25.2
Total Group	**86.4**	79.0

The Group manages its business segments on a global basis. The operations are based in the following geographical areas: Europe, with manufacturing sites in the UK, France, the Netherlands, Italy, Spain and Denmark; North America, with manufacturing sites in the US; Latin America, with manufacturing sites in Brazil, Argentina, Colombia and Mexico; Asia, with manufacturing sites in Singapore, Japan, India, China, Indonesia, Malaysia and Australia; and South Africa and Tunisia.

The Group's revenue from external customers in the UK is £66.3m (2021: £52.3m), in France is £121.5m (2021: £96.9m), in Germany is £120.9m (2021: £196.0m), in China is £189.3m (2021: £161.4m), in the US is £491.1m (2021: £455.3m) and the total revenue from external customers from other countries is £1,100.2m (2021: £927.7m). No single external customer represents more than 5% of the total revenue of the Group. The total of non-current assets other than financial instruments, retirement benefit assets and deferred tax assets located in the UK is £177.6m (2021: £208.2m), in the US is £618.4m (2021: £557.1m) and in other countries is £677.4m (2021: £733.6m). Goodwill has not been split by geography as this asset is not attributable to a geographical area.

2. Operating costs

	2022 £m	2021 £m
Analysis of net operating expenses by function:		
Distribution costs	**101.8**	93.0
Administrative expenses	**439.1**	407.7
	540.9	500.7

Additional information on the nature of operating expenses, including depreciation and employee costs, is provided in note 3.

3. Profit for the year

	2022 £m	2021 £m
The Group profit for the year is stated after charging/(crediting):		
Depreciation and amortisation (notes 12, 13 & 14)	**120.7**	113.3
Goodwill impairment (exceptional) (note 12)	**34.6**	–
Property, plant and equipment impairment (exceptional) (note 13)	**7.6**	–
Impairments (non-exceptional)	**–**	1.1
Staff costs (note 9, 2021 restated)	**389.9**	400.7
Redundancy costs (non-exceptional)	**1.2**	0.8
Gain on business disposal (exceptional) (note 28)	**(356.0)**	–
Inventories – cost recognised as expense in cost of sales	**1,102.9**	950.7
Inventories – provision movement in the year	**15.0**	6.7
Research and development	**66.3**	58.7
Net foreign exchange	**(4.2)**	0.8
Bad debt charge (note 18)	**2.7**	0.4

	2022 £m	2021 £m
Adjustments:		
Exceptional items – operating profit		
Business acquisitions and disposal costs	**–**	(13.5)
Pension curtailment gain	**–**	11.2
Goodwill impairment (note 12)	**(34.6)**	–
Property, plant and equipment impairment (note 13)	**(7.6)**	–
Fair value movement on contingent consideration	**6.1**	6.2
Exceptional items – financial costs		
Unwind of discount on contingent consideration	**(1.7)**	(3.3)
Gain on business disposal (note 28)	**356.0**	–
Exceptional items	**318.2**	0.6
Amortisation of intangible assets arising on acquisition	**(34.3)**	(34.3)
Total adjustments	**283.9**	(33.7)

Notes to the Group Accounts continued

3. Profit for the year continued

The exceptional items in the current year reflect the gain on business disposal, discount unwind and fair value adjustment both in respect of contingent consideration, the goodwill impairment of the Group's Flavours Cash Generating Unit (note 12) and an impairment relating to the write-off of unusable manufacturing plant in Japan. Movements in contingent consideration have been presented as exceptional as they are not directly representative of the underlying business performance in the period, and therefore this presentation provides a meaningful basis to make comparisons between reporting periods. The gain on business disposal and impairment charges have been presented as exceptional due to their size and one-off nature. The exceptional items in the prior year related to the discount unwind and fair value adjustment both in respect of contingent consideration, a pension curtailment gain (arising from transfer of the Dutch scheme to a collective defined contribution arrangement), acquisition costs and fees incurred in preparation of the disposal of part of the PTIC business.

	2022 £m	2021 £m
Services provided by the Group's auditors		
Audit services		
Fees payable to the Group auditors for the audit of Parent Company and consolidated financial statements	0.3	0.2
Fees payable to the Group auditors and its associates for the audit of the Company's subsidiaries	1.9	1.4
Other audit services		
Audit-related assurance and other services including fees payable in relation to the Group's interim review	0.2	0.1
	2.4	1.7

4. Net financial costs

	2022 £m	2021 £m
Financial costs		
US$100m 3.75% fixed rate 10 year note	3.0	2.7
2019 Club facility due 2026	5.9	7.0
US$200m 3 year term loan due 2023	0.6	0.3
€30m 1.08% fixed rate 7 year note	0.3	0.3
€70m 1.43% fixed rate 10 year note	0.9	0.9
£30m 2.54% fixed rate 7 year note	0.8	0.8
£70m 2.80% fixed rate 10 year note	2.0	2.0
€50m 1.18% fixed rate 8 year note	0.5	0.5
£65m 2.46% fixed rate 8 year note	1.6	1.6
US$60m 3.70% fixed rate 10 year note	1.8	1.6
Net interest on post-retirement benefits	–	0.3
Provision against non-operating loan	–	2.5
Interest on lease liabilities	2.5	2.2
Other bank loans and overdrafts	2.9	2.2
Other interest costs	1.2	–
Unwind of discount on contingent consideration (exceptional)	1.7	3.3
Preference share dividend	0.1	–
	25.8	28.2
Financial income		
Bank interest receivable and similar income	(2.7)	(1.5)
Net interest on post-retirement benefits	(2.4)	–
	(5.1)	(1.5)
Net financial costs	20.7	26.7

5. Tax

	2022 £m	2021 £m
(a) Analysis of tax charge for the year		
UK current corporate tax	**28.1**	11.5
Overseas current corporate taxes	**100.0**	95.0
Current tax	**128.1**	106.5
Deferred tax (note 6)	**(1.4)**	(17.8)
	126.7	88.7
(b) Tax on items charged/(credited) to other comprehensive income or equity		
Deferred tax on remeasurement of post-retirement benefits (OCI)	**22.4**	8.3
Deferred tax on share-based payments (equity)	**1.1**	(2.4)
Deferred tax on provisions (OCI)	**0.5**	(0.2)
	24.0	5.7
(c) Factors affecting the tax charge for the year		
Profit before tax	**780.0**	411.5
Tax at the standard rate of corporation tax in the UK, 19.0% (2021: 19.0%)	**148.2**	78.2
Effect of:		
Non-taxable gain on business disposal	**(46.1)**	–
Tax rate changes	**(0.1)**	7.1
Prior year over-provisions	**(2.9)**	(16.3)
Tax cost of remitting overseas income to the UK	**5.5**	2.2
Expenses and write-offs not deductible for tax purposes	**9.7**	7.3
Unutilised tax losses not recognised through deferred tax	**0.9**	–
Effect of higher overseas tax rates	**11.5**	10.2
	126.7	88.7

The effective adjusted corporate tax rate before exceptional items of 22.8% (2021: 21.2%) is significantly higher than the UK's standard tax rate of 19.0%. The reported corporate tax rate after exceptional items is 16.2% (2021: 21.6%).

The reported corporate tax rate after exceptional items includes the tax arising on the gain of the PTIC divestment and associated business disposal costs. Whilst the gain was subject to tax in the jurisdictions in which business units were sold, a number of local exemptions have resulted in the overall gain being taxed at a rate significantly lower than the UK's standard tax rate of 19.0%. This has reduced the reported corporate tax rate after exceptional items in the current year. The impairment of goodwill, also included in exceptional items, is a non-tax-deductible expense and included within expenses and write-offs not deductible for tax purposes.

Croda operates in many tax jurisdictions other than the UK, both as a manufacturer and distributor, with the majority of those jurisdictions having rates higher than the UK, considerably so in some cases. It is the exposure to these different tax rates that increases the effective tax rate above the UK standard rate and also makes it difficult to forecast the Group's future tax rate with any certainty given the unpredictable nature of exchange rates, individual economies and tax legislators. Other than the exposure to higher overseas tax rates, there are no significant adjustments between the Group's expected and reported tax charge based on its adjusted accounting profit. Given the global nature of the Group, and the number of associated cross-border transactions between connected parties, we are exposed to potential adjustments to the price charged for those transactions by tax authorities. However, the Group carries appropriate provisions relating to the level of risk.

Legislation to increase the UK standard rate of corporation tax from 19% to 25% was substantively enacted on 24 May 2021, effective from 1 April 2023. The UK deferred tax is calculated at 25%. The overseas tax is calculated at the rates prevailing in the respective jurisdictions.

The UK, like many other jurisdictions, will bring into effect its supporting Pillar 2 tax legislation from 31 December 2023. First applicable to the Group's 31 December 2024 period end, this legislation will effectively mandate the incurrence of a minimum effective tax rate of 15% (in aggregate) across each of its trading jurisdictions.

Initial assessments, supported through an appraisal of those preliminary safe harbours communicated by the OECD, validate the Group's view that no material tax exposures are expected to arise under this legislation. Notwithstanding this, the Croda Group continues to proactively monitor developments in this area and has actioned an internal roadmap to ensure the Group is compliant ahead of the first reporting event (currently 30 June 2026).

6. Deferred tax

	2022 £m	2021 £m
The deferred tax balances included in these accounts are attributable to the following:		
Deferred tax assets		
Retirement benefit liabilities	**3.6**	6.1
Provisions	**45.2**	42.1
Gross deferred tax asset	**48.8**	48.2
Offset with deferred tax liabilities	**(38.5)**	(34.7)
Net deferred tax asset	**10.3**	13.5
Deferred tax liabilities		
Accelerated capital allowances	**103.9**	97.1
Revaluation gains	**1.9**	1.9
Acquired intangibles	**74.2**	77.9
Retirement benefit assets	**28.5**	8.2
Other	**2.9**	1.0
Gross deferred tax liability	**211.4**	186.1
Offset with deferred tax assets	**(38.5)**	(34.7)
Net deferred tax liability	**172.9**	151.4
The movement on deferred tax balances during the year is summarised as follows:		
Deferred tax (charged)/credited through the income statement		
Continuing operations before adjustments	**(4.8)**	13.9
Adjustments and exceptional items	**6.2**	3.9
Deferred tax charged directly to other comprehensive income or equity (note 5(b))	**(24.0)**	(5.7)
Disposals	**8.8**	–
Acquisitions	**–**	(8.9)
Exchange differences	**(10.9)**	4.7
	(24.7)	7.9
Net balance brought forward	**(137.9)**	(145.8)
Net balance carried forward	**(162.6)**	(137.9)
Deferred tax credited/(charged) through the income statement relates to the following:		
Retirement benefit obligations	**0.3**	(0.7)
Accelerated capital allowances	**(6.6)**	(2.1)
Provisions	**2.1**	13.9
Other	**5.6**	6.7
	1.4	17.8

Deferred tax is calculated in full on temporary differences under the balance sheet liability method at rates appropriate to each subsidiary. Deferred tax expected to reverse in the year to 31 December 2023 and beyond has been measured using the rate due to prevail in the year of reversal.

Deferred tax assets have been recognised in all material cases where such assets arise, as it is probable the assets will be recovered. At 31 December 2022, no deferred tax asset has been recognised in respect of £39.1m (2021: £32.6m) of losses across the Group as it is not considered probable that there will be future taxable profits against which these losses can be offset.

Deferred tax is only recognised on the unremitted earnings of overseas subsidiaries to the extent that remittance is expected in the foreseeable future. If all earnings were remitted, an additional £15.8m (2021: £9.3m) of tax would be payable.

All movements on deferred tax balances have been recognised in the income statement with the exception of the items shown in note 5(b).

Of the gross deferred tax assets, £6.7m are expected to reverse within 12 months of the balance sheet date. No material reversal of any of the deferred tax liability is expected within 12 months of the balance sheet date based on the Group's current capital expenditure programme.

7. Earnings per share

	2022 £m	2021 £m
Adjusted profit after tax for the year attributable to owners of the parent	**379.2**	348.8
Exceptional items and amortisation of intangible assets	**283.9**	(33.7)
Tax impact of exceptional items and amortisation of intangible assets	**(13.8)**	5.7
Profit after tax for the year attributable to owners of the parent	**649.3**	320.8

	Number m	Number m
Weighted average number of 10.61p (2021: 10.61p) ordinary shares in issue for basic calculation	**139.4**	139.5
Deemed issue of potentially dilutive shares	**0.3**	0.3
Average number of 10.61p (2021: 10.61p) ordinary shares for diluted calculation	**139.7**	139.8

	Pence	Pence
Basic earnings per share	**465.8**	230.0
Adjusted basic earnings per share	**272.0**	250.0
Diluted earnings per share	**464.8**	229.5
Adjusted diluted earnings per share	**271.4**	249.5

Basic earnings per share is calculated by dividing the profit after tax attributable to owners of the parent by the weighted average number of ordinary shares in issue during the year, excluding those shares held in treasury or employee share trusts (note 24). Shares held in employee share trusts are treated as cancelled because, except for a nominal amount, dividends have been waived.

For diluted earnings per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all potentially dilutive ordinary shares.

Additional earnings per share calculations are included above to give a better indication of the Group's underlying performance.

8. Dividends

	Pence per share	2022 £m	Pence per share	2021 £m
Ordinary				
Interim				
2021 interim, paid October 2021	**–**	**–**	43.5	60.6
2022 interim, paid October 2022	**47.0**	**65.6**	–	–
Final				
2020 final, paid June 2021	**–**	**–**	51.5	71.8
2021 final, paid June 2022	**56.5**	**78.8**	–	–
	103.5	**144.4**	95.0	132.4
Preference (paid June and December)		**–**		0.1
		144.4		132.5

The Directors are recommending a final dividend of 61.0p per share, amounting to a total of £85.1m, in respect of the financial year ended 31 December 2022.

Subject to shareholder approval, the dividend will be paid on 26 May 2023 to shareholders registered on 28 April 2023 and has not been accrued in these financial statements. The total dividend for the year ended 31 December 2022 will be 108.0p per share amounting to a total of £150.7m.

Notes to the Group Accounts continued

9. Employees

	2022 £m	Restated 2021 £m
Group employment costs including Directors		
Wages and salaries	**307.3**	288.0
Share-based payment charges (note 23)	**3.5**	41.3
Social security costs	**55.5**	49.7
Post-retirement benefit costs	**23.6**	21.7
Redundancy costs	**1.2**	0.8
	391.1	401.5

	2022 Number	2021 Number
Average employee numbers by function		
Production	**3,656**	3,766
Selling and distribution	**1,311**	1,342
Administration	**939**	929
	5,906	6,037

As required by the Companies Act 2006, the figures disclosed above are the weighted averages based on the number of employees including Executive Directors. At 31 December 2022, the Group had 5,825 (2021: 6,135) employees in total. Prior year post-retirement benefit costs have been restated to include the £11.2m exceptional curtailment gain.

10. Directors' and key management compensation

Detailed information concerning Directors' remuneration, interests and options is shown in section E of the Directors' Remuneration Report, which is subject to audit, on pages 130 to 140 forming part of the Annual Report and Accounts.

Aggregate compensation for key management, being the Directors and members of the Group Executive Committee, was as follows:

	2022 £m	2021 £m
Key management compensation including Directors		
Short-term employee benefits	**10.5**	8.1
Post-retirement benefit costs	**0.1**	0.1
Share-based payment charge	**5.9**	6.6
	16.5	14.8

11. Post-retirement benefits

The table below summarises the Group's net year end post-retirement benefits balance sheet positions and activity for the year.

	2022 £m	2021 £m
Balance sheet:		
Retirement benefit assets	**123.2**	35.3
Retirement benefit liabilities	**(23.1)**	(27.4)
Net asset in Group balance sheet	**100.1**	7.9
Net balance sheet assets/(liabilities) for:		
Defined pension benefits	**110.9**	21.4
Post-employment medical benefits	**(10.8)**	(13.5)
	100.1	7.9
Income statement charge included in profit before tax for:		
Defined pension benefits	**9.3**	13.5
Post-employment medical benefits	**0.6**	0.7
	9.9	14.2
Remeasurements included in other comprehensive income for:		
Defined pension benefits	**(84.2)**	(38.5)
Post-employment medical benefits	**(4.7)**	(2.1)
	(88.9)	(40.6)

Defined benefit pension schemes

The Group operates defined benefit pension schemes in the UK, US and several other territories under broadly similar regulatory frameworks. All of the Group's final salary type pension schemes (which provide benefits to members in the form of a guaranteed level of pension payable for life based on salary in the final years leading up to retirement) are closed to future service accrual with the exception of a small number of 'grandfathered' employees in the US scheme.

The UK scheme, which remains open to new members, operated on a final salary basis until 5 April 2016, following which the scheme changed to a Career Average Revalued Earnings (CARE) defined benefit scheme, with annual pensionable earnings capped and pensions in payment indexed based on CPI (previously RPI) for service accrued from 6 April 2016. This change reduces the future comparable cost and risk attached to the UK scheme. The US scheme operates a cash balance pension scheme that provides a guaranteed rate of return on pension contributions until retirement (other than for 'grandfathered' employees). From 1 October 2017 the US scheme was closed to new joiners, who will receive defined contribution benefits. The US plans also do not generally receive inflationary increases once in payment. With the exception of this difference in inflationary risk, the Group's main defined benefit pension schemes continue to face materially similar risks, as described on pages 182 and 183.

The majority of benefit payments are from trustee administered funds; however, there are also a number of unfunded plans where the relevant Group company meets the benefit payment obligation as it falls due.

Plan assets held in trusts are governed by local regulations and practice in each country, as is the nature of the relationship between the Group and the trustees (or equivalent) and their composition. Responsibility for governance of the schemes, including investment decisions and contribution schedules, predominantly lies with the particular scheme's board of trustees with appropriate input from the relevant Group company. The board of trustees must be composed of representatives in accordance with each scheme's regulations and any relevant legislation.

During the period the business divestment resulted in a curtailment gain of £3.9m on cessation of defined benefit accrual, primarily within the Group's UK pension scheme, which has been recognised in the Group income statement as part of the gain on business disposal. During 2021 the Group's primary Netherlands scheme was converted into a collective defined contribution scheme for both past and future service. This change resulted in a curtailment gain of £11.2m on the cessation of defined benefit accrual, which was recognised in the Group income statement as an exceptional item.

11. Post-retirement benefits continued

The amounts recognised in the balance sheet in respect of these schemes are as follows:

	2022 £m	2021 £m
Present value of funded obligations		
UK pension scheme	**(726.2)**	(1,162.6)
US pension scheme	**(108.3)**	(126.8)
Rest of world	**(15.6)**	(19.6)
	(850.1)	(1,309.0)
Fair value of schemes' assets		
UK pension scheme	**840.1**	1,178.3
US pension scheme	**116.6**	145.4
Rest of world	**12.6**	16.4
	969.3	1,340.1
Net asset in respect of funded schemes	**119.2**	31.1
Present value of unfunded obligations	**(8.3)**	(9.7)
Net asset in Group balance sheet (excluding post-employment medical benefits)	**110.9**	21.4

	2022 £m	2021 £m
Movement in present value of retirement benefit obligations in the year:		
Opening balance	**1,318.7**	1,554.0
Current service cost	**15.9**	24.7
Past service cost – curtailments	**(3.9)**	(11.2)
Settlements	**–**	(207.1)
Acquisitions	**–**	0.9
Business disposal	**(1.8)**	–
Interest cost	**30.7**	20.1
Remeasurements		
Change in demographic assumptions	**(1.6)**	8.2
Change in financial assumptions	**(481.9)**	(46.7)
Experience gains	**16.8**	26.9
Contributions paid in		
Employee	**2.7**	3.0
Benefits paid	**(51.3)**	(46.8)
Exchange differences on overseas schemes	**14.1**	(7.3)
	858.4	1,318.7
Movement in fair value of schemes' assets in the year:		
Opening balance	**1,340.1**	1,536.8
Interest income	**33.4**	20.1
Remeasurements		
Return on scheme assets, excluding amounts included in financial expenses	**(382.5)**	26.9
Contributions paid in		
Employee	**2.7**	3.0
Employer	**11.5**	13.6
Settlements	**–**	(207.1)
Business disposal	**(0.3)**	–
Benefits paid out	**(51.3)**	(46.8)
Exchange differences on overseas schemes	**15.7**	(6.4)
	969.3	1,340.1

As at the balance sheet date, the present value of funded and unfunded retirement benefit obligations comprised approximately £171m in respect of active employees, £239m in respect of deferred members and £448m in relation to members in retirement.

Total employer contributions to the schemes in 2023 are expected to be £10.9m.

The actuarial assumptions used to determine the present value of the defined benefit obligations were as follows:

	2022 UK	**2022 US**	2021 UK	2021 US
Discount rate	**4.8%**	**5.3%**	1.8%	2.8%
Inflation rate – RPI	**3.2%**	**3.0%**	3.2%	2.5%
Inflation rate – CPI	**2.6%**	**n/a**	2.8%	n/a
Rate of increase in salaries	**4.6%**	**4.0%**	4.8%	3.5%
Rate of increase for pensions in payment	**3.0%**	**n/a**	3.1%	n/a
Duration of liabilities (i.e. life expectancy) (years)	**15.0**	**9.6**	18.9	11.0
Remaining working life	**9.5**	**9.9**	9.6	10.6

Mortality assumptions are based on country-specific mortality tables and where appropriate allow for future improvements in life expectancy. Where credible data exists, actual plan experience is taken into account. The UK mortality improvement scale has been updated to CMI2021, in order to reflect the most recent CMI model with no weighting for 2020 and 2021 experience given uncertainty around the long-term impact of COVID-19 on life expectancy. The mortality experience analysis for the scheme will be carried out in the future as part of the 30 September 2023 funding valuation for the UK Croda Pension Scheme. Applying the mortality tables adopted, the expected future average lifetime of members currently at age 65 and members at age 65 in 20 years' time is as follows:

	Current age 65		Age 65 in 20 years	
	UK	US	UK	US
Male	20.2	20.9	21.5	22.1
Female	23.3	22.8	24.8	23.9

The sensitivity of the defined benefit obligation to changes in the significant assumptions is as follows:

	Impact on retirement benefit obligation		
	Sensitivity	Of increase	Of decrease
Discount rate	0.5%	-6.3%	7.0%
Inflation rate	0.5%	4.7%	-4.5%
Mortality (assumes a one-year change in life expectancy)	1 year	3.6%	-3.6%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting year) has been applied as when calculating the retirement benefit obligation recognised in the Group balance sheet. The weighted average duration of the defined benefit obligation is 14.3 years (2021: 18.1 years).

The assets in the schemes comprised:

	2022 £m	**2022 %**	2021 £m	2021 %
Quoted				
Equities	**70.1**	**7%**	188.2	14%
Government bonds	**336.9**	**36%**	590.8	44%
Corporate bonds	**56.3**	**6%**	70.6	5%
Other quoted securities	**24.2**	**2%**	28.7	2%
Unquoted				
Cash and cash equivalents	**98.1**	**10%**	73.1	5%
Real estate (pooled investment vehicles)	**60.3**	**6%**	61.6	5%
Derivatives	**(46.1)**	**-5%**	10.0	1%
Other	**369.5**	**38%**	317.1	24%
	969.3	**100%**	1,340.1	100%

Derivatives presented above represent the scheme's net position on Government bond repurchase agreements and other swap contracts (valued on a mark-to-market basis) which form part of the scheme's Liability Driven Investment (LDI) portfolio. The non-derivative assets in the LDI portfolio have been presented in the relevant asset category. During September and October 2022 significant volatility in UK interest rates impacted pensions scheme's that use LDI funds. The Scheme's low level of leverage in the LDI portfolio and significant collateral headroom has meant that the Scheme has remained resilient to this volatility. As a result of market movements, the Scheme's asset allocation during Q4 2022 was out of line with the target allocation with an overweight position to return seeking assets. The Trustee and investment consultant reviewed the Scheme's investments and instructed various trades to rebalance the Scheme's portfolio towards the target allocation. The increases in interest rates over the year have seen an improvement in the Scheme's overall funding position and the Trustee and its advisors are continuing to review and monitor the situation. Other investments include; a fund of hedge funds, which consists of a fund of multiple investment managers across both traditional markets such as equities and credit and also more specialist diversified strategies; infrastructure type investments that hold assets linked to the value and income from UK and overseas infrastructure.

11. Post-retirement benefits continued

Post-employment medical benefits

The Group operates an unfunded post-employment medical benefit scheme in the US. The method of accounting, significant assumptions and the frequency of valuations are similar to those used for defined benefit pension schemes set out above with the addition of actuarial assumptions relating to the long-term increase in health care costs of 5.0% a year (2021: 5.0%).

The amounts recognised in the balance sheet in respect of this scheme are as follows:

	2022 £m	2021 £m
Present value of unfunded obligations		
US scheme	**10.8**	13.5

	2022 £m	2021 £m
Movement in present value of retirement benefit obligations in the year:		
Opening balance	**13.5**	15.1
Current service cost	**0.3**	0.4
Interest cost	**0.3**	0.3
Remeasurements – change in financial assumptions	**(4.4)**	(1.2)
Remeasurements – experience gains	**(0.3)**	(0.9)
Benefits paid	**(0.2)**	(0.3)
Exchange differences on overseas schemes	**1.6**	0.1
	10.8	13.5

Pension and medical benefits – risks and volatility

Through its defined benefit pension schemes and post-employment medical schemes, the Group is exposed to a number of risks, the most significant of which are detailed below:

Asset volatility

The schemes' liabilities are calculated using a discount rate set with reference to corporate bond yields; if scheme assets underperform this yield, a deficit will be created. The schemes hold a proportion of equities, which are expected to outperform corporate bonds in the long-term while providing volatility and risk in the short-term. As the schemes mature, the Group intends to reduce the level of investment risk by investing more in assets that better match the liabilities. However, the Group and the pension trustees (Trustees) believe that due to the long-term nature of the scheme liabilities and the strength of the supporting Group, a level of continuing equity investment is an appropriate element of the Group's long-term strategy to manage the schemes efficiently. See below for more details on the Group's asset-liability matching strategy.

Changes in bond yields

A decrease in corporate bond yields will increase scheme liabilities, although this will be partially offset by an increase in the value of the schemes' bond holdings.

Inflation risk

Some of the Group's pension obligations are linked to inflation, and higher inflation will lead to higher liabilities. However, the level of inflationary increases are usually capped to protect the scheme against extreme inflation. The majority of the schemes' assets are either unaffected by inflation in the case of fixed interest bonds or loosely correlated in the case of equities, meaning that an increase in inflation will thus increase the deficit. In the US schemes, the pensions in payment are not linked to inflation, so this is a less material risk.

Life expectancy

The majority of the schemes' obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the schemes' liabilities. This is particularly significant in the UK scheme, where inflationary increases result in higher sensitivity to changes in life expectancy. In the case of the funded schemes, the Group ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are cognisant of the obligations under the pension schemes. Within this framework, the Group's ALM objective is to match a portion of assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency. The Group and Trustees actively monitor how the duration and the expected yield of the investments are matching the expected cash outflows arising from the pension obligations. The Group has not changed the processes used to manage its risks from previous years.

Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets. A significant portion of assets in 2022 consists of equities and bonds, although the schemes also invest in property, cash and infrastructure funds. The Group believes that equities offer the best returns over the long-term with an acceptable level of risk. The UK scheme makes use of a portfolio of derivative instruments to mitigate interest rate and inflation risk.

The latest triennial valuation of the UK scheme was completed as at 30 September 2020. As a result, no deficit funding payments to this scheme are required prior to completion of the next triennial valuation (as at 30 September 2023). The funding review of our US scheme is undertaken annually. As at 1 December 2021 the scheme was 150.2% funded.

The expected distribution of the timing of discounted benefit payments is as follows:

	Less than a year £m	Between 1–2 years £m	Between 2–5 years £m	Beyond 5 years £m	Total £m
Pension benefits	44.0	47.2	146.1	621.1	858.4
Post-employment medical benefits	0.5	0.5	1.7	8.1	10.8
	44.5	47.7	147.8	629.2	869.2

Defined contribution schemes

	2022 £m	2021 £m
Contributions paid charged to operating profit	**11.3**	7.8

12. Intangible assets

	Goodwill £m	Software £m	Technology processes £m	Customer relationships £m	Trade names and brands £m	Other intangibles £m	Total £m
Cost							
At 1 January 2021	866.7	35.7	154.3	218.6	89.4	3.9	1,368.6
Exchange differences	(34.7)	(0.7)	(7.6)	(10.2)	(4.5)	(0.1)	(57.8)
Additions	–	5.5	–	–	–	0.2	5.7
Acquisitions	20.0	0.2	6.0	18.0	4.2	–	48.4
Disposals and write-offs	–	(4.0)	–	–	–	–	(4.0)
Reclassifications from property, plant and equipment	–	(0.3)	(0.1)	–	–	0.9	0.5
At 31 December 2021	**852.0**	**36.4**	**152.6**	**226.4**	**89.1**	**4.9**	**1,361.4**
At 1 January 2022	852.0	36.4	152.6	226.4	89.1	4.9	1,361.4
Exchange differences	37.3	1.5	8.4	15.5	5.9	–	68.6
Additions	–	2.9	6.3	–	–	1.8	11.0
Disposals and write-offs	(10.1)	(6.8)	(17.4)	–	–	–	(34.3)
Reclassifications from property, plant and equipment	–	0.4	–	–	–	–	0.4
At 31 December 2022	**879.2**	**34.4**	**149.9**	**241.9**	**95.0**	**6.7**	**1,407.1**
Accumulated amortisation and impairment losses							
At 1 January 2021	–	19.6	22.2	10.9	2.6	1.6	56.9
Exchange differences	–	(0.8)	(1.6)	(0.7)	(0.1)	–	(3.2)
Charge for the year (note 3)	–	2.7	15.8	12.9	5.0	0.6	37.0
Disposals and write-offs	–	(0.9)	–	–	–	–	(0.9)
Reclassifications	–	(0.2)	–	–	–	0.2	–
At 31 December 2021	**–**	**20.4**	**36.4**	**23.1**	**7.5**	**2.4**	**89.8**
At 1 January 2022	–	20.4	36.4	23.1	7.5	2.4	89.8
Exchange differences	–	1.3	2.1	2.0	0.6	–	6.0
Charge for the year (note 3)	–	2.7	15.5	13.7	5.2	0.2	37.3
Disposals and write-offs	–	(6.5)	(7.3)	–	–	–	(13.8)
Impairments	34.6	–	–	–	–	–	34.6
At 31 December 2022	**34.6**	**17.9**	**46.7**	**38.8**	**13.3**	**2.6**	**153.9**
Net carrying amount							
At 31 December 2022	**844.6**	**16.5**	**103.2**	**203.1**	**81.7**	**4.1**	**1,253.2**
At 31 December 2021	852.0	16.0	116.2	203.3	81.6	2.5	1,271.6
At 1 January 2021	866.7	16.1	132.1	207.7	86.8	2.3	1,311.7

During the year goodwill was impaired by £34.6m. This impairment is recorded in the income statement on page 159 as an exceptional item within operating costs and is within the Consumer Care operating business segment. Intangible asset amortisation is also recorded in operating costs.

12. Intangible assets continued

Impairment testing for CGUs containing goodwill

The Group's goodwill balance predominantly relates to the value of commercial and other synergies arising from the combination of acquired businesses with Croda's established global sales, marketing and R&D networks. This goodwill is allocated to the Group's Cash Generating Units (CGUs) expected to benefit from that combination based on the smallest identifiable group of assets that generate independent cash inflows.

Following the divestment of the majority of the Performance Technologies and Industrial Chemicals business as announced in the 2022 Interim Statement, the retained business now forms a new Industrial Specialties sector. Accordingly, the Group has combined the previously reported operating business segments for the year ended 31 December 2021 for both Performance Technologies and Industrial Chemicals and shown as Industrial Specialties. The divestment included the disposal of standalone CGUs Ionphase and Rewitec.

The Fragrances CGU includes the goodwill arising on the acquisition of Parfex S.A. ('Parfex') in June 2021. This is in line with the level at which goodwill is monitored by Management following the integration of Parfex into the Group.

As discussed in the accounting policies note on page 166, goodwill is tested at each year end for impairment with reference to the relevant CGU's recoverable amount compared to the unit's carrying value including goodwill. Assets are grouped at the lowest level for which there are separately identifiable cash flows relevant to the acquisition generating the goodwill. The recoverable amount is based on the higher of fair value less cost to sell and value in use calculations using discounted cash flow projections with the following key assumptions:

- Terminal value growth rates – set for each CGU with reference to the long-term growth rate for the market and territory in which the CGU operates but not exceeding the Group's long-term average growth rate, estimated at 3%.
- Discount rate – set using a weighted average cost of capital adjusted for the specific risk profile of each CGU.
- Cash flow projections – based on management's most recent risk-adjusted view of future trading, with assumptions including revenue growth, operating margins, maintenance capital expenditure and working capital days.

The carrying amount of goodwill is allocated to operating business segments as follows:

	2022			Restated 2021		
	Standalone CGUs £m	**Allocated goodwill £m**	**Total £m**	Standalone CGUs £m	Allocated goodwill £m	Total £m
Consumer Care	**370.3**	**219.2**	**589.5**	385.4	213.7	599.1
Life Sciences	**163.3**	**69.2**	**232.5**	151.2	69.5	220.7
Industrial Specialties	**22.6**	**–**	**22.6**	30.9	1.3	32.2
	556.2	**288.4**	**844.6**	567.5	284.5	852.0

The allocated goodwill primarily relates to £63m (2021: £59m) associated with the 2020 acquisition of Iberchem as it relates to revenue synergies with Croda's existing Consumer Care business and £192m (2021: £192m) associated with the 2006 acquisition of Uniqema (with all other balances individually less than £10m). Due to the geographical and operational scale of the Uniqema acquisition, this goodwill balance is tested for impairment at an operating business segment level. Standalone CGUs operate independently of the Group's core regional operating assets, are capable of generating largely independent cash inflows and therefore goodwill relating to standalone CGUS is tested separately for impairment annually.

For impairment testing performed at an operating business segment level, cash flow projections are based on the Group's current year results and a growth rate of 3% (an appropriate risk-adjusted view based on past experience reflecting the market and territories in which the Group operates), discounted using a weighted average cost of capital, which for these purposes has been calculated to be approximately 9.9% pre-tax (2021: 8.5%). No reasonably possible changes in key assumptions would cause the recoverable amount of the operating segments to be less than their carrying value. Based on the testing performed, no impairment has been recognised for the year ended 31 December 2022.

Standalone CGUs

The carrying amount of goodwill (post impairment) is allocated to Standalone CGUs as follows:

	2022 £m	Restated 2021 £m
Incotec	**71.2**	67.6
Biosector	**26.0**	24.6
Sipo	**22.6**	22.1
Ionphase	**–**	6.5
Rewitec	**–**	2.3
Avanti	**66.1**	59.0
Fragrances	**269.3**	255.5
Flavours	**94.4**	123.6
Alban Muller	**6.6**	6.3
	556.2	567.5

For all Standalone CGUs the recoverable amount was based on value in use calculations, including Sipo, which was based on fair value less cost to sell in the prior year. Cash flow projections have been based on specific risk adjusted estimates for five years taking management's most recent view of medium-term trading prospects. Unless otherwise stated, cash flow projections assume an appropriate view of past experience, specifically considering revenue growth in relation to market share, maintaining operating margins, maintenance capital expenditure and working capital days. Previously Biosector, Fragrances and Flavours cash flow projections were based on 10-year projections that supported the acquisitions, however these have been refreshed in the year based on management's latest view and capped to a 5-year period to reduce the risk with longer term forecasting, consistent with other CGU's cash flow projections. Due to the changes in the cash flow projections, where applicable, comparative growth rates are not presented. Discount rates have been calculated for standalone CGUs considering specific size risk premiums. Excluding Fragrances and Flavours, discount rates have increased in the year as a result of the independent inputs into the calculation, predominantly the increase in risk-free rates. Given the diverse geographical spread of the Fragrances and Flavours business, the risk-free rates has been less impacted by changes in interest rate compared to the Group's other CGUs. The terminal value growth rates and discount rates applied in these CGU level calculations are set out below:

		Terminal value growth rate		Pre-tax discount rate
	2022	2021	**2022**	2021
Incotec	**3.0%**	3.0%	**11.0%**	8.9%
Biosector	**3.0%**	3.0%	**13.6%**	11.0%
Sipo	**3.0%**	n/a	**12.4%**	n/a
Avanti	**3.0%**	3.0%	**12.8%**	11.0%
Fragrances	**3.0%**	3.0%	**10.6%**	10.5%
Flavours	**3.0%**	3.0%	**10.5%**	10.4%
Alban Muller	**3.0%**	n/a	**12.8%**	n/a

An impairment of £34.6m was recorded in relation to goodwill arising on the acquisition of Iberchem's Flavours business. This principally reflected the impact of significant cost inflation which was not fully recovered, with future value of the business being behind the acquisition case. The assumptions underpinning the cash flow projection used in the value in use calculation reflect management's most recent five-year business plan. These projections use an appropriate view of past experience, specifically that operating margins will improve in the medium to long-term and sales growth targets will be achieved resulting in approximately 14% compound average growth rates ('CAGR') at a sales level and 20% EBITDA CAGR over the period.

Excluding Flavours, based on the annual impairment testing performed for all standalone CGUs no impairment has been recognised for the year ended 31 December 2022 and standalone CGUs remain on track to perform to our long-term expectations. In forming this conclusion, the Directors have reviewed sensitivity analysis which considered all reasonably possible downsides on key assumptions, both individually and in combination, and considered whether these would give rise to an impairment. This analysis concluded that no reasonably possible changes in key assumptions would cause the recoverable amount of the Standalone CGUs to be less than the carrying value, other than for the Fragrances and Flavours CGUs.

The estimated recoverable amount of the Fragrances CGU exceeded its carrying value by approximately £111m (2021: £17m) and therefore the Directors concluded that no impairment was required; however, the calculations are sensitive to changes in key assumptions. The key assumptions considered by the Directors, where a reasonably possible change could give rise to an impairment, were the EBITDA CAGR (set at approximately 16%), pre-tax discount rate and long-term growth rate. Sensitivity disclosures for both the Fragrances and Flavours CGUs are set out below.

Sensitivity to changes in assumptions

The recoverable amount, and therefore level of headroom or impairment charge, is predominantly dependent upon judgements used in arriving at the cash flow projections, long-term growth rate, and the discount rate. Although it is not management's current expectation, the impact on the recoverable amount when applying a reasonably possible change in these assumptions would be as follows for the year ended 31 December 2022:

			Flavours			**Fragrances**
	Sensitivity	**Increase £m**	**Decrease £m**	**Sensitivity**	**Increase £m**	**Decrease £m**
Incremental increase/(decrease) in recoverable amount						
Change in pre-tax discount rate by:	**1.0%**	**(21.1)**	**27.7**	**1.0%**	**(80.0)**	**104.7**
Change in long-term growth rates by:	**1.0%**	**28.5**	**(20.0)**	**1.0%**	**109.5**	**(76.8)**
Change in EBITDA compound annual growth rate by:	**5.0%**	**39.8**	**(33.9)**	**5.0%**	**167.1**	**(141.3)**

The above sensitivity analyses are based on a change in an assumption whilst holding all other assumptions constant. In practice, some of the assumptions may be correlated.

13. Property, plant and equipment

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
At 1 January 2021	256.9	1,199.7	1,456.6
Exchange differences	(6.9)	(24.6)	(31.5)
Additions	40.2	112.8	153.0
Acquisitions	9.9	3.1	13.0
Other disposals and write-offs	(0.6)	(8.8)	(9.4)
Reclassifications to intangible assets	(2.6)	2.1	(0.5)
At 31 December 2021	**296.9**	**1,284.3**	**1,581.2**
At 1 January 2022	296.9	1,284.3	1,581.2
Exchange differences	24.1	94.5	118.6
Additions	16.1	119.8	135.9
Other disposals and write-offs	(39.1)	(373.6)	(412.7)
Reclassifications to intangible assets	7.2	(7.6)	(0.4)
At 31 December 2022	**305.2**	**1,117.4**	**1,422.6**
Accumulated depreciation and impairment losses			
At 1 January 2021	83.9	471.9	555.8
Exchange differences	(3.1)	(16.0)	(19.1)
Charge for the year (note 3)	8.5	54.6	63.1
Other disposals and write-offs	(0.6)	(6.1)	(6.7)
Reclassifications	(0.9)	0.9	–
At 31 December 2021	**87.8**	**505.3**	**593.1**
At 1 January 2022	87.8	505.3	593.1
Exchange differences	7.5	38.8	46.3
Charge for the year (note 3)	10.6	58.0	68.6
Other disposals and write-offs	(27.4)	(230.1)	(257.5)
Impairments	–	7.6	7.6
At 31 December 2022	**78.5**	**379.6**	**458.1**
Net book amount			
At 31 December 2022	**226.7**	**737.8**	**964.5**
At 31 December 2021	209.1	779.0	988.1
At 1 January 2021	173.0	727.8	900.8

During the current year the Group received government grant funding of £6.1m (2021: £nil) relating to the US cGMP scale up project.

During the year plant and equipment was impaired by £7.6m relating to the write-off of unusable manufacturing plant in Japan. This impairment is recorded in the income statement on page 159 as an exceptional item within operating costs and is within the Consumer Care (£5.0m) and Life Sciences (£2.6m) operating business segments.

The value of assets under construction not yet subject to depreciation at 31 December was as follows:

	2022 £m	2021 £m
Assets under construction		
Land and buildings	**18.8**	42.8
Plant and equipment	**134.8**	178.6
	153.6	221.4

14. Leases

Right of use assets

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
At 1 January 2021	91.1	10.0	101.1
Exchange differences	(0.9)	(0.4)	(1.3)
Additions	10.1	7.6	17.7
Remeasurements	3.4	0.1	3.5
Acquisitions	0.8	0.5	1.3
Other disposals and write-offs	(2.8)	(0.6)	(3.4)
At 31 December 2021	**101.7**	**17.2**	**118.9**
At 1 January 2022	101.7	17.2	118.9
Exchange differences	6.6	1.1	7.7
Additions	5.1	3.8	8.9
Remeasurements	10.4	0.4	10.8
Other disposals and write-offs	(5.1)	(2.2)	(7.3)
At 31 December 2022	**118.7**	**20.3**	**139.0**
Accumulated depreciation and impairment losses			
At 1 January 2021	17.5	3.5	21.0
Exchange differences	(0.2)	(0.2)	(0.4)
Charge for the year (note 3)	10.9	2.3	13.2
Other disposals and write-offs	(2.3)	(0.5)	(2.8)
At 31 December 2021	**25.9**	**5.1**	**31.0**
At 1 January 2022	25.9	5.1	31.0
Exchange differences	1.4	0.4	1.8
Charge for the year (note 3)	11.7	3.1	14.8
Other disposals and write-offs	(3.7)	(1.8)	(5.5)
At 31 December 2022	**35.3**	**6.8**	**42.1**
Net book amount			
At 31 December 2022	**83.4**	**13.5**	**96.9**
At 31 December 2021	75.8	12.1	87.9
At 1 January 2021	73.6	6.5	80.1

Lease liabilities

	2022 £m	2021 £m
Lease liabilities included in the Group balance sheet		
Current	**12.9**	12.2
Non-current	**79.2**	78.3
	92.1	90.5

A maturity analysis of contractual undiscounted cash flows relating to lease liabilities is presented within note 20.

14. Leases continued

Amounts recognised in the Group income statement

	2022 £m	2021 £m
Interest on lease liabilities	**2.5**	2.2
Expenses relating to short-term leases	**0.3**	0.3
Expenses relating to low value leases, excluding short-term leases of low value assets	**0.3**	0.6
Expenses relating to variable lease components	**0.4**	0.5
Depreciation of right of use assets	**14.8**	13.2
Profit on disposal of right of use assets	**(0.2)**	(0.1)
	18.1	16.7

Total cash outflow for leases

	2022 £m	2021 £m
Payment of lease liabilities	**17.4**	14.4
Payment of short-term, low value and variable lease components	**1.0**	1.4
	18.4	15.8

15. Future commitments

	2022 £m	2021 £m
Group capital projects		
At 31 December the Directors had authorised the following expenditure, excluding grant income, on capital projects:		
Contracted, but not provided for		
Property, plant and equipment	**45.6**	19.3
Intangible assets	**1.3**	0.8
Authorised, but not contracted for		
Property, plant and equipment	**165.9**	106.4
Intangible assets	**3.8**	3.7
	216.6	130.2

16. Investments

The amounts recognised in the balance sheet are as follows:

	2022 £m	2021 £m
Other investments	**3.4**	3.3

During the prior year, the Group impaired the carrying value of its minority shareholding in Cutitronics Limited resulting in a charge to the income statement of £1.1m. There have been no material changes in other investments during the year. All assets recognised as other investments on the Group balance sheet are non-quoted equity securities measured at fair value.

The amounts recognised within administrative expenses in the income statement are as follows:

	2022 £m	2021 £m
Share of loss of associate	**–**	0.7
Impairment of associate	**–**	1.1
	–	1.8

17. Inventories

	2022 £m	2021 £m
Raw materials	**135.9**	121.8
Work in progress	**45.8**	56.0
Finished goods	**282.3**	265.2
	464.0	443.0

The Group consumed £1,102.9m (2021: £950.7m) of inventories during the year.

18. Trade and other receivables

	2022 £m	2021 £m
Amounts falling due within one year		
Trade receivables	**320.4**	280.3
Less: provision for impairment of receivables	**(5.8)**	(2.9)
Trade receivables – net	**314.6**	277.4
Other receivables	**47.1**	45.9
Prepayments	**14.1**	14.6
	375.8	337.9

The ageing of the Group's year end overdue receivables against which no material provision has been made is as follows:

	2022 £m	2021 £m
Not impaired		
Less than three months	**60.1**	39.1
Three to six months	**8.9**	6.3
Over six months	**6.0**	1.1
	75.0	46.5

The provision for impairment of receivables principally relates to customers in unexpectedly difficult economic circumstances. The overdue receivables against which no material provision has been made relate to a number of customers for whom there is no recent history of default, nor any other indication that settlement will not be forthcoming. The other classes within trade and other receivables do not contain impaired assets and are considered to be fully recoverable.

The carrying amounts of the Group's receivables are denominated in the following currencies:

	2022 £m	2021 £m
Sterling	**15.9**	17.2
US Dollar	**130.5**	112.0
Euro	**108.7**	106.4
Other	**120.7**	102.3
	375.8	337.9

Movements on the Group's provision for impairment of trade receivables are as follows:

	2022 £m	2021 £m
At 1 January	**2.9**	2.5
Exchange differences	**0.4**	–
Charged to income statement	**2.7**	0.4
Net write-off of uncollectible receivables	**(0.2)**	–
At 31 December	**5.8**	2.9

Amounts charged to the income statement are included within administrative expenses.

19. Trade and other payables

	2022 £m	2021 £m
Trade payables	**120.9**	133.2
Taxation and social security	**16.9**	15.7
Other payables	**45.4**	62.8
Accruals and deferred income	**131.4**	132.5
Contingent consideration	**9.9**	26.1
	324.5	370.3

All trade payables are payable within one year. Included in the above are balances payable after one year of £nil (2021: £8.5m) contingent consideration, £3.5m (2021: £3.0m) accruals and deferred income, and £1.0m (2021: £0.8m) other payables. During the period, contingent consideration has decreased by £6.1m due to fair value movements, £0.7m due to the business divestment and £13.7m due to payments, increasing by £1.7m for the unwind of discounting and £2.6m for foreign exchange. Fair value movements in the year reflect the revenue recognised for applicable products to the end of the contracted earn out period being 31 December 2022.

20. Borrowings, other financial liabilities and other financial assets

This note should be read in conjunction with the further liquidity disclosures in our accounting policies note and the Finance Review on pages 44 to 47.

	2022 £m	2021 £m
Assets		
Non-current assets – Investments	**3.4**	3.3
Current assets – Trade and other receivables (excluding prepayments)	**361.7**	323.3
	365.1	326.6
Current liabilities		
Trade and other payables (excluding taxation, social security, contingent consideration, accruals and deferred income)	**161.8**	192.2
US$200m 3 year term loan due 2023	**–**	14.5
€30m 1.08% fixed rate 7 year note	**26.5**	–
£30m 2.54% fixed rate 7 year note	**30.0**	–
Unsecured bank loans and overdrafts due within one year or on demand	**42.8**	21.9
Other loans	**22.6**	14.5
Lease liabilities	**12.9**	12.2
	296.6	255.3
Non-current liabilities		
2019 Club facility due 2026	**18.0**	262.2
US$200m 3 year term loan due 2023	**–**	110.9
US$100m 3.75% fixed rate 10 year note	**83.0**	74.1
€30m 1.08% fixed rate 7 year note	**–**	25.2
€70m 1.43% fixed rate 10 year note	**61.9**	58.7
£30m 2.54% fixed rate 7 year note	**–**	30.0
£70m 2.80% fixed rate 10 year note	**70.0**	70.0
€50m 1.18% fixed rate 8 year note	**44.2**	41.9
£65m 2.46% fixed rate 8 year note	**65.0**	65.0
US$60m 3.70% fixed rate 10 year note	**49.8**	44.5
Other secured bank loans	**8.6**	9.8
Other unsecured bank loans	**0.2**	2.3
Preference share capital	**1.1**	–
Lease liabilities	**79.2**	78.3
	481.0	872.9

During the year the Group's preference share capital has been reclassified from equity to borrowings and other financial liabilities.

The Group's 2019 Club facility falls due for repayment upon expiry of the agreement in October 2026. Interest is charged on this agreement at a floating rate based on SONIA, ICE LIBOR or EURIBOR, depending upon the drawdown currency, plus a variable margin. In May 2022, the Group obtained a new £100m 364 day committed revolving credit facility, the facility remained undrawn and was subsequently cancelled in November 2022. In July 2022, the Group's existing three-year amortising Term Loan for US$200m was repaid and cancelled. Interest was charged on this agreement at a floating rate based on ICE LIBOR plus a variable margin. The margin the Group paid on this borrowing over and above standard rates was determined by the Group's net debt to EBITDA ratio.

	2022 £m	2021 £m
Maturity profile of financial liabilities		
Repayments fall due as follows:		
Within one year		
Bank loans and overdrafts	**99.3**	36.4
Other loans	**22.6**	14.5
	121.9	50.9
Lease liabilities	**12.9**	12.2
	134.8	63.1
After more than one year		
Loans repayable		
Within one to two years	**3.4**	171.2
Within two to five years	**264.6**	397.9
Five years and over	**132.7**	225.5
	400.7	794.6
Preference share capital	**1.1**	–
Lease liabilities	**79.2**	78.3
	481.0	872.9
The minimum lease payments under lease liabilities fall due as follows:		
Within one year	**14.8**	14.4
Within one to two years	**12.3**	13.0
Within two to five years	**27.3**	24.9
Five years and over	**55.0**	54.6
	109.4	106.9
Future finance charges on lease liabilities	**(17.3)**	(16.4)
Present value of lease liabilities	**92.1**	90.5

	2022 £m	2021 £m
Undiscounted maturity analysis of financial liabilities		
Within one year		
Bank loans and overdrafts	**101.6**	36.8
Other loans	**23.5**	15.1
Lease liabilities	**14.8**	14.4
	139.9	66.3
After more than one year		
Loans repayable		
Within one to two years	**14.3**	187.6
Within two to five years	**295.8**	437.0
Five years and over	**143.8**	245.5
Lease liabilities		
Within one to two years	**12.3**	13.0
Within two to five years	**27.3**	24.9
Five years and over	**55.0**	54.6
	548.5	962.6

The analysis above includes estimated interest payable to maturity on the underlying loans. For the loans due after more than one year £10.9m (2021: £14.9m) of the interest falls due within one year of the balance sheet date, £10.9m (2021: £13.4m) within one to two years, £25.3m (2021: £33.7m) within two to five years and £6.2m (2021: £13.5m) beyond five years.

20. Borrowings, other financial liabilities and other financial assets continued

Interest rate and currency profile of Group financial liabilities

	Total £m	Fixed £m	Floating £m	Fixed rate weighted average Interest rate %	Fixed rate weighted average Fixed period Years
Sterling	219.9	165.0	54.9	2.62	3.3
US Dollar	180.9	132.8	48.1	3.73	6.9
Euro	141.4	132.6	8.8	1.28	3.2
Other	73.6	–	73.6	–	–
At 31 December 2022	**615.8**	**430.4**	**185.4**	**2.55**	**4.4**
Sterling	336.4	165.0	171.4	2.62	4.3
US Dollar	299.0	118.6	180.4	3.73	7.9
Euro	241.4	125.8	115.6	1.28	4.2
Other	59.2	–	59.2	–	–
At 31 December 2021	**936.0**	**409.4**	**526.6**	**2.53**	**5.3**

Fair values

Prior to 2016, the Group did not typically utilise complex financial instruments and accordingly the only element of Group borrowings where fair value differed from book value was the US$100m fixed rate 10-year note that was issued in 2010. In January 2020 the existing US$100m fixed rate 10-year note matured and was repaid, this was replaced with a new US$100m fixed rate 10-year note (27 January 2020). On 27 June 2016, the Group issued £100m and €100m of fixed rate notes. On 6 June 2019, the Group issued a further £65m, €50m and US$60m of fixed rate notes.

The table below details a comparison of the book and fair values of the Group's financial assets and liabilities. Where there are no readily available market values to determine fair values, cash flows relating to the various instruments have been discounted at prevailing interest and exchange rates to give an estimate of fair value.

	Book value 2022 £m	**Fair value 2022 £m**	Book value 2021 £m	Fair value 2021 £m
Cash deposits	**320.6**	**320.6**	112.8	112.8
Other investments	**3.4**	**3.4**	3.3	3.3
2019 Club facility due 2026	**(18.0)**	**(18.0)**	(262.2)	(262.2)
US$200m 3 year term loan due 2023	**–**	**–**	(125.4)	(125.4)
US$100m 3.75% fixed rate 10 year note	**(83.0)**	**(74.4)**	(74.1)	(78.2)
€30m 1.08% fixed rate 7 year note	**(26.5)**	**(26.3)**	(25.2)	(25.5)
€70m 1.43% fixed rate 10 year note	**(61.9)**	**(57.8)**	(58.7)	(61.5)
£30m 2.54% fixed rate 7 year note	**(30.0)**	**(29.7)**	(30.0)	(30.3)
£70m 2.80% fixed rate 10 year note	**(70.0)**	**(64.8)**	(70.0)	(71.9)
€50m 1.18% fixed rate 8 year note	**(44.2)**	**(40.1)**	(41.9)	(43.5)
£65m 2.46% fixed rate 8 year note	**(65.0)**	**(58.1)**	(65.0)	(65.7)
US$60m 3.70% fixed rate 10 year note	**(49.8)**	**(45.4)**	(44.5)	(47.4)
Other bank borrowings	**(51.6)**	**(51.6)**	(34.0)	(34.0)
Other loans	**(22.6)**	**(22.6)**	(14.5)	(14.5)
Contingent consideration	**(9.9)**	**(9.9)**	(26.1)	(26.1)
Preference share capital	**(1.1)**	**(1.1)**	–	–
Forward foreign currency contracts	**(1.3)**	**(1.3)**	(2.3)	(2.3)

For financial instruments with a remaining life of greater than one-year, fair values are based on cash flows discounted at prevailing interest rates. Accordingly, the fair value of cash deposits and short-term borrowings approximates to the book value due to the short maturity of these instruments. The same applies to trade and other receivables and payables excluded from the above analysis.

Financial instruments

Financial instruments measured at fair value use the following hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1)
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2)
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

All of the Group's financial instruments are classed as level 2 with the exception of contingent consideration, other investments and lease liabilities, which are classed as level 3.

Preference share capital

	2022 £m	2021 £m
The authorised, issued and fully paid preference share capital comprises:		
615,562 5.9% preference shares of £1 (2021: 615,562)	**0.6**	0.6
498,434 6.6% preference shares of £1 (2021: 498,434)	**0.5**	0.5
21,900 7.5% preference shares of £1 (2021: 21,900)	**–**	–
	1.1	1.1

The preference shares have no redemption rights and carry no voting rights other than in certain circumstances affecting the rights of the preference shareholders, details of which are set out in the Company's Articles of Association. The three classes of preference shares rank *pari passu* with each other but ahead of the ordinary shares on a winding up. Rights on a winding up are limited to repayment of capital and any arrears of dividends.

Borrowing facilities

As at 31 December 2022, the Group had undrawn committed facilities of £579.3m (2021: £334.4m). In addition, the Group had other undrawn facilities of £53.1m (2021: £40.1m) available. Of the Group's total committed facilities of £1,122.5m, £1,066.0m expire after 2023. New and repaid borrowings disclosed in the Group Statement of Cash Flows reflect routine short-term cash management, comprising regular monthly drawdowns and repayments on the Group's revolving credit facilities. It also reflects the repayments made to the Group's revolving credit facility and the term loan facility following the business disposal.

Financial risk factors

The Group's activities expose it to a variety of financial risks: currency risk, interest rate risk, liquidity risk, and credit risk. The Group's overall risk management strategy is approved by the Board and implemented and reviewed by the Risk Management Committee. Detailed financial risk management is then delegated to the Group Finance department which has a specific policy manual that sets out guidelines to manage financial risk. Regular reports are received from all sectors and regional operating units to enable prompt identification of financial risks so that appropriate action may be taken. In the management definition of capital the Group includes ordinary and preference share capital and net debt.

Currency risk

The Group operates internationally and is exposed to currency risk arising from various currency exposures, primarily with respect to the US Dollar and the Euro. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments in foreign operations. Entities in the Group use foreign currency bank balances to manage their foreign exchange risk arising from future commercial transactions, recognised assets and liabilities. The Group's risk management policy is to manage transactional risk up to three months forward. The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk. Currency exposure arising from the net assets of the Group's foreign operations is not specifically hedged but is reduced primarily through borrowings denominated in the relevant foreign currencies where it is efficient to do so. Currency exposure arising from significant one-off transactions (for example acquisitions or disposals) is reviewed and hedged through forward contracts if required.

For 2022, had the Group's basket of reporting currencies been 10% weaker/stronger than the actual rates experienced, post-tax profit for the year would have been £27.6m (2021: £29.4m) lower/higher than reported, primarily as a result of the translation of the profits of the Group's overseas entities, and equity would have been £162.4m (2021: £156.5m) lower/higher.

20. Borrowings, other financial liabilities and other financial assets continued

Cash flow hedging

During the year, the Group held two instruments to hedge exposures to changes in foreign currency on a highly probable future business disposal and debt repayment (hedged items). As at 31 December 2021, the combined nominal value of the contracts was £601.9m and the average forward contract rates were 0.85 (EUR:GBP) and 1.12 (EUR:USD). These contracts were contingent on the successful completion of the business disposal, were designated as cash flow hedges and provided certainty over approximately 85% of the estimated FX exposure on these forecast future transactions. The forecast future transactions were completed in the year ended 31 December 2022 and the associated instruments settled. The cumulative cash flow hedging reserve of £6.5m credit (2021: £3.7m credit) and cost of hedging reserves of £6.0m debit (2021: £6.0m debit) were reclassified to the income statement and reported within the gain on business disposal. There was no hedge ineffectiveness recognised in the income statement during the year ended 31 December 2022 (2021: £nil).

The Group also holds forward foreign currency contracts to hedge certain intercompany loans. The contracts are classified as fair value through profit and loss and had a carrying amount of £1.3m liability at 31 December 2022, reported within trade and other payables. As at 31 December 2022 the gross notional value of intercompany loan hedges was £128.1m (2021: £nil).

Interest rate risk

The Group has both interest bearing assets and liabilities. In 2016, the Group had a policy of maintaining no more than 60% of its gross borrowings at fixed interest rates in normal circumstances. During 2016, the Group increased its amount of fixed rate debt following payment of the £136m special dividend and consequent increase in core debt requirements. Notes were issued in the amounts of £100m and €100m with an average maturity of 2.6 years and interest rate of 2.07%. During 2017, the policy formally increased the upper limit for fixed rate debt to 75% of gross borrowings. During 2019, the Group increased its amount of fixed rate debt following payment of the £151.5m special dividend. Notes were issued in the amounts of £65m, €50m and US$60m with an average maturity of 5.1 years and interest rate of 2.49%. In January 2020 the Group repaid its US$100m 10-year loan note carrying a fixed rate of 5.94%, and replaced it with a US$100m 10-year loan note carrying a fixed rate of 3.75%. At 31 December 2022, approximately 70% of Group borrowings were at fixed rates.

At 31 December 2022, aside from the loan notes referred to above, all Group debt and cash was exposed to repricing within 12 months of the balance sheet date.

At 31 December 2022, the Group's fixed rate debt was at a weighted average rate of 2.55% (2021: 2.53%). As at 31 December 2022, the Group's floating rate liabilities are based on SONIA, ICE LIBOR or EURIBOR, depending upon the drawdown currency.

Based on the above, had interest rates moved by 100 basis points in the territories where the Group has substantial borrowings, post-tax profits would have moved by £3.6m (2021: £5.1m) due to a change in interest expense on the Group's floating rate borrowings.

Liquidity risk

The Group actively maintains a mixture of long-term and short-term committed facilities designed to ensure that the Group has sufficient funds available for operations and planned investments.

On a regular basis, management monitors forecasts of the Group's cash flows against both internal targets and those targets imposed by external lenders. The Group has substantial committed, unused facilities and the Directors are confident this situation will remain the case for the foreseeable future.

Credit risk

The Group has no significant concentrations of credit risk. It has policies in place to ensure that sales of products are made to customers with an appropriate credit history. Derivative counterparties and cash transactions are limited to high-credit quality financial institutions. The Group has policies that limit the amount of credit exposure to any individual financial institution.

Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders, as well as maintaining an optimal capital structure to reduce overall cost of capital.

In order to maintain this optimal structure, the Group may adjust the amount of dividends paid, issue new shares, return capital to shareholders or dispose of assets to reduce net debt. Given the Group's strong balance sheet and sustained trading growth, the Group announced a dividend policy in 2011 of paying a dividend of between 40% and 50% of sustainable earnings. Further details can be found in the Finance Review on pages 44 to 47.

Underlying growth coupled to Return on Invested Capital (ROIC) is the key perceived driver of shareholder value within the Group. The Group's ROIC now stands at 14.1% against a post-tax Weighted Average Cost of Capital (WACC) of 7.5%. The Group's target is to maintain ROIC at two to three times WACC over the long-term. In addition, the Group employs two widely used ratios to measure its ability to service its debt. Both net debt/EBITDA and EBITDA interest cover were well ahead of target in 2022. Further details can be found in the Finance Review on pages 44 to 47. The Group was in compliance with its covenant requirements throughout the year. Additional information on progress against Key Performance Indicators can be found on pages 48 to 51.

21. Provisions

	Environmental £m	Site restoration £m	Other £m	Total £m
At 1 January 2022	5.7	–	3.4	9.1
Exchange differences	0.4	–	0.6	1.0
Remeasurement	–	7.9	–	7.9
Released to the income statement	(0.2)	–	(0.2)	(0.4)
Charged to the income statement	0.9	–	1.1	2.0
Cash paid against provisions and utilised	(1.2)	–	(0.8)	(2.0)
At 31 December 2022	**5.6**	**7.9**	**4.1**	**17.6**

Analysis of total provisions

	2022 £m	2021 £m
Current	**6.1**	5.5
Non-current	**11.5**	3.6
	17.6	9.1

Provisions are made where a constructive or legal obligation has arisen from a past event, can be quantified and where the timing of the transfer of economic benefits relating to the provisions cannot be ascertained with any degree of certainty.

The environmental provision relates to soil and potential groundwater contamination on a number of sites, both currently in use and previously occupied, in Europe and the Americas.

In relation to the environmental provision, the Directors expect that the balance will be utilised within 10 years. Provisions for remediation costs are made when there is a present obligation, it is probable that expenditures for remediation work will be required, and the cost can be estimated within a reasonable range of possible outcomes. The costs are based on currently available facts and prior experience. Environmental liabilities are recorded at the estimated amount at which the liability could be settled at the balance sheet date. Remediation of environmental damage typically takes a long time to complete due to the substantial amount of planning and regulatory approvals normally required before remediation activities can begin. In addition, increases in or releases of environmental provisions may be necessary whenever new developments occur or additional information becomes available. Consequently, environmental provisions can change significantly, and the timing and quantum of costs are inherently uncertain. The level of environmental provision is based on management's best estimate of the most likely outcome for each individual exposure.

During the year, site restoration provisions have been made for certain leased sites with an existing obligation to restore the environment or dismantle assets. The provisions are based on currently available facts and prior experience and are recorded at the estimated amount as at the balance sheet date.

The Group has also considered the impact of discounting on its provisions and has concluded that, as a consequence of the size of the provisions and utilisation timescales, the impact is not material.

22. Ordinary share capital

Ordinary shares of 10.61p (2021: 10.61p)	**2022 £m**	2021 £m
Allotted, called up and fully paid		
At 1 January and 31 December – 142,536,884 (2021: 142,536,884) ordinary shares	**15.1**	15.1

During 2022, options were granted to employees under the Croda International Plc Sharesave Scheme to subscribe for 69,318 ordinary shares at an option price of 5509p per share. Conditional awards over 121,930 ordinary shares were granted under the Performance Share Plan during the year and 14,280 under the Free Share Plan. Also granted in the year were 16,914 shares under the Deferred Bonus Share Plan and 6,693 shares under the Restricted Share Plan.

During the year consideration of £3.6m was received on the exercise of options over 90,189 shares. The options were satisfied with shares transferred from the Group's employee share trusts. Since the year end a further 1,299 shares have been transferred from the trusts. During the year, the Group purchased 154,115 of its own ordinary shares to satisfy awards under various share-based payment schemes for consideration of £10.8m.

22. Ordinary share capital continued

The outstanding options to subscribe for ordinary shares were as follows at the balance sheet date:

	Year option granted	Number of shares	Price	Options exercisable from
Croda International Plc Sharesave Scheme	2019	5,561	3898p	1 Nov 2022 to 30 Apr 2023
	2020	50,799	4804p	1 Nov 2023 to 30 Apr 2024
	2021	31,694	7327p	1 Nov 2024 to 30 Apr 2025
	2022	67,497	5509p	1 Nov 2025 to 30 Apr 2026
Croda International Plc Performance Share Plan (2014)	2020	105,541	Nil	25 Mar 2023
	2020	48,447	Nil	29 Apr 2023
	2021	123,197	Nil	24 Mar 2024
	2022	121,930	Nil	22 Mar 2025
Croda International Plc Deferred Bonus Share Plan	2022	17,160	Nil	22 Mar 2025
Croda International Plc Restricted Share Plan	2020	6,161	Nil	25 Mar 2023
	2021	7,040	Nil	17 Mar 2024
	2022	6,356	Nil	29 Mar 2025
	2022	337	Nil	24 Oct 2025
Croda International Plc Free Share Plan	2022	14,120	Nil	2 May 2023

23. Share-based payments

The impact of share-based payment transactions on the Group's financial position is as follows:

	2022 £m	2021 £m
Analysis of amounts recognised in the income statement:		
Charged in respect of equity settled share-based payment transactions	**8.7**	10.3
(Credited)/Charged in respect of cash settled share-based payment transactions	**(5.2)**	31.0
	3.5	41.3
Analysis of amounts recognised in the balance sheet:		
Liability in respect of cash settled share-based payment transactions	**8.4**	28.0

The key elements of each scheme along with the assumptions employed to arrive at the charge in the income statement are set out below. Where appropriate the expected volatility has been based on historical volatility considering daily share price movements over periods equal to the expected future life of the awards and the risk free rate is based on the Bank of England's projected nominal yield curve with appropriate duration.

Croda International Plc Sharesave Scheme ('Sharesave')

The Sharesave Scheme, established in 1983 and renewed in 2013, grants options annually in September to employees of the Group at a fixed exercise price, being the market price of the Company's shares at the grant date discounted by up to 20%. Employees then enter into a savings contract over three years and, subject to continued employment, purchase options at the end of the period based on the amount saved. Options are then exercisable for a six month period following completion of the savings contract. For options granted in the year, the fair value per option granted and the assumptions used in the calculation of the value are as follows:

	2022	2021
Grant date	**15 Sep 2022**	16 Sep 2021
Share price at grant date	**6568p**	9144p
Exercise price	**5509p**	7327p
Number of employees	**646**	727
Shares under option	**69,318**	55,474
Vesting period	**Three years**	Three years
Expected volatility	**26%**	20%
Option life	**Six months**	Six months
Risk free rate	**3.1%**	0.3%
Dividend yield	**1.6%**	1.0%
Possibility of forfeiture	**7.5% p.a.**	7.5% p.a.
Fair value per option at grant date	**1758.1p**	2094.0p
Option pricing model	**Black Scholes**	Black Scholes

A reconciliation of option movements over the year is as follows:

	2022 Number	2022 Weighted average exercise price	2021 Number	2021 Weighted average exercise price
Outstanding at 1 January	**212,421**	**5082p**	230,705	4243p
Granted	**69,318**	**5509p**	55,474	7327p
Forfeited	**(35,999)**	**6340p**	(11,177)	4524p
Exercised	**(90,189)**	**4028p**	(62,581)	4081p
Outstanding at 31 December	**155,551**	**5592p**	212,421	5082p
Exercisable at 31 December	**5,561**	**3898p**	4,434	4144p
For options exercised in year, weighted average share price at date of exercise		**6789p**		9206p
Weighted average remaining life at 31 December (years)	**2.4**		2.4	

Croda International Plc International Sharesave Plan 2009 ('International')

The International scheme, established in 1999 and renewed in 2009, has the same option pricing model, savings contract and vesting period as the Sharesave scheme. At exercise, employees are paid a cash equivalent for each option purchased, being the difference between the exercise price and market price at the exercise date. For options granted in the year, the fair value per option granted and the assumptions used in the calculation of the value are as follows:

	2022	2021
Grant date	**15 Sep 2022**	16 Sep 2021
Share price at grant date	**6568p**	9144p
Exercise price	**5509p**	7327p
Number of employees	**2,660**	2,973
Shares under option	**243,807**	202,071
Vesting period	**Three years**	Three years
Expected volatility	**27%**	20%
Option life	**One month**	One month
Risk free rate	**3.4%**	0.3%
Dividend yield	**1.6%**	0.9%
Possibility of forfeiture	**7.5% p.a.**	7.5% p.a.
Fair value per option at 31 December	**1814.7p**	2934.8p
Option pricing model	**Black Scholes**	Black Scholes

A reconciliation of option movements over the year is as follows:

	2022 Number	2022 Weighted average exercise price	2021 Number	2021 Weighted average exercise price
Outstanding at 1 January	**653,245**	**5227p**	681,756	4262p
Granted	**243,807**	**5509p**	202,071	7327p
Forfeited	**(101,670)**	**5917p**	(57,397)	4519p
Exercised	**(247,676)**	**3960p**	(173,185)	4141p
Outstanding at 31 December	**547,706**	**5778p**	653,245	5227p
For options exercised in year, weighted average share price at date of exercise		**6664p**		9378p
Weighted average remaining life at 31 December (years)	**2.0**		1.8	

Notes to the Group Accounts continued

23. Share-based payments continued

Croda International Plc Performance Share Plan 2014 ('PSP')

The PSP scheme was established in 2014 and replaced the Company's previous Executive long-term incentive plans. The PSP provides for awards of free shares (i.e. either conditional shares or nil-cost options) normally made annually which vest after three years dependent upon an EPS performance related sliding scale (non-market condition), an NPP growth measure (non-market condition), sustainability conditions in relation to decarbonisation roadmaps and emissions (non-market conditions) and the Group's total shareholder return (market condition). The PSP is discussed in detail in the Directors' Remuneration Report (pages 102 to 140). Shares (on an after-tax basis) are subject to a two-year post vesting holding period. For options granted in the year, the fair value per option granted and the assumptions used in the calculation of the value are as follows:

	2022		2021	
	Market condition	**Non-market condition**	Market condition	Non-market condition
Grant date	**22 Mar 2022**	**22 Mar 2022**	24 Mar 2021	24 Mar 2021
Share price at grant date	**7390p**	**7390p**	6401p	6401p
Number of employees	**67**	**67**	68	68
Shares under conditional award	**42,676**	**79,254**	45,546	84,585
Vesting period	**Three years**	**Three years**	Three years	Three years
Expected volatility	**24%**	**24%**	20%	20%
Dividend yield	**1.4%**	**1.4%**	1.4%	1.4%
Possibility of forfeiture	**3.45% p.a.**	**3.45% p.a.**	3.45% p.a.	3.45% p.a.
Fair value per option at grant date	**3111p**	**7098p**	2420p	6136p
Option pricing model	**Closed form valuation**	**Closed form valuation**	Closed form valuation	Closed form valuation

A reconciliation of option movements over the year is as follows:

	2022		2021	
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**426,300**	**–**	461,005	–
Granted	**121,930**	**–**	130,131	–
Forfeited	**(14,536)**	**–**	(108,077)	–
Exercised	**(134,579)**	**–**	(56,759)	–
Outstanding at 31 December	**399,115**	**–**	426,300	–
For options exercised in year, weighted average share price at date of exercise		**6870p**		6205p
Weighted average remaining life at 31 December (years)	**1.2**		1.3	

Croda International Plc Deferred Bonus Share Plan ('DBSP')

The DBSP scheme was established in 2014. Under the DBSP, one third of any annual bonuses due to certain senior executives are deferred. The size of award is determined by the amount of the total bonus divided by one third and converted into a number of Croda shares using the market value of shares at the time the award is granted. Awards are increased by the number of shares equating to the equivalent value of any dividend paid during the option period. The awards vest on the third anniversary of the date of grant unless the recipient has been dismissed for cause. There are no performance conditions applied to the award. The DBSP is also discussed in the Directors' Remuneration Report (pages 102 to 140).

	2022	2021
Grant date	**22 Mar 2022**	–
Share price at grant date	**7390p**	–
Number of employees	**11**	–
Shares under conditional award	**16,914**	–
Vesting period	**Three years**	–

A reconciliation of option movements over the year is as follows:

	2022 Number	2022 Weighted average exercise price	2021 Number	2021 Weighted average exercise price
Outstanding at 1 January	**8,913**	**–**	28,127	–
Granted	**16,914**	**–**	–	–
Dividend enhancement	**246**	**–**	101	–
Exercised	**(8,913)**	**–**	(19,315)	–
Outstanding at 31 December	**17,160**	**–**	8,913	–
For options exercised in year, weighted average share price at date of exercise		**6904p**		6205p
Weighted average remaining life at 31 December (years)	**2.3**		0.2	

Croda International Plc Restricted Share Plan ('RSP')

The RSP scheme was established in 2018 and provides for awards of free shares or cash equivalent to a limited number of employees not eligible for the PSP scheme, based on a percentage of salary. The awards vest on the third anniversary of the date of grant, subject to the condition that the employee remains employed by the Group. There are no performance conditions applied to the award. On the vesting date, UK employees will be awarded free shares and non-UK employees will be paid a cash equivalent based on the market price.

	2022	2022	2021
Grant date	**24 Oct 2022**	**29 Mar 2022**	17 Mar 2021
Share price at grant date	**6646p**	**7795p**	6314p
Number of employees	**1**	**57**	66
Shares under conditional award	**337**	**6,356**	8,621
Vesting period	**Three years**	**Three years**	Three years
Dividend yield	**1.5%**	**1.3%**	1.4%
Possibility of forfeiture	**3.45% p.a.**	**3.45% p.a.**	3.45% p.a.
Fair value per option at grant date	**6349p**	**7506p**	6049p
Option pricing model	**Closed form valuation**	**Closed form valuation**	Closed form valuation

A reconciliation of option movements over the year is as follows:

	2022 Number	2022 Weighted average exercise price	2021 Number	2021 Weighted average exercise price
Outstanding at 1 January	**20,958**	**–**	19,288	–
Granted	**6,693**	**–**	8,621	–
Forfeited	**(1,226)**	**–**	(693)	–
Exercised	**(6,531)**	**–**	(6,258)	–
Outstanding at 31 December	**19,894**	**–**	20,958	–
For options exercised in year, weighted average share price at date of exercise		**7260p**		6257p
Weighted average remaining life at 31 December (years)	**1.3**		1.5	

Croda International Plc Free Share Plan ('FSP')

The FSP scheme was established in 2021 and provides for awards of free shares or cash equivalent to eligible employees. The Company has discretion to set the number of shares awarded. The awards will vest provided that the employee remains employed by the Group and that a bonus payment is paid under the terms of the Company's Group Profit Incentive Bonus Scheme in respect of the financial year concerned. Subject to the two conditions being met, on the vesting date, UK employees (and certain other identified jurisdictions) will be awarded free shares and non-UK employees will be paid a cash equivalent based on the market price.

23. Share-based payments continued

	2022	2021
Grant date	**6 Sep 2022**	3 Nov 2021
Share price at grant date	**6648p**	9597p
Number of employees	**5,038**	5,237
Shares under conditional award	**50,380**	52,370
Vesting period	**One year**	One year
Dividend yield	**1.6%**	1.0%
Possibility of forfeiture	**7.5% p.a.**	7.5% p.a.
Fair value per option at grant date	**6497p**	9503p
Option pricing model	**Closed form valuation**	Closed form valuation

A reconciliation of option movements over the year is as follows:

	2022 Number	2022 Weighted average exercise price	2021 Number	2021 Weighted average exercise price
Outstanding at 1 January	**51,580**	**–**	–	–
Granted	**50,380**	**–**	52,370	–
Forfeited	**(2,470)**	**–**	(790)	–
Exercised	**(50,160)**	**–**	–	–
Outstanding at 31 December	**49,330**	**–**	51,580	–
For options exercised in year, weighted average share price at date of exercise		**7605p**		–
Weighted average remaining life at 31 December (years)	**0.3**		0.3	

Croda International Plc Share Incentive Plan ('SIP')

The SIP scheme has similar objectives to the Sharesave Scheme in terms of increasing employee retention and share ownership. Under the scheme, employees enter into an agreement to purchase shares in the Company each month. For each share purchased by an employee, the Company awards a matching share which passes to the employee after three years' service. The matching shares are allocated each month at market value with this fair value charge being recognised in the income statement in full in the year of allocation.

24. Shareholders' equity

Croda International Plc Qualifying Share Ownership Trust (QUEST), Croda International Plc Employee Benefit Trust (CIPEBT) and Croda International Plc AESOP Trust (AESOP) each hold shares purchased on the open market or transferred from treasury shares to satisfy the future issue of shares under the Group's share option schemes. As at 31 December 2022 the QUEST had a net amount due from the Company of £19.8m (2021: £16.1m) and held 57,216 (2021: 30,640) shares transferred at a nil cost (2021: nil cost) with a market value of £3.8m (2021: £3.1m). As at 31 December 2022 the CIPEBT was financed by a repayable on demand loan to the Company of £37.8m (2021: £26.9m) and held 688 (2021: 910) shares transferred at a nil cost (2021: nil cost) with a market value of £0.1m (2021: £0.1m).

As at 31 December 2022 the AESOP had issued all its previously held shares, as financed by the Company, and thus had no residual loan balance with the Company. All of the shares held by the QUEST and CIPEBT were under option at 31 December 2022 and, except for a nominal amount, the right to receive dividends has been waived.

As at 31 December 2022 the total number of treasury shares held was 2,901,442 (2021: 3,018,203) with a market value of £199.3m (2021: £303.2m).

25. Non-controlling interests in equity

	2022 £m	2021 £m
At 1 January	**12.8**	9.3
Exchange differences	**0.4**	0.1
Profit for the year	**4.0**	2.0
Acquisition of a subsidiary with a non-controlling interest	**–**	1.6
Acquisition of a non-controlling interest in an existing subsidiary	**(1.4)**	(0.2)
Adjustment to retained earnings	**(0.3)**	–
Issue of share capital	**–**	0.2
Dividends paid to non-controlling interests	**–**	(0.2)
At 31 December	**15.5**	12.8

During 2022, the Group purchased an additional 4% share in Parfex S.A. for cash consideration of £1.4m.

26. Related party transactions

The Group has no related party transactions, with the exception of remuneration paid to key management and Directors (note 10).

27. Business combinations

2021 Acquisitions

On 2 March 2021, the Group acquired the worldwide business activities of Alban Muller including 100% of the shares and voting interests of Acallmi for a total consideration of £15.2m with identifiable net assets of £8.7m, generating goodwill of £6.5m. Established in France and employing 90 people, Alban Muller specialises in eco-responsible solutions to developing innovative botanical extracts, natural formulation ingredients and natural organic cosmetics. The company is an excellent fit for Croda's Beauty Actives business (part of the Consumer Care sector) and provides Croda with access to innovative technology in the botanicals market.

On 1 June 2021, the Group acquired a 96% majority shareholding in Parfex S.A. ('Parfex'), a fine fragrance business based in Grasse, France for a total consideration of £35.4m with identifiable net assets of £23.5m and NCI of £1.6m, generating goodwill of £13.5m. Employing 75 people, Parfex creates fragrances principally for premium personal care and fine perfumery markets, leveraging the natural raw materials that are available in the region. The company forms part of the Fragrances & Flavours business (part of the Consumer Care sector) alongside Iberchem acquired in November 2020.

28. Business disposal

On 30 June 2022, the Group completed the disposal of the majority of its Performance Technologies and Industrial Chemicals business for cash consideration of £651.0m. The divested business comprised four manufacturing facilities, together with associated laboratory facilities and sales operations, and formed part of Croda's integrated operating model prior to disposal. The following table summarises the effect of the disposal on the Group's consolidated financial statements.

	£m
Cash consideration received	**651.0**
Intercompany settlement	**(24.1)**
	626.9
Assets and liabilities of the divested business	
Intangible assets	**20.2**
Property, plant & equipment	**154.4**
Right of use assets	**1.1**
Inventories	**99.7**
Trade and other receivables	**24.3**
Cash and cash equivalents	**9.3**
Trade and other payables	**(35.3)**
Lease liabilities	**(1.1)**
Current tax payable	**0.3**
Retirement benefit liabilities	**(1.5)**
Deferred tax	**(8.8)**
Net assets	**262.6**
Associated transactions and costs	
Pension curtailment gain	**3.9**
Disposal and separation costs	**(33.9)**
Foreign exchange gains	**6.9**
Reclassification of currency translation	**14.8**
Gain on business disposal before tax	**356.0**
Income tax on business disposal	**(21.5)**
Gain on business disposal after tax	**334.5**

Disposal and separation costs primarily comprise investment banking fees, legal fees, external consultant support for financial, tax and operational aspects of the transaction as well as related employee bonuses. The gain on business disposal includes foreign exchange gains that resulted from the settlement of proceeds and associated intercompany balances across the Group shortly following completion.

Income tax payable on the gain on business disposal has been calculated on a jurisdiction-by-jurisdiction basis, applying the relevant corporation tax rates and exemptions.

29. Post balance sheet events

Subsequent to 31 December 2022, the Group signed an agreement to acquire Solus Biotech, based in South Korea, for total consideration of KRW350bn (approximately £232m). The transaction is subject to regulatory approval and had no impact on the Group's 2022 financial statements.

Company Financial Statements

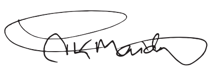
Company Balance Sheet

at 31 December 2022

	Note	2022 £m	2021 £m
Fixed assets			
Intangible assets	D	**0.6**	0.8
Tangible assets	E	**1.2**	1.3
Investments			
Shares in Group undertakings	F	**1,411.1**	1,385.6
Retirement benefit assets	K	**5.6**	0.8
		1,418.5	1,388.5
Current assets			
Debtors	G	**1,318.9**	1,373.2
Deferred tax asset	H	**0.1**	0.4
Cash and cash equivalents		**176.1**	15.9
		1,495.1	1,389.5
Current liabilities			
Creditors: Amounts falling due within one year	I	**(74.0)**	(76.1)
Borrowings	J	**(56.5)**	–
		(130.5)	(76.1)
Net current assets		**1,364.6**	1,313.4
Total assets less current liabilities		**2,783.1**	2,701.9
Non-current liabilities			
Deferred tax liability	H	**(1.2)**	(0.2)
Borrowings	J	**(242.2)**	(525.2)
		(243.4)	(525.4)
Net assets		**2,539.7**	2,176.5
Capital and reserves			
Ordinary share capital		**15.1**	15.1
Preference share capital	J	**–**	1.1
Called up share capital		**15.1**	16.2
Share premium account		**707.7**	707.7
Reserves[1]		**1,816.9**	1,452.6
Total shareholders' funds		**2,539.7**	2,176.5

1 Included within Reserves is profit after tax of £505.9m (2021: £2.2m)

The financial statements on pages 202 to 207 were approved by the Board on 27 February 2023 and signed on its behalf by



Dame Anita Frew DBE
Chair

Jez Maiden
Group Finance Director

Registered in England number 206132

Company Statement of Changes in Equity

for the year ended 31 December 2022

	Note	Share capital £m	Share premium account £m	Capital redemption reserve £m	Revaluation reserve £m	Other reserves £m	Retained earnings £m	Total £m
At 1 January 2021		16.2	707.7	0.9	2.1	–	1,563.1	2,290.0
Profit for the year attributable to equity shareholders		–	–	–	–	–	2.2	2.2
Other comprehensive (expense)/income		–	–	–	–	(0.2)	9.1	8.9
Transactions with owners:								
Dividends on equity shares	8	–	–	–	–	–	(132.5)	(132.5)
Share-based payments		–	–	–	–	–	10.3	10.3
Transactions in own shares		–	–	–	–	–	(2.4)	(2.4)
Total transactions with owners		–	–	–	–	–	(124.6)	(124.6)
Total equity at 31 December 2021		**16.2**	**707.7**	**0.9**	**2.1**	**(0.2)**	**1,449.8**	**2,176.5**
At 1 January 2022		16.2	707.7	0.9	2.1	(0.2)	1,449.8	2,176.5
(Loss)/profit for the year attributable to equity shareholders		–	–	–	(0.9)	–	505.9	505.0
Other comprehensive income		–	–	–	–	0.2	1.8	2.0
Transactions with owners:								
Dividends on equity shares	8	–	–	–	–	–	(144.4)	(144.4)
Share-based payments		–	–	–	–	–	9.0	9.0
Transactions in own shares		–	–	–	–	–	(7.3)	(7.3)
Total transactions with owners		–	–	–	–	–	(142.7)	(142.7)
Preference share capital reclassification		(1.1)	–	–	–	–	–	(1.1)
Total equity at 31 December 2022		**15.1**	**707.7**	**0.9**	**1.2**	**–**	**1,814.8**	**2,539.7**

Other reserves include the Hedging Reserve of £nil (2021: £4.0m) and the Cost of Hedging Reserve of £nil (2021: £(4.2)m). During the year the Group's preference share capital has been reclassified from equity to borrowings and other financial liabilities.

Of the retained earnings, £1,226.4m (2021: £852.7m) are realised and £588.4m (2021: £597.1m) are unrealised. Details of investments in own shares are disclosed in note 24 of the Group financial statements.

Notes to the Company Financial Statements

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been applied consistently to all years presented, unless otherwise stated.

A. Accounting policies

Basis of accounting

The Company meets the definition of a qualifying entity under Financial Reporting Standard 100 ('FRS 100') issued by the Financial Reporting Council. These financial statements were prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ('FRS 101'). In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of UK-adopted international accounting standards, but makes amendments where necessary in order to comply with the Companies Act 2006 and has set out below where advantage of the FRS 101 disclosure exemptions has been taken. The financial statements have been prepared under the historical cost convention, in compliance with the provisions of the Act and the requirements of the Listing Rules of the Financial Conduct Authority.

As permitted by FRS 101, the Company has taken advantage of the disclosure exemptions available under the standard in relation to share-based payments, financial instruments, capital management, presentation of comparative information in respect of certain assets, presentation of a cash flow statement, standards not yet effective, impairment of assets and related party transactions. Where required, equivalent disclosures are provided in the Group financial statements of Croda International Plc.

Going concern

The financial statements which appear on pages 202 to 207 have been prepared on a going concern basis as, after making appropriate enquiries, including a review of forecasts, budgets and banking facilities, the Directors have a reasonable expectation that the Company has adequate resources to continue in operational existence.

Principal accounting policies

The accounting policies which have been applied by the Company when preparing the financial statements are in accordance with FRS 101. FRS 101 is based on the recognition and measurement requirements of Adopted IFRSs, under which the Group financial statements have been prepared. As a result, the accounting policies of the Company are consistent with those used by the Group as presented on pages 164 to 171, except for those relating to the recognition and measurement of goodwill and the recognition of revenue, which are not directly relevant to the Company financial statements. Investments are held at cost less accumulated impairment. Investments are subject to impairment testing upon indication of impairment, at which point the carrying value is reviewed against the underlying net assets or forecast cash generation of the entity.

The Group accounting policy for financial risk factors is also relevant to the preparation of the Company financial statements and is disclosed on pages 193 and 194.

B. Profit and loss account

Of the Group's profit for the year, £505.9m (2021: £2.2m) is included in the profit and loss account of the Company which was approved by the Board on 27 February 2023 but which is not presented as permitted by Section 408 Companies Act 2006.

Included in the Company profit and loss account is a profit before tax and fees on the disposal of Equus UK Topco Limited (PTIC business) of £6.5m (2021: £nil). Also included is £522.9m (2021: £25.4m) income from shares in Group undertakings, partly related to the PTIC business disposal, and a charge of £0.3m (2021: £0.2m) in respect of the Company's audit fee.

C. Employees

	2022 £m	2021 £m
Company employment costs including Directors		
Wages and salaries	**15.8**	13.1
Share-based payment charges (note L)	**5.4**	5.9
Social security costs	**2.4**	1.9
Post-retirement benefit costs	**1.6**	0.8
	25.2	21.7

	2022 Number	2021 Number
Average employee numbers by function		
Production	**28**	21
Administration	**45**	41
	73	62

As required by the Companies Act 2006, the figures disclosed above are weighted averages based on the number of employees including Executive Directors. At 31 December 2022, the Company had 77 (2021: 69) employees in total.

Detailed information concerning Directors' remuneration, interests and options is shown in section E of the Directors' Remuneration Report, which is subject to audit, on pages 130 to 140 which forms part of the Annual Report and Accounts.

D. Intangible assets

	Computer software £m
Cost	
At 1 January 2022	1.8
At 31 December 2022	**1.8**
Accumulated amortisation	
At 1 January 2022	1.0
Charge for the year	0.2
At 31 December 2022	**1.2**
Net carrying amount	
At 31 December 2022	**0.6**
At 31 December 2021	0.8

E. Tangible assets

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
At 1 January 2022	2.2	1.6	3.8
Disposals	–	(0.1)	(0.1)
At 31 December 2022	**2.2**	**1.5**	**3.7**
Accumulated depreciation			
At 1 January 2022	1.5	1.0	2.5
Charge for the year	–	0.1	0.1
Disposals	–	(0.1)	(0.1)
At 31 December 2022	**1.5**	**1.0**	**2.5**
Net book amount			
At 31 December 2022	**0.7**	**0.5**	**1.2**
At 31 December 2021	0.7	0.6	1.3

F. Shares in Group undertakings

	Shares £m	Loans £m	Total £m
Cost			
At 1 January 2022	1,115.9	299.0	1,414.9
Exchange differences	–	6.9	6.9
Additions	65.8	254.9	320.7
Disposals	(62.0)	–	(62.0)
Amounts repaid	–	(240.6)	(240.6)
Amounts invested	–	0.5	0.5
At 31 December 2022	**1,119.7**	**320.7**	**1,440.4**
Impairment			
At 1 January 2022	27.8	1.5	29.3
Impairment in the year	–	–	–
At 31 December 2022	**27.8**	**1.5**	**29.3**
Net book value			
At 31 December 2022	**1,091.9**	**319.2**	**1,411.1**
At 31 December 2021	1,088.1	297.5	1,385.6

The undertakings which affect the financial statements are listed on pages 208 to 210.

Additions to shares in the year of £0.5m relate to the continued investment in Cowick Insurance Services Ltd, £3.3m of capital contributions in relation to share-based payments and a £62.0m investment in Equus UK Topco Limited prior to disposal on 30 June 2022.

The Directors believe that the carrying value of the investments is supported by their underlying net assets or forecast cash generation.

Notes to the Company Financial Statements continued

G. Debtors

	2022 £m	2021 £m
Amounts owed by Group undertakings	**1,287.1**	1,325.2
Trade and other receivables	**5.0**	–
Corporation tax	**25.0**	46.4
Prepayments	**1.8**	1.6
	1,318.9	1,373.2

Although the amounts owed by Group undertakings have no fixed date of repayment, £1,279.6m (2021: £1,324.6m) is expected to be collected after one year. Of the amount at 31 December 2022, £1,279.0m will continue to attract interest from 1 January 2023 at a floating rate based on the main facility agreement. The remainder will continue to be interest free.

H. Deferred tax

The deferred tax (liabilities)/assets included in the balance sheet are attributable to the following:

	2022 £m	2021 £m
Retirement benefit obligations	**(1.2)**	(0.2)
Cash flow hedging	**–**	0.4
Provisions	**0.1**	–
	(1.1)	0.2
The movement on deferred tax balances during the year is summarised as follows:		
At 1 January	**0.2**	0.1
Deferred tax credited through the profit and loss account	**0.1**	0.3
Deferred tax charged to other comprehensive income	**(1.4)**	(0.2)
At 31 December	**(1.1)**	0.2

Deferred tax assets were recognised in all cases where such assets arose, as it was probable that the assets would be recovered.

I. Creditors: Amounts falling due within one year

	2022 £m	2021 £m
Amounts falling due within one year		
Trade payables	**0.4**	0.5
Taxation and social security	**1.6**	2.2
Amounts owed to Group undertakings	**56.0**	54.6
Other payables	**3.8**	3.3
Accruals and deferred income	**12.2**	15.5
	74.0	76.1

The amounts owed to Group undertakings are interest free, unsecured and have no fixed date of repayment.

J. Borrowings

The Company's objectives, policies and strategies in respect of financial instruments are outlined in the accounting policies note on page 170 which forms part of the Annual Report and Accounts. Short-term receivables and payables have been excluded from all of the following disclosures.

	2022 £m	2021 £m
Maturity profile of financial liabilities		
2019 Club facility due 2026	**–**	234.4
€30m 1.08% fixed rate 7 year note	**26.5**	25.2
€70m 1.43% fixed rate 10 year note	**61.9**	58.7
£30m 2.54% fixed rate 7 year note	**30.0**	30.0
£70m 2.80% fixed rate 10 year note	**70.0**	70.0
€50m 1.18% fixed rate 8 year note	**44.2**	41.9
£65m 2.46% fixed rate 8 year note	**65.0**	65.0
Preference share capital	**1.1**	–
	298.7	525.2
Repayments fall due as follows:		
Within one year		
Bank loans and overdrafts	**56.5**	–
	56.5	–
After more than one year		
Loans repayable		
Within one to five years	**241.1**	418.3
After five years	**–**	106.9
Preference share capital	**1.1**	–
	242.2	525.2

During the current year, the Company's preference share capital has been reclassified from equity to borrowings and other financial liabilities.

K. Post-retirement benefits

In line with the requirements of FRS 101, the Company recognises its share of the UK pension scheme assets, liabilities, income statement (charges)/credits and OCI movements based on the number of scheme members. A full reconciliation of the Group retirement benefit obligation can be found in note 11 of the Group financial statements on pages 179 to 183. The table below shows the movement in the obligation during the year.

	2022 £m	2021 £m
Opening balance:		
Assets	**56.5**	56.0
Liabilities	**(55.7)**	(56.7)
Net opening retirement benefit asset/(liability)	**0.8**	(0.7)
Movements in the year:		
Service cost – current	**(0.6)**	(0.8)
Interest income	**0.1**	–
Contributions	**1.5**	0.8
Remeasurements	**3.8**	1.5
Closing balance	**5.6**	0.8

L. Share-based payments

The total charge for the year in respect of share-based remuneration schemes was £5.4m (2021: £5.9m). The grant by the Company of options over its equity instruments to the employees of subsidiary undertakings in the Group is treated as a capital contribution. The fair value of employee services received, measured by reference to the grant date fair value, is recognised over the vesting period as an increase to investment in subsidiary undertakings, with a corresponding credit to equity.

The key elements of each scheme along with the assumptions employed to arrive at the charge in the profit and loss account are set out in note 23 to the Group financial statements.

M. Contingent liabilities

The Company has guaranteed loan capital and bank overdrafts of subsidiary undertakings amounting to £153.5m (2021: £272.3m).

N. Dividends

Details of dividends are disclosed in note 8 of the Group financial statements.

O. Related party transactions

The Company has taken advantage of the exemption available under FRS 101 from disclosing transactions with other Group undertakings. There were no other related party transactions during the year. Information on the Group can be found in note 26 on page 201 of the Group financial statements.

Related undertakings

Related undertakings of Croda International Plc

All companies listed below are owned by the Group and all interests are in ordinary share capital, except where otherwise indicated. All subsidiaries have been consolidated. All companies operate principally in their country of incorporation. Unless otherwise indicated, all shareholdings represent 100% of the issued share capital of the subsidiary.

Wholly owned subsidiaries:

Incorporated in the UK

Cowick Hall, Snaith, Goole, East Yorkshire, DN14 9AA
Bio Futures Limited (vii)
Brookstone Chemicals Limited (viii)
Cowick Hall Trustees Limited (xi)
Croda (Goole) Limited (viii)
Croda Application Chemicals Limited (viii)
Croda Bakery Services Limited (viii)
Croda Bowmans Chemicals Limited (v) (viii)
Croda CE Limited (viii)
Croda Chemicals Limited (viii)
Croda Colloids Limited (viii)
Croda Cosmetics & Toiletries Limited (i) (v) (viii)
Croda Cosmetics (Europe) Limited (iii) (viii)
Croda Distillates Limited (i) (x)
Croda Enterprises Limited (viii)
Croda Europe Limited (i) (vii)
Croda Fire Fighting Chemicals Limited (viii)
Croda Food Services Limited (viii)
Croda Foundation (xiv)
Croda Hydrocarbons Limited (viii)
Croda Investments Limited (ix)
Croda Investments No 2 Limited (ix)
Croda Investments No 3 Limited (ix)
Croda JDH Limited (viii)
Croda Leek Limited (viii)
Croda Limited (viii)
Croda Overseas Holdings Limited (i) (ix)
Croda Pension Trustees Limited (viii)
Croda Polymers International Limited (i) (ix)
Croda Resins Limited (viii)
Croda Solvents Limited (iii) (iv) (viii)
Croda Trustees Limited (viii)
Croda Universal Limited (viii)
Croda World Traders Limited (i) (v) (viii)
P.I. Bioscience Limited (vii)
Plant Impact Limited (ix)
John L Seaton & Co Limited (viii)
Southerton Investments Limited (i) (viii)
Sowerby & Co Limited (viii)
Technical and Analytical Services Limited (i) (viii)
Uniqema Limited (i) (viii)
Uniqema UK Limited (i) (viii)

c/o Cutitronics Limited, Torus Building, Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, G75 0QF
Croda (CPI) Limited (ix)

Incorporated in China

Unit 701-703, 7th Floor, Building C, No.3 Linhong Road, Changning District, Shanghai
Croda China Trading Company Ltd (vii)

No. 2 Xiang Shan Avenue, Ning Xi Street, Zeng Cheng District, Guangzhou, China
Croda Iberchem (Guangzhou) Fragrance and Flavour Manufacturing Co., Ltd (vi) (viii)

191 Dong Jiang Street, GET Development Zone, 510730 Guangzhou
Guangzhou Iberchem, Co. Ltd (vii)

2nd Floor, No. 21, Eastern of Yonyou Industrial Park, No. 9 Yongfeng Road, Haidian District, Beijing
Incotec (Beijing) Agricultural Technology Co. Ltd (vii)

No.3 Plant, No.202, Huashan Road, Modern Industrial Zone, Tianjin Development Zone, Tianjin
Incotec (Tianjin) Agricultural Science & Technology Co. Ltd (vii)

No.656 East Tangxun Road, Economic-Technological Development Zone, Mianyang, Sichuan 621000
Sichuan Xihe Rape Seed Industry Co., Ltd (vii)

No.139. Jianqinq Road, Pu'an Town, Jiange County Guangyuan, Sichuan, 628300
Sichuan Xiyuan Grease Chemical Co., Ltd (vii)

Incorporated in France

9, rue Jean Monnet, 28630 Fontenay Sur Eure
Alban Muller International (vii)

1, rue de Lapugnoy, 62920 Chocques
Croda Chocques SAS (vii)

Futura III, 1, avenue de Westphalie, 78180 Montigny-le-Bretonneux
Croda France SAS (vii)
Croda Holdings France SAS (ix)

Zone artisanale, 48230 Chanac
Crodarom SAS (vii)

29 rue du Chemin Vert, 78610, Le Perray en Yvelines
Sederma SAS (vii)

Incorporated in the Netherlands

Westeinde 107, 1601 BL Enkhuizen

AM Coatings BV (v) (viii)
Croda EU BV (ix)
Incotec Europe B.V. (vii)
Incotec Group B.V. (i) (ix)
Incotec Holding B.V. (ix)

Incorporated in the USA

700 Industrial Park Drive, Alabaster, AL 35007
Avanti Polar Lipids, LLC (vii)

777 Scudders Mill Road, Building 2, Suite 200, Plainsboro, NJ 08536
Croda Americas LLC (viii)
Croda Finance Inc (viii)
Croda Inc. (vii)
Croda Inks Corp (viii)
Croda Investments Inc (ix)
Croda Storage Inc (viii)
Croda Synthetic Chemicals Inc (ix)
Mona Industries Inc (viii)
Sederma Inc (vii)

1293 Harkins Road, Salinas, CA 93901
Incotec Integrated Coating and Seed Technology, Inc. (vii)

Incorporated in other overseas countries

Argentina – Office Dardo Rocha 2044, 1640, Martinez, Buenos Aires
Croda Argentina SA (vii)

Australia – Suite 2, Level 6, 111 Phillip Street, Parramatta, NSW 2150
Croda Australia Pty Ltd (vii)

Brazil – Rua Croda, 580, Distrito Industrial, Campinas, São Paulo, CEP 13.074-710
Croda do Brasil Ltda (vii)

Brazil – Avenida Mercedes Benz, 679, Distrito Industrial, Campinas, São Paulo, CEP 13.054-750
Iberchem Brazil Industria Ltda (viii)

Canada – 1700 Langstaff Road, Suite 1000, Vaughan, Ontario, L4K 3S3
Croda Canada Ltd (vii)

Chile – Los Militares 4611, 17th Floor – 7560968, Las Condes, Santiago
Croda Chile Ltda (vi) (vii)

Colombia – Calle 90 # 19-41 Office 601, Bogotá
Croda Colombia (ii) (vii)

Colombia – Aut. Medellín km. 7, Bodega 88-02, Celta Trade Park, Funza, Cundinamarca
Iberchem Colombia SAS(vii)

Czech Republic – Praha 5, Pekar˘ská 603/12, 150 00
Croda Spol. s.r.o (vii)

Denmark – Elsenbakken 23, 3600 Frederikssund
Croda Denmark A/S (vii)

Germany – Herrenpfad Süd 33, 41334 Nettetal
Croda GmbH (vii)
Sederma GmbH (vii)

Guernsey – PO Box 33, Dorey Court, Admiral Park, St Peter Port, GY1 4AT
Cowick Insurance Services Ltd (i) (xii)

Hong Kong – Room 908, East Ocean Centre, No.9 Science Museum Road, Tsim Sha Tsui, East Kowloon
Croda Hong Kong Company Ltd (vii)

Hungary – 1117 Budapest XI, Bölcso utca 6. 1. emelet 4.
Croda Magyarorszag Kft (i) (vii)

India – Plot No. 1/1, Part TTC Industrial Area, Thane Belapur Road, Koparkhairne, Navi Mumbai 400710, Maharashtra
Croda India Company Private Ltd (i) (vii)

India – 38/A, Radhe Industrial Estate, Tajpur Road, Changodar 382213, Ahmedabad
Iberchem India Private Limited (vii)

India – 47, Mahagujarat Industrial Estate, Opp. Pharma Lab, Sarkhej-Bavla Highway, At. Moraiya, Ta. Sanand, Ahmedabad-382213, Gujarat
Integrated Coating and Seed Technology India Pvt. Ltd (vii)

Indonesia – Kawasan Industri Jababeka, Jl. Jababeka IV Blok V Kav 74-75, Cikarang Bekasi 17530
PT Croda Indonesia (iii) (iv) (vii)

Indonesia – Palma Tower , 17th Floor, Jl. RA Kartini II-S Kav.6 , Jakarta 12310
PT Croda Trading Indonesia (vii)

Indonesia – Pusat Niaga Terpadu, Jl. Daan Mogot Raya Km 19, 6 Blok GG8N, 15122 Tangerang
PT Scentium Flavours (vii)

Iran – Apt. 305, 3rd Floor, No 14 Golestan Avenue, Alikhani Avenue, Southern Shiraz Street, Tehran
Croda Pars Trading Co (vii)

Italy – Via P. Grocco 915, 27036 Mortara
Croda Italiana S.p.A. (vii)

Italy – Via del Commercio, 2, Desio (MB)
Iberchem Italia SRL (vii)

Japan – 7-1 Nishi-shinjuku 3-chome, Shinjuku-ku, Tokyo 163-1001
Croda Japan KK (i) (vii)

Malaysia – 305 (Suite1) Block E, Phileo Damansara 1, 9, Jalan 16/11, Off Jln Damansara, 46350 PJ, Selangor
Flavor Inn Corporation Sdn Bhd (vii)

Mexico – Hamburgo 213, Piso 10, Colonia Juárez, Delegacion Cuauhtémoc, D.F., C.P. 06600
Croda México SA de CV (vii)

Mexico – Alfredo Nobel No. 3, 3 y 4, Col. Fraccionamiento Industrial Los Reyes, Estado de México, 54073 Tlalnepantla
Iberchem Mexico SA de CV (vii)

Nigeria – Landmark Towers, 5B, Water Corporation Road, Victoria Island, Lagos
Croda SI&T Nigeria Limited (vii)

Peru – Av. Juan de Aliaga 425 Of. 401, Magdalena del Mar
Croda Peruana S.A.C (vii)

Poland – ul. Wadowicka 6, 30-415 Kraków
Croda Poland Sp. z o.o. (i) (vii)

Republic of Korea – Rm. 1201, 12th Floor, 42, Hwang Sae Ul-Ro 360 Beon-Gil, Bun Dang-Gu, Seong Nam-Si, Gyeong Gi-Do, 13591
Croda Korea (ii) (vii)

Related undertakings continued

Incorporated in other overseas countries continued

Russian Federation – Office 1333, 16 Raketnyi bulvar, Moscow, 129164
Croda RUS LLC

Singapore – 30 Seraya Avenue, Singapore 627884
Croda Singapore Pte Ltd (i) (v) (vii)

Singapore – 2 International Business Park, #04-06 The Strategy (Tower 1)
Iberchem Far East Pte Ltd (vii)

South Africa – Clearwater Estate Office Park, Block G, Corner of Atlas & Park Road, Parkhaven Ext 8, Boksburg 1459
Croda (SA) (Pty) Ltd (vii)
Incotec South Africa (Pty) Ltd (vii)

South Africa – 5 Marconi Nook, Hennopspark, Centurion, 0157
Iberchem South Africa (Pty) Ltd (vii)

Spain – Carrer Pujades, 350 planta 10, 08019 Barcelona
Croda Ibérica SA (vii)

Spain – Avenida del Descubrimiento, Parcela 9/9, Polígono I, 30820 Alcantarilla, Murcia
Fragrance Spanish Topco, S.L. (ix)
Iberchem SAU (vii)

Sweden – Geijersgatan 2B, 216 18 Limhamn
Croda Nordica AB (vii)
MX Adjuvac AB (xiii)

Thailand – 319 Chamchuri Square Building, 16th Floor, Unit 13-14, Payathai Road, Patumwan, Bangkok 10330
Croda (Thailand) Co., Ltd (i) (vii)

Thailand – No. 41/87 Moo 6 Bangna Trad Road Km. 16.5, Bangcha long-Sub District, Bangplee District, 10540 Bangkok, Samutprakarn Province
Iberchem Thailand Ltd (vii)

Turkey – Nidakule Göztepe Is¸ Merkezi, Merdivenköy Mahallesi, Bora Sokak, No: 1 Kat:2/5 Kadıköy 34732, Istanbul
Croda Kimya Ticaret Limited Şirketi (vii)

United Arab Emirates – P. O. BOX 17916, Office 1209, 1210 & 1211, 12th Floor, Jafza One, Tower B, Jebel Ali Free Zone, Dubai
Croda Middle East FZE (vii)

Vietnam – Room # 606A, Floor 6th, Centre Point Building 106 Nguyen Van Troi Street, Ward 8, Phu Nhuan District, Ho Chi Minh City
The Representative Office of Croda Singapore Pte Ltd in Ho Chi Minh City (ii) (vii)

Zimbabwe – 4a Knightsbridge Crescent, Highlands, Harare
Croda Chemicals Zimbabwe Pvt Ltd (viii)

Classifications Key
(i). Companies owned directly by Croda International Plc
(ii). Branch office
(iii). A Ordinary
(iv). B Ordinary
(v). Preference including cumulative, non-cumulative and redeemable shares
(vi). No share capital, share of profits
(vii). Manufacture, sales or distribution of speciality chemicals, or of seed treatment services and products, or fragrances and flavours compositions
(viii). Dormant
(ix). Holding company
(x). Property holding company
(xi). Trustee
(xii). Captive insurance company
(xiii). Research enterprise
(xiv). Not consolidated; Company limited by Guarantee and not having a Share Capital

Non-wholly owned subsidiaries, associates and investments:

Incorporated in the UK

3 Huxley Road, Surrey Research Park, Guildford, GU2 7RE
SiSaf Ltd 3.79%

Incorporated in other overseas countries

Brazil – Rua das Sementes nr. 291, Holambra, State of São Paulo
Incotec America do Sul Tecnologia em Sementes Ltda. (vii) 99.99%

China – No 656 East Tangxun Road Economic and Technological Development Zone Miangyang Sichuan
Croda Sipo (Sichuan) Co., Ltd (vii) 65.00%

China – 2nd Industrial Road (E), Changleng Foreign Investment Industrial Park II, Xinjian County, Nanchang City, Jiangxi, 330100
Nanchang Xinduomei Bio-Technology Co.,Ltd (vii) 70.00%

France – 51 avenue Louison Bobet, 06130 Grasse
Parfex (vii) 99.47%

Indonesia – Pusat Niaga Terpadu, Jl. Daan Mogot Raya Km 19, 6 Blok GG8N, 15122 Tangerang
PT Iberchem Indonesia Fragrances (vii) 98.00%

Indonesia – Pusat Niaga Terpadu, Blok EE 8A, Jl, Daan Mogot, Raya,
Km.19, Tangerang, 15122, Jakarta West Java, Indonesia
PT Inti Berkah Chemindo (viii) 51.00%

Spain – Avenida de Holanda, Parcela 12/14, Polígono Industrial Las Salinas, 30840 Alhama de Murcia, Murcia
Scentium Flavours, S.L. (vii) 98.60%

Sweden – Scheelevägen 22, 22363 Lund
Enza Biotech AB (xiii) 88.00%

Tunisia – 39, rue Jamel Abdennaceur, Z.I. Borj Cédria, Bir El Bey, BP 69, 2055 Ben Arous
Iberchem Tunisie S.A.R.L. (vii) 63.70%

Turkey – Ye iltepe Mahallesi smetinönü-2 Cad. No:2/57 Tepeba i, Eski ehir
Entekno Industrial, Technological and Nano Materials Corp. 9.00%

United Arab Emirates – Units 2601 & 2602, Al Manara Tower, Al Abraj St., Business Bay, P.O. Box 191160, Dubai
The Essence of Nature F&F Trading LLC (vii) 49.00%

Shareholder information

2023 Annual General Meeting	26 April 2023
2022 Final ordinary dividend payment	26 May 2023
2023 Half year results announcement	25 July 2023
2023 Interim ordinary dividend payment	3 October 2023
2023 Preference dividend payments	30 June 2023
	31 December 2023
2023 Full year results announcement	27 February 2024

Investor relations

Shareholders can now get up to date information on Stock Exchange announcements, key dates in the corporate calendar, the Croda share price and brokers' estimates by visiting our corporate website at www.croda.com and clicking on the section called 'Investors'.

Shareholders can receive shareholder communications electronically by registering on the Registrars' website, www.signalshares.com and following the instructions. To register, shareholders will require their investor code (IVC): this is an 11 digit number starting with five or six zeros and can be found on your dividend tax voucher or your share certificate. Receiving corporate communications by email has a number of benefits including being more environmentally friendly, reducing unnecessary waste, faster notification of information to shareholders and a reduction in company costs.

Shareholders who register on the above website can also check their shareholding, view their dividend history, choose their dividend options, register changes of address and dividend mandate instructions.

Share price information

The latest ordinary share price is available on our website at www.croda.com.

The middle market values of the listed share capital at 31 December 2022, or last date traded*, were as follows:

Ordinary shares	6663p
5.9% preference shares	88.5p*
6.6% preference shares	96.5p*

Dividend reinvestment plan ('DRIP')

Ordinary shareholders may wish to know about this plan, which allows you to use your dividends to buy further shares in Croda. The DRIP is offered to **UK shareholders only** by Link Group which is authorised and regulated by the Financial Conduct Authority.

For information and an application pack please call 0371 664 0381. Calls are charged at the standard geographic rate and will vary by provider. Calls outside the United Kingdom will be charged at the applicable international rate. Lines are open 9.00am to 5.30pm, Monday to Friday, excluding public holidays in England and Wales. From outside the UK dial +44 (0)208 639 3402. Alternatively you can email shares@linkgroup.co.uk or log on to www.signalshares.com.

Payment of dividends

You can arrange to have your dividends paid direct to your bank account. This means that:

- your dividend reaches your bank account on the payment date;
- it is more secure – cheques can sometimes get lost in the post;
- you don't have the inconvenience of depositing a cheque; and
- helps reduce cheque fraud.

If you have a UK bank account you can sign up to this service on Signal Shares (www.signalshares.com) by clicking on 'your dividend options' and following the on-screen instructions or by contacting the Customer Support Centre.

Overseas shareholders – choose to receive your next dividend in your local currency

If you live outside the UK, Link has partnered with Deutsche Bank to provide you with a service that will convert Sterling dividends into your local currency at a competitive rate.

You can choose to receive payment directly to your local bank account or alternatively you can be sent a currency draft. You can sign up to this service on Signal Shares (www.signalshares.com) by clicking on 'your dividend options' and following the on-screen instructions or by contacting the Customer Support Centre. For further information contact Link:

By phone – UK 0371 664 0300, from overseas +44 (0)371 664 0300. Calls are charged at the standard geographic rate and will vary by provider. Calls outside the United Kingdom will be charged at the applicable international rate. Lines are open 9.00am to 5.30pm, Monday to Friday, excluding public holidays in England and Wales.

By email – ips@linkgroup.co.uk

Relating to beneficial owners of shares with 'information rights'

Please note that beneficial owners of shares who have been nominated by the registered holder of those shares to receive information rights under section 146 of the Companies Act 2006 are required to direct all communications to the registered holder of their shares rather than to the Company's registrar, Link Group, or to the Company directly.

Share fraud warning

Scams are increasingly sophisticated. Fraudsters can be articulate and financially knowledgeable, with credible websites, testimonials and materials that are hard to distinguish from the real thing.

Shareholder information continued

How to avoid scams

- Treat all unexpected calls, emails and text messages with caution. Don't assume they're genuine, even if the person seems to know some basic information about you.
- Don't be pressured into acting quickly. A genuine bank or financial services firm won't mind waiting if you want time to think.
- Never give out your bank account or credit card details unless you are certain who you are dealing with.
- If you're buying a financial product such as a loan, insurance, investment or pension, only deal with an FCA-authorised firm – check the FS Register to see if the firm is registered. Always access the Register from the FCA website, rather than through links in emails or on a firm's website (it might be part of the scam).
- Double-check the URL and contact details of a firm in case it's a 'clone firm' pretending to be a real firm, such as your bank or a genuine investment firm.
- Check the list of unauthorised firms and individuals the FCA have received complaints about. If the firm isn't on their list, don't assume it's legitimate – it may not have been reported to them yet.
- Check your bank account and credit card statements regularly.
- Don't give access to your device by downloading software or an app from a source you don't trust. Scammers may be able to view, take control of your device and access your bank account.
- **Remember:** if it sounds too good to be true, it probably is!

Report a scam

If you are approached by fraudsters please tell the FCA using the share fraud reporting form at www.fca.org.uk/scams, where you can find out more about investment scams.

You can also call the FCA Consumer Helpline on 0800 111 6768.

If you have already paid money to share fraudsters you should contact Action Fraud on 0300 123 2040.

Secretary and Registered Office

Tom Brophy (Company Secretary)
Cowick Hall, Snaith, Goole, East Yorkshire
DN14 9AA
Tel: +44 (0)1405 860551
Fax: +44 (0)1405 861767
Website: www.croda.com
Registered in England number 206132

Registrars

Link Group
PXS1, Central Square
29 Wellington Street, Leeds, LS1 4DL

Tel: 0371 664 0300 (from UK)
+44 (0) 371 664 0300
(from overseas)

Calls are charged at the standard geographic rate and will vary by provider. Calls outside the United Kingdom will be charged at the applicable international rate; lines are open 9.00am to 5.30pm, Monday to Friday excluding public holidays in England and Wales.

Fax: + 44 (0)1484 601512
Website: www.linkgroup.eu
Email: shareholderenquiries@linkgroup.co.uk

Independent Auditors

KPMG LLP
15 Canada Square, London, E14 5GL

Principal Financial Advisers

Morgan Stanley & Co. International plc

Principal Solicitors

Freshfields Bruckhaus Deringer LLP

Stockbrokers

Morgan Stanley & Co. International plc
HSBC Bank plc

Financial PR Advisers

Teneo

Five year record

Earnings

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Turnover	**2,089.3**	1,889.6	1,390.3	1,377.7	1,386.9
Covenant EBITDA[4]	**560.0**	591.4	433.4	402.9	408.6
Depreciation and amortisation	**(86.4)**	(79.0)	(68.2)	(57.6)	(50.1)
Share-based payments and loss on associates	**(3.5)**	(42.0)	(14.7)	(5.9)	(15.3)
Impact of acquisitions or disposals	**45.0**	(1.8)	(30.8)	0.3	(0.7)
Adjusted operating profit[1]	**515.1**	468.6	319.6	339.7	342.5
Adjusted profit before tax[1]	**496.1**	445.2	300.6	322.1	331.5
Profit after tax	**653.3**	322.8	201.6	223.8	238.3
Profit attributable to owners of the parent	**649.3**	320.8	201.6	223.9	238.5

Return on sales[1] (%)	**24.7**	24.8	23.0	24.7	24.7
Effective tax rate[1] (%)	**22.8**	21.2	24.1	25.6	24.6

	Pence	Pence	Pence	Pence	Pence
Adjusted earnings per share[1]	**272.0**	250.0	175.5	185.0	190.2
Ordinary dividends per share	**108.0**	100.0	91.0	90.0	87.0

	Times	Times	Times	Times	Times
Net debt/Covenant EBITDA	**0.5**	1.4	1.8	1.4	1.0
Covenant EBITDA interest cover[2]	**24.2**	22.4	22.5	23.3	29.8

Summarised Balance Sheet

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Intangible assets, property, plant and equipment and investments	**2,318.0**	2,350.9	2,297.8	1,301.4	1,240.0
Inventories	**464.0**	443.0	302.6	268.9	287.2
Trade and other receivables	**375.8**	337.9	289.9	216.8	233.6
Trade and other payables	**(324.5)**	(370.3)	(267.6)	(164.7)	(191.3)
Capital employed	**2,833.3**	2,761.5	2,622.7	1,622.4	1,569.5
Tax, provisions and other	**(207.1)**	(180.3)	(194.8)	(131.1)	(127.5)
Retirement benefit assets/(liabilities)	**100.1**	7.9	(32.3)	(75.0)	(18.5)
	2,726.3	2,589.1	2,395.6	1,416.3	1,423.5
Shareholders' funds	**2,415.6**	1,753.1	1,585.8	861.6	990.5
Non-controlling interests	**15.5**	12.8	9.3	7.0	7.5
Net assets	**2,431.1**	1,765.9	1,595.1	868.6	998.0
Net debt	**295.2**	823.2	800.5	547.7	425.5
Invested capital	**2,726.3**	2,589.1	2,395.6	1,416.3	1,423.5

Return on capital

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Adjusted operating profit net of tax[1]	**397.9**	369.2	242.6	252.8	258.2
Invested capital	**2,726.3**	2,589.1	2,395.6	1,416.3	1,423.5
Adjustments for:					
Goodwill previously written off to reserves	**84.8**	50.2	50.2	50.2	50.2
Accumulated amortisation of acquired intangible assets	**104.9**	70.6	36.3	22.7	14.8
Adjusted invested capital	**2,916.0**	2,709.9	2,482.1	1,489.2	1,488.5
Average adjusted invested capital[3]	**2,813.0**	2,596.0	1,665.6	1,488.9	1,343.6
Return on invested capital (ROIC) (%)	**14.1**	14.2	14.6	17.0	19.2

Post-tax cost of capital (%)	**7.5**	6.4	6.2	6.2	5.1
Charge for invested capital	**(211.0)**	(166.1)	(103.3)	(92.3)	(68.5)
Economic value added[1]	**186.9**	203.1	139.3	160.5	189.7

1 Before exceptional items, amortisation of intangible assets arising on acquisition and the tax thereon where applicable
2 Interest excludes net interest on retirement benefit liabilities
3 The Group acquired Avanti Polar Lipids, LLC on 12 August 2020 and Fragrance Spanish Topco, S.L. ('Iberchem') on 24 November 2020. Given the value of the acquisitions, the Group's measure of average adjusted invested capital for 2020 has been adjusted for the related weighted average impact. The Group acquired Brenntag Biosector A/S on 28 December 2018. Given the value of the acquisition and its proximity to the balance sheet date, the Group's measure of average adjusted invested capital for 2018 has been adjusted for the related impact
4 Covenant EBITDA is EBITDA as defined in the Finance Review but before share-based payment charges and the loss on associates. Covenant EBITDA is also adjusted to reflect the annualised impact of acquisitions or disposals in the period

The five year record is presented based on the applicable accounting standards at the relevant reporting date.

Glossary

Adjusted	Before exceptional items, amortisation of intangible assets arising on acquisition and the tax thereon where applicable
AGM	Annual General Meeting
ALM	Asset-Liability Matching
Bio-based	Carbon containing, from renewable, non-fossil sources
CARE	Career Average Revalued Earnings
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CGU	Cash Generating Unit
CIPEBT	Croda International Plc Employee Benefit Trust
Code	Financial Reporting Council's 2018 UK Corporate Governance Code
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
Constant currency	Current year results for existing business translated at the prior year's average exchange rates and include the impact of acquisitions
CPI	Consumer Price Index
CPS	Croda Pension Scheme
D&I	Diversity & Inclusion
DRIP	Dividend Reinvestment Plan
DBSP	Deferred Bonus Share Plan
EBITDA	Earnings Before Interest, Taxation, Depreciation and Amortisation
EBT	Employee Benefit Trust
EPS	Earnings per share
ESG	Environmental, Social and Governance
EU	European Union
EVA	Economic Value Added
F&F	Fragrances and Flavours
FCA	Financial Conduct Authority
FRC	Financial Reporting Council
FRS	Financial Reporting Standard
FSP	Free Share Plan
FTSE	Financial Times Stock Exchange
GDPR	General Data Protection Regulation
GHG	Greenhouse gas
Scope 1 emissions	Direct emissions from our own, or controlled sources
Scope 2 emissions	Indirect emissions from the generation of purchased electricity, steam, heating and cooling
Scope 3 emissions	All other indirect emissions that occur in our value chain
GMP	Good Manufacturing Practice
GRI	Global Reporting Initiative
HMRC	HM Revenue & Customs
IFRS	International Financial Reporting Standards
IP	Intellectual Property
ISO	International Organization for Standardization
ISSB	International Sustainability Standards Board
IT	Information Technology
KPI	Key Performance Indicator
LDG	Leadership Development Group
LDI	Liability driven investment
M&A	Mergers and acquisitions
Market sectors	Consumer Care, Life Sciences, Industrial Specialties
mRNA	Messenger ribonucleic acid
NCI	Non-controlling interest
Net debt	Borrowings and other financial liabilities less cash and cash equivalents
NGO	Non-governmental Organisation
NPP	New and protected products
PSP	Performance Share Plan
PTIC	Performance Technologies & Industrial Chemicals
QUEST	Croda International Plc Qualifying Share Ownership Trust
R&D	Research and Development
Return on sales	Adjusted operating profit divided by revenue
RFT	Right first time
ROIC	Return on Invested Capital
RPI	Retail Price Index
RSP	Restricted Share Plan
RSPO	Roundtable on Sustainable Palm Oil
SASB	Sustainability Accounting Standards Board
SBT	Science Based Targets
SDGs	United Nations Sustainable Development Goals
SHE	Safety, health, environment
SHEQ	Safety, health, environment, quality
SIP	Share Incentive Plan
SMEs	Small and Medium Enterprises
SR	Sustainability Report
STEM	Science, technology, engineering and mathematics
TCFD	Task Force on Climate-related Financial Disclosures
Te	Tonnes
$TeCO_2e$	Tonnes carbon dioxide equivalent
TRIR	Total Recordable Injury Rate
TSR	Total shareholder return
WACC	Weighted Average Cost of Capital
WHO	World Health Organization

Cautionary Statement

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