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		
Group Statement of Cash Flows;	accounting policies on page 204.		
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	A	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 lan 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.

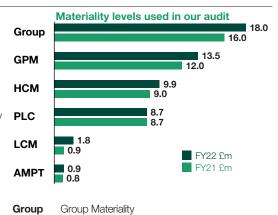
Total audit fee	£2.2m
Audit related fees	
(including interim review)	£0.2m
Other services	£0.0m
Non-audit fee as a %	
of total audit and audit related fee %	1.9%
Date first appointed	25 April 2018
Uninterrupted audit tenure	5 years
Next financial period	
which requires a tender	2028
Tenure of Group engagement 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%).



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)

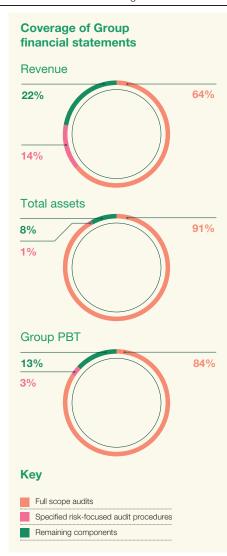
We have performed risk assessment and planning procedures to determine which of the Group's components are likely to include risks of material misstatement to the Group financial statements, the type of procedures to be performed at these components and the extent of involvement required from our component 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 1.5°C 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

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 and our audit knowledge.
 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.

Our reporting

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

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 procedures to address the risk included:

Our response to the risk

- 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),	FY22	FY21	A	Risk is increased due to potential	FY22: Acceptable
although this specific risk is only associated with the Fragrances (£269.3m) and Flavours (£94.4m) Cash Generating Units.	£363.7m £379.1m			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.	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			Our assessment of risk vs FY21 Our results
Gross defined benefit	FY22	FY22 FY21 As part of our FY22 risk assessment, we	
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	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.

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 procedures to address the risk included:

Our response to the risk

- 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.

KPMG LLP's Independent Auditor's Report continued

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 R	evenue	Group Profit Bet	fore 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 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.

Our reporting

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

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.

Our reporting

We have nothing to report in these respects.

Directors' Remuneration Report

Our responsibility

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.

Our reporting

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

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.

Our reporting

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

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.

Our reporting

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

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27 February 2023

Group Consolidated Statements

Group Income Statement

for the year ended 31 December 2022

		2022	2022	2022 Reported	2021	2021	2021 Reported
	Note	Adjusted £m	Adjustments £m	Total £m	Adjusted £m	Adjustments £m	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 in	tanaible accete origin	a on onguinition on	od the toy thereon De	staila ara diaalaaad	in noto 2		

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		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

for the year ended 31 December 2022			
	Note	2022 £m	2021 £m
Profit after tax for the year	11010	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 Consolidated Statements continued

Group Balance Sheet

at 31 December 2022

		2022	2021
	Note	£m	£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	20	2,431.1	1,765.9
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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

Jez Maiden

Chair 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	1,111	94.3	77.8
Exchange differences	iii	6.8	(2.4)
Cash and cash equivalents carried forward	III	281.6	94.3
Cash and cash equivalents carried forward		201.0	04.0
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 Consolidated Statements continued

Group Cash Flow Notes

for the year ended 31 December 2022

(i) Reconciliation to net debt

	2022	2021
Note	£m	£m
iii	180.5	18.9
iii	399.2	(23.2)
	579.7	(4.3)
	_	(5.7)
	(13.4)	(24.1)
	(1.1)	_
	(37.2)	11.4
	528.0	(22.7)
	(823.2)	(800.5)
iii	(295.2)	(823.2)
	iii iii	iii 180.5 iii 399.2 579.7 - (13.4) (1.1) (37.2) 528.0 (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	(8.0)	(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

	Cash	Exchange	Other	
2022	flow	movements	non-cash	2021
£m	£m	£m	£m	£m
320.6	199.3	8.5	-	112.8
(39.0)	(18.8)	(1.7)		(18.5)
	180.5	6.8	_	
(82.9)	121.9	(6.3)	(166.1)	(32.4)
(401.8)	259.9	(32.1)	165.0	(794.6)
(92.1)	17.4	(5.6)	(13.4)	(90.5)
	399.2	(44.0)	(14.5)	
(295.2)	579.7	(37.2)	(14.5)	(823.2)
	320.6 (39.0) (82.9) (401.8) (92.1)	2022 flow £m 320.6 199.3 (39.0) (18.8) 82.9 121.9 (401.8) 259.9 (92.1) 17.4 399.2	2022 flow £m movements £m 320.6 199.3 8.5 (39.0) (18.8) (1.7) 180.5 6.8 (82.9) 121.9 (6.3) (401.8) 259.9 (32.1) (92.1) 17.4 (5.6) 399.2 (44.0)	2022 flow £m movements £m non-cash £m 320.6 199.3 8.5 - (39.0) (18.8) (1.7) - 180.5 6.8 - (82.9) 121.9 (6.3) (166.1) (401.8) 259.9 (32.1) 165.0 (92.1) 17.4 (5.6) (13.4) 399.2 (44.0) (14.5)

Included within other non-cash movements are $\mathfrak{L}8.9 \mathrm{m}$ 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

To the year chaed of Boosinson 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 Ω .9m (2021: Ω .9m), the Hedging Reserve of Ω nil (2021: Ω .0m), the Cost of Hedging Reserve of Ω nil (2021: Ω .9m) and the Translation Reserve of Ω 46.2m (2021: Ω 4.8m). 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 PIc 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:

- 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.

202: £n	
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Income statement	
Revenue	
Consumer Care 897.	763.0
Life Sciences 682.	572.3
Industrial Specialties 509.2	554.3
Total Group revenue 2,089.3	1,889.6
Adjusted operating profit	
Consumer Care 204.	188.5
Life Sciences 229.	208.5
Industrial Specialties 81.	71.6
Total Group operating profit (before exceptional items and amortisation of intangible assets arising on acquisition) 515.	468.6
Exceptional items and amortisation of intangible assets arising on acquisition ¹ (70.4)	(30.4)
Total Group operating profit 444.	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	North America	Latin America	Asia	Total
	£m	£m	£m	£m	£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 $\pounds 66.3$ m (2021: $\pounds 52.3$ m), in France is $\pounds 121.5$ m (2021: $\pounds 96.9$ m), in Germany is $\pounds 120.9$ m (2021: $\pounds 196.0$ m), in China is $\pounds 189.3$ m (2021: $\pounds 161.4$ m), in the US is $\pounds 491.1$ m (2021: $\pounds 455.3$ m) and the total revenue from external customers from other countries is $\pounds 1,100.2$ m (2021: $\pounds 927.7$ m). 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 $\pounds 177.6$ m (2021: $\pounds 208.2$ m), in the US is $\pounds 618.4$ m (2021: $\pounds 557.1$ m) and in other countries is $\pounds 677.4$ m (2021: $\pounds 733.6$ m). Goodwill has not been split by geography as this asset is not attributable to a geographical area.

2. Operating costs

	2022	2021
	£m	£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	2021
	£m	£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)

2022

2021

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	EIII	٤١١١
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

o. rux		
	2022	2021
	£m	£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).

Notes to the Group Accounts continued

6. Deferred tax

	2022	2021
	£m	£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
	(4.8) 6.2	3.9
Adjustments and exceptional items		(5.7)
Deferred tax charged directly to other comprehensive income or equity (note 5(b))	(24.0) 8.8	(5.7)
Disposals Acquisitions	0.0	(0.0)
Exchange differences	(10.9)	(8.9) 4.7
Exchange unlerences		7.9
Niet le elegan le verrelet fan rand	(24.7)	
Net balance brought forward	(137.9)	(145.8)
Net balance carried forward	(162.6)	(137.9)
5		
Deferred tax credited/(charged) through the income statement relates to the following:		(0.7)
Retirement benefit obligations	0.3	(0.7)
Accelerated capital allowances	(6.6)	(2.1)
Provisions	2.1	13.9
Other	5.6	
	1.4	6.7 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, $\mathfrak{L}6.7$ m 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

7. Lattings per share		
	2022	2021
	£m	£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	Number
	m	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	2022	Pence per	2021
share	£m	share	£m
-	_	43.5	60.6
47.0	65.6	_	-
-	_	51.5	71.8
56.5	78.8	_	-
103.5	144.4	95.0	132.4
	_		0.1
	144.4		132.5
	share - 47.0 - 56.5	share £m 47.0 65.6 56.5 78.8 103.5 144.4	share £m share - - 43.5 47.0 65.6 - - - 51.5 56.5 78.8 - 103.5 144.4 95.0

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

9. Limpioyees		
		Restated
	2022	2021
	£m	£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	2021
	Number	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	2021
	£m	£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.

Notes to the Group Accounts continued

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	2111	٤١١١
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	2021
	£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	2022	2021	2021
	UK	US	UK	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		
	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 be	netit 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:

The assets in the schemes comprised.				
	2022	2022	2021	2021
	£m	%	£m	%
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	2021
	£m	£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.

-			Less than	Between	Between	Beyond	
			a year £m	1–2 years £m	2–5 years £m	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							0004
						2022 £m	2021 £m
Contributions paid charged to operating pr	ofit					11.3	7.8
12. Intangible assets							
			Technology	Customer	Trade names	Other	
	Goodwill £m	Software £m	processes £m	relationships £m	and brands £m	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		(0, 0)	(0.1)			0.0	0.5
and equipment At 31 December 2021	852.0	(0.3) 36.4	(0.1) 152.6	226.4	89.1	0.9 4.9	0.5 1,361.4
At 31 December 2021	652.0	30.4	132.0	220.4	09.1	4.9	1,301.4
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 At 31 December 2021		(0.2)	26.4		7.5	0.2	- 00.0
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 2022 At 31 December 2021	852.0	16.0	116.2	203.3	81.6	2.5	1,271.6
At 31 December 2022							

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			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

Restated

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:

		Restated
	2022 £m	2021 £m
Incotec	71.2	67.6
Biosector	26.0	24.6
Sipo	22.6	22.1
lonphase	_	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:

		l erminal value		Pre-tax
		growth rate		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		I	Fragrances
	Sensitivity	Increase	Decrease	Sensitivity	Increase	Decrease
		£m	£m		£m	£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	Plant and equipment	Total
	£m	£m	£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
		.,	1,12210
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 2022 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	2021
	£m	£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
According to the design of the condition			
Accumulated depreciation and impairment losses	17 5	0.5	01.0
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 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
rayment of lease habilities		
Payment of short-term, low value and variable lease components	1.0	1.4
,	1.0 18.4	1.4 15.8
Payment of short-term, low value and variable lease components		
,	18.4	15.8
Payment of short-term, low value and variable lease components		
Payment of short-term, low value and variable lease components	18.4	15.8
Payment of short-term, low value and variable lease components 15. Future commitments	18.4	15.8
Payment of short-term, low value and variable lease components 15. Future commitments Group capital projects	18.4	15.8
Payment of short-term, low value and variable lease components 15. Future commitments Group capital projects At 31 December the Directors had authorised the following expenditure, excluding grant income, on capital	18.4	15.8
Payment of short-term, low value and variable lease components 15. Future commitments Group capital projects At 31 December the Directors had authorised the following expenditure, excluding grant income, on capital projects:	18.4	15.8
Payment of short-term, low value and variable lease components 15. Future commitments Group capital projects At 31 December the Directors had authorised the following expenditure, excluding grant income, on capital projects: Contracted, but not provided for	18.4 2022 £m	15.8 2021 £m
Payment of short-term, low value and variable lease components 15. Future commitments 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	18.4 2022 £m	15.8 2021 £m
Payment of short-term, low value and variable lease components 15. Future commitments 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 Intangible assets	18.4 2022 £m	15.8 2021 £m
Payment of short-term, low value and variable lease components 15. Future commitments 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 Intangible assets Authorised, but not contracted for	2022 £m 45.6 1.3	15.8 2021 £m 19.3 0.8

The amounts recognised in the balance sheet are as follows:

	2022	2021
	£m	£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 $\mathfrak{L}1.1m$. 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	2021
	£m	£m
Share of loss of associate	-	0.7
Impairment of associate	-	1.1
	-	1.8

17. Inventories

	2022	2021
	£m	£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	2021
	£m	£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	2021
	£m	£m
Sterling US Dollar	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	2021
	£m	£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	2021
	£m	£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		2
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	ZIII	LII
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	202
	£m	£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	66.0
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 $\mathfrak{L}10.9m$ (2021: $\mathfrak{L}14.9m$) of the interest falls due within one year of the balance sheet date, $\mathfrak{L}10.9m$ (2021: $\mathfrak{L}13.4m$) within one to two years, $\mathfrak{L}25.3m$ (2021: $\mathfrak{L}33.7m$) within two to five years and $\mathfrak{L}6.2m$ (2021: $\mathfrak{L}13.5m$) beyond five years.

20. Borrowings, other financial liabilities and other financial assets continued

Interest rate and currency profile of Group financial liabilities

				we	Fixed rate ighted average
	Total £m	Fixed £m	Floating £m	Interest rate %	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	2021
	£m	£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	4	2011
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	Number of		
	granted	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		2021
		Weighted		Weighted
		average		average
		exercise		exercise
	Number	price	Number	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		2021
		Weighted		Weighted
		average		average
		exercise		exercise
	Number	price	Number	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	
				,

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	Non-market	Market	Non-market
	condition	condition	condition	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	Three	Three	Three
	years	years	years	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	Closed form	Closed form	Closed form
	valuation	valuation	valuation	valuation

A reconciliation of option movements over the year is as follows:		2022		2021
		Weighted		Weighted
		average		average
		exercise		exercise
	Number	price	Number	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	

conciliation of option movements over the year is as follows:		2022		2021
		Weighted		Weighted
		average		average
	Number	exercise	Numahaw	exercise
	Number	price	Number	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	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	Closed form	Closed form
	valuation	valuation	valuation

A reconciliation of option movements over the year is as follows:			2021	
		Weighted		Weighted
		average		average
		exercise		exercise
	Number	price	Number	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	Closed form
	valuation	valuation

A reconciliation of option movements over the year is as follows:		2022		2021	
		Weighted		Weighted	
		average		average	
		exercise		exercise	
	Number	price	Number	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	2021
	£m	£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 $\mathfrak{L}15.2$ m with identifiable net assets of $\mathfrak{L}8.7$ m, generating goodwill of $\mathfrak{L}6.5$ m. 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 lberchem 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.

	LIII
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

£m

Company Financial Statements

Company Balance Sheet

at 31 December 2022

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
	П	176.1	15.9
Cash and cash equivalents		1,495.1	1,389.5
		1,700.1	1,000.0
Current liabilities			
Creditors: Amounts falling due within one year	1	(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
Total addition loss our one habitation		2,70011	2,701.0
Non-current liabilities			
Deferred tax liability	Н	(1.2)	(0.2)
Borrowings	J	(242.2)	(525.2)
		(243.4)	(525.4)
Net assets		0.520.7	0.176.5
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

Jez Maiden

Chair Group Finance Director

Registered in England number 206132

Company Statement of Changes in Equity

for the year ended 31 December 2022

for the year ended 31 December 2022								
			Share	Capital		0.11		
		Share capital	premium account	redemption reserve	Revaluation reserve	Other reserves	Retained earnings	Total
	Note	£m	£m	£m	£m	£m	£m	£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
Total equity at 31 December 2022		10.1	101.1	0.9	1.2		1,014.0	2,009.7

Other reserves include the Hedging Reserve of \mathfrak{L} nil (2021: $\mathfrak{L}4.0$ m) and the Cost of Hedging Reserve of \mathfrak{L} nil (2021: $\mathfrak{L}(4.2)$ 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	2021
	£m	£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

Section Sect	D. Intangible assets			Computer
1.8	<u></u>			£m
At 31 December 2022 1.0 Accumulated amortisation At 1 January 2022 1.0 At 31 December 2022 1.0 At 31 December 2022 1.0 At 31 December 2022 0.0 At 31 December 2022 0.0 At 31 December 2021 0.0 At 31 December 2022 1.0 At 31 D				10
Accumulated amortisation Act January 2022 1.0				
1.0 1.0	ACST December 2022			1.0
Charge for the year	Accumulated amortisation			
Net carrying amount Staff December 2022 0.6 0.8 0.				1.0
Net carrying amount				
At 31 December 2022 0.6 At 31 December 2021 0.8 E. Tangible assets Land and buildings of the part of	At 31 December 2022			1.2
Act 31 December 2021 Cost Land and buildings of pulpment of the buildings of pulpment of the buildings of pulpment of the buildings of	Net carrying amount			
Land and buildings Pant an	At 31 December 2022			0.6
Cost Land any buildings equipment per	At 31 December 2021			0.8
Cost Land any buildings equipment per	E. Tangible assets			
Cost Em S. a. 3.8 3.8 3.8 3.8 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.2 3.7 3.1 0.1 <td>3</td> <td>Land and</td> <td>Plant and</td> <td></td>	3	Land and	Plant and	
Cost 2.2 1.6 3.8 Disposals — (0.1) (0.1) At 31 December 2022 2.2 1.5 3.7 Accumulated depreciation Security 1.5 1.0 2.5 Charge for the year — 0.1 (0.1) (0.1) Disposals — (0.1)				
Disposals — (0.1) (0.1) At 31 December 2022 1.5 3.7 3.	Cost	LIII	LIII	LIII
Accumulated depreciation Secure S	At 1 January 2022	2.2	1.6	3.8
Accumulated depreciation 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 ************************************	Disposals	_	(0.1)	(0.1)
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 in Group undertakings 1.15 2.93 <td>At 31 December 2022</td> <td>2.2</td> <td>1.5</td> <td>3.7</td>	At 31 December 2022	2.2	1.5	3.7
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 in Group undertakings 1.15 2.93 <td>Accumulated depreciation</td> <td></td> <td></td> <td></td>	Accumulated depreciation			
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 & Loans & Total & Empty &	At 1 January 2022	1.5	1.0	2.5
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 2.5 F. Shares in Group undertakings Shares in Group undertakings Cost At 1 January 2022 1,115.9 299.0 1,414.9 Exchange differences - 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9 6.9	Charge for the year	_	0.1	0.1
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 in Group undertakings 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 31 December 2022 27.8 1.5 29.3 Net book value At 31 December 2022 1,091.9 319.2 1,411.1	Disposals	_	(0.1)	(0.1)
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 in Group undertakings Cost Ct 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 2022	1.5	1.0	2.5
At 31 December 2021 0.7 0.6 1.3 F. Shares in Group undertakings Cost Shares £m Loans £m Total £m 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 31 December 2022 27.8 1.5 29.3 Net book value At 31 December 2022 1,091.9 319.2 1,411.1	Net book amount			
F. Shares in Group undertakings Cost Loans £m Total £m 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 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 2022	0.7	0.5	1.2
Cost Shares £m Loans £m Total £m K1 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	0.7	0.6	1.3
Cost Shares £m Loans £m Total £m K1 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	F. Shares in Group undertakings			
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 31 December 2022 27.8 1.5 29.3 Net book value At 31 December 2022 1,091.9 319.2 1,411.1	Transition in Group unusitation go	Shares	Loans	Total
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 31 December 2022 27.8 1.5 29.3 Net book value At 31 December 2022 1,091.9 319.2 1,411.1		£m	£m	£m
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 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		1 115 0	200.0	1 111 0
Additions 65.8 254.9 320.7 Disposals (62.0) - (62.0)				
Disposals (62.0) - (62.0) Amounts repaid (240.6) (240.6) (240.6) (240.6) (240.6) (240.6) (240.6) (240.6) (*			
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 — — — — — — — — — — — — — — — — — — —				
Amounts invested – 0.5 0.5 At 31 December 2022 1,119.7 320.7 1,440.4 Impairment 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		(62.8)	(240.6)	
At 31 December 2022 1,119.7 320.7 1,440.4 Impairment At 1 January 2022 27.8 1.5 29.3	Amounts invested	_		0.5
At 1 January 2022 27.8 1.5 29.3 27.8 Impairment in the year 27.8 27.8 29.3 27.8 27.8 27.8 27.8 29.3 27.8 27.8 27.8 27.8 27.8 29.3 27.8 27.8 27.8 27.8 27.8 27.8 27.8 27.8	At 31 December 2022	1,119.7		1,440.4
At 1 January 2022 27.8 1.5 29.3 27.8 Impairment in the year 27.8 27.8 29.3 27.8 27.8 27.8 27.8 29.3 27.8 27.8 27.8 27.8 27.8 29.3 27.8 27.8 27.8 27.8 27.8 27.8 27.8 27.8	Impairment			
Impairment in the year - <td></td> <td>27.8</td> <td>1.5</td> <td>29.3</td>		27.8	1.5	29.3
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 2022 1,091.9 319.2 1,411.1	At 31 December 2022	27.8	1.5	29.3
At 31 December 2022 1,091.9 319.2 1,411.1	Net book value			
	At 31 December 2022	1,091.9	319.2	1,411.1
1,000.1 201.0 1,000.0	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 $\mathfrak{L}0.5$ m relate to the continued investment in Cowick Insurance Services Ltd, $\mathfrak{L}3.3$ m of capital contributions in relation to share-based payments and a $\mathfrak{L}62.0$ m 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	2021
	£m	£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	2021
	£m	£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
Amounts falling due within one year	LIII	£m
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	2021
	£m	£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	2021
	£m	£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.