Group Consolidated Statements

Group Income Statement

for the year ended 31 December 2023

	Note	**2023 Adjusted £m**	**2023 Adjustments £m**	**2023 Reported Total £m**	2022 Adjusted £m	2022 Adjustments £m	2022 Reported Total £m
Revenue	1	**1,694.5**	**–**	**1,694.5**	2,089.3	–	2,089.3
Cost of sales		**(964.5)**	**–**	**(964.5)**	(1,103.7)	–	(1,103.7)
Gross profit		**730.0**	**–**	**730.0**	985.6	–	985.6
Operating costs	2	**(410.0)**	**(72.5)**	**(482.5)**	(470.5)	(70.4)	(540.9)
Operating profit	3	**320.0**	**(72.5)**	**247.5**	515.1	(70.4)	444.7
Gain on business disposal	28	**–**	**–**	**–**	–	356.0	356.0
Financial costs	4	**(26.0)**	**–**	**(26.0)**	(24.1)	(1.7)	(25.8)
Financial income	4	**14.8**	**–**	**14.8**	5.1	–	5.1
Profit before tax		**308.8**	**(72.5)**	**236.3**	496.1	283.9	780.0
Tax	5	**(73.7)**	**9.5**	**(64.2)**	(112.9)	(13.8)	(126.7)
Profit after tax for the year		**235.1**	**(63.0)**	**172.1**	383.2	270.1	653.3
Attributable to:							
Non-controlling interests		**1.1**	**–**	**1.1**	4.0	–	4.0
Owners of the parent		**234.0**	**(63.0)**	**171.0**	379.2	270.1	649.3
		235.1	**(63.0)**	**172.1**	383.2	270.1	653.3

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	**167.6**		**122.5**	272.0		465.8
Diluted	7	**167.4**		**122.3**	271.4		464.8

Group Statement of Comprehensive Income

for the year ended 31 December 2023

	Note	**2023 £m**	2022 £m
Profit after tax for the year		**172.1**	653.3
Other comprehensive (expense)/income:			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of post-retirement benefit obligations	11	**(23.3)**	88.9
Tax on items that will not be reclassified	5	**5.5**	(22.4)
		(17.8)	66.5
Items that have been or may be reclassified subsequently to profit or loss:			
Currency translation		**(58.4)**	104.2
Reclassification of currency translation		**–**	(14.8)
Cash flow hedging	20	**(19.3)**	2.8
Reclassification of cash flow hedging	20	**–**	(6.5)
Reclassification of cost of hedging reserve	20	**–**	6.0
Tax on items that may be reclassified	5	**–**	(0.4)
		(77.7)	91.3
Other comprehensive (expense)/income for the year		**(95.5)**	157.8
Total comprehensive income for the year		**76.6**	811.1
Attributable to:			
Non-controlling interests		**0.1**	4.4
Owners of the parent		**76.5**	806.7
		76.6	811.1
Arising from:			
Continuing operations		**76.6**	811.1

Group Balance Sheet

at 31 December 2023

	Note	2023 £m	2022 £m
Assets			
Non-current assets			
Intangible assets	12	**1,408.5**	1,253.2
Property, plant and equipment	13	**1,044.0**	964.5
Right of use assets	14	**87.5**	96.9
Investments	16	**1.9**	3.4
Deferred tax assets	6	**14.4**	10.3
Retirement benefit assets	11	**113.5**	123.2
		2,669.8	2,451.5
Current assets			
Inventories	17	**341.2**	464.0
Trade and other receivables	18	**395.7**	375.8
Cash and cash equivalents	20	**172.5**	320.6
		909.4	1,160.4
Liabilities			
Current liabilities			
Trade and other payables	19	**(252.0)**	(320.0)
Borrowings and other financial liabilities	20	**(36.7)**	(121.9)
Lease liabilities	14	**(13.7)**	(12.9)
Provisions	21	**(8.6)**	(6.1)
Current tax liabilities		**(9.2)**	(26.9)
		(320.2)	(487.8)
Net current assets		**589.2**	672.6
Non-current liabilities			
Borrowings and other financial liabilities	20	**(588.4)**	(401.8)
Lease liabilities	14	**(71.3)**	(79.2)
Other payables	19	**(1.1)**	(4.5)
Retirement benefit liabilities	11	**(26.8)**	(23.1)
Provisions	21	**(10.5)**	(11.5)
Deferred tax liabilities	6	**(192.8)**	(172.9)
		(890.9)	(693.0)
Net assets		**2,368.1**	2,431.1
Equity			
Ordinary Share capital	22	**15.1**	15.1
Share premium account		**707.7**	707.7
Reserves		**1,629.7**	1,692.8
Equity attributable to owners of the parent		**2,352.5**	2,415.6
Non-controlling interests in equity	25	**15.6**	15.5
Total equity		**2,368.1**	2,431.1

The financial statements on pages 152 to 194 were signed on behalf of the Board who approved the accounts on 26 February 2024.

Dame Anita Frew DBE
Chair

Louisa Burdett
Chief Financial Officer

Group Statement of Cash Flows

for the year ended 31 December 2023

	Note	2023 £m	2022 £m
Cash generated from operating activities			
Cash generated by operations	ii	**431.0**	462.2
Interest paid		**(24.2)**	(23.2)
Tax paid		**(69.3)**	(130.8)
Net cash generated from operating activities		**337.5**	308.2
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired	27	**(204.3)**	–
Payment of contingent consideration		**(9.6)**	(13.7)
Purchase of property, plant and equipment	13	**(180.4)**	(141.2)
Receipt of government grants		**10.9**	6.1
Purchase of other intangible assets	12	**(8.6)**	(11.2)
Proceeds from sale of property, plant and equipment		**4.0**	1.7
Proceeds from business disposal, net of cash in disposed business		**–**	583.6
Tax paid on business disposals		**(4.6)**	(4.6)
Settlement of acquisition-related FX derivatives		**(23.9)**	–
Cash paid against non-operating provisions	21	**(1.6)**	(1.2)
Interest received		**8.3**	5.1
Net cash (used in)/generated from investing activities		**(409.8)**	424.6
Cash flows from financing activities			
New borrowings		**336.0**	232.6
Repayment of borrowings		**(210.9)**	(614.4)
Payment of lease liabilities	14	**(17.0)**	(17.4)
Acquisition of non-controlling interests		**–**	(1.4)
Net transactions in own shares		**(9.8)**	(7.3)
Dividends paid to equity shareholders	8	**(150.7)**	(144.4)
Net cash used in financing activities		**(52.4)**	(552.3)
Net movement in cash and cash equivalents	i, iii	**(124.7)**	180.5
Cash and cash equivalents brought forward		**281.6**	94.3
Exchange differences	iii	**(6.7)**	6.8
Cash and cash equivalents carried forward		**150.2**	281.6
Cash and cash equivalents carried forward comprise:			
Cash at bank and in hand		**172.5**	320.6
Bank overdrafts		**(22.3)**	(39.0)
		150.2	281.6

Group Cash Flow Notes
for the year ended 31 December 2023

(i) Reconciliation to net debt

	Note	**2023 £m**	2022 £m
Net movement in cash and cash equivalents	iii	**(124.7)**	180.5
Net movement in borrowings and other financial liabilities	iii	**(108.1)**	399.2
Change in net debt from cash flows		**(232.8)**	579.7
Loans in acquired businesses		**(6.1)**	–
Non-cash movement in lease liabilities		**(12.9)**	(13.4)
Non-cash preference shares reclassification		**–**	(1.1)
Exchange differences		**9.4**	(37.2)
		(242.4)	528.0
Net debt brought forward		**(295.2)**	(823.2)
Net debt carried forward	iii	**(537.6)**	(295.2)

(ii) Cash generated by operations

	Note	**2023 £m**	2022 £m
Adjusted operating profit		**320.0**	515.1
Exceptional items	iv	**(35.8)**	(36.1)
Amortisation of intangible assets arising on acquisition		**(36.7)**	(34.3)
Operating profit		**247.5**	444.7
Adjustments for:			
Depreciation and amortisation		**126.2**	120.7
Fair value movement on contingent consideration		**–**	(6.1)
Impairments on intangible assets and property, plant and equipment		**22.0**	42.2
Impairment of investment		**1.5**	–
Loss on derivatives		**4.6**	–
Loss on disposal and write-offs of intangible assets and property, plant and equipment		**0.2**	0.2
Net provisions charged	21	**5.6**	1.6
Share-based payments		**(4.2)**	(11.0)
Non-cash pension expense		**(4.4)**	4.5
Net-monetary adjustment		**6.3**	–
Cash paid against operating provisions	21	**(3.4)**	(0.8)
Movement in inventories		**117.8**	(98.1)
Movement in receivables		**(19.0)**	(43.3)
Movement in payables		**(69.7)**	7.6
Cash generated by operations		**431.0**	462.2

(iii) Analysis of net debt

	2023 £m	Cash flow £m	Exchange movements £m	Other non-cash £m	2022 £m
Cash and cash equivalents	**172.5**	(140.3)	(7.8)	–	320.6
Bank overdrafts	**(22.3)**	15.6	1.1	–	(39.0)
Movement in cash and cash equivalents		(124.7)	(6.7)	–	
Borrowings repayable within one year	**(14.4)**	72.6	2.0	(6.1)	(82.9)
Borrowings repayable after more than one year	**(588.4)**	(197.7)	11.1	–	(401.8)
Lease liabilities	**(85.0)**	17.0	3.0	(12.9)	(92.1)
Movement in borrowings and other financial liabilities		(108.1)	16.1	(19.0)	
Total net debt	**(537.6)**	(232.8)	9.4	(19.0)	(295.2)

Included within other non-cash movements are £9.9m of lease liabilities recognised in the year.

(iv) Cash flow on exceptional items
The total cash outflow during the year in respect of exceptional items, including those recognised in prior years' income statements but excluding business disposal and contingent consideration, was £7.9m (2022: £1.0m). Details of exceptional items can be found in note 3 on pages 165 and 166.

Group Statement of Changes in Equity

for the year ended 31 December 2023

	Note	Share capital £m	Share premium account £m	Other reserves £m	Retained earnings £m	Non-controlling interests £m	Total equity £m
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**
At 1 January 2023		15.1	707.7	47.1	1,645.7	15.5	2,431.1
Profit after tax for the year		–	–	–	171.0	1.1	172.1
Other comprehensive expense		–	–	(76.7)	(17.8)	(1.0)	(95.5)
Total comprehensive (expense)/income for the year		–	–	(76.7)	153.2	0.1	76.6
Hedging losses transferred to cost of goodwill	20	–	–	19.3	–	–	19.3
Transactions with owners:							
Dividends on equity shares	8	–	–	–	(150.7)	–	(150.7)
Share-based payments		–	–	–	1.6	–	1.6
Transactions in own shares		–	–	–	(9.8)	–	(9.8)
Total transactions with owners		–	–	–	(158.9)	–	(158.9)
Total equity at 31 December 2023		**15.1**	**707.7**	**(10.3)**	**1,640.0**	**15.6**	**2,368.1**

Other reserves include the Capital Redemption Reserve of £0.9m (2022: £0.9m) and the Translation Reserve of £(11.2)m (2022: £46.2m).

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 2023 the Group had £1,050m of committed debt facilities available from its banking group, USPP bondholders and lease providers, with principal maturities between 2026 and 2030, of which £381.2m (2022: £579.3m) was undrawn, together with cash balances of £172.5m (2022: £320.6m). The Group's debt facilities have funding covenant requirements, principally the leverage covenant with a maximum level of 3.5x net debt to covenant EBITDA, and interest cover.

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. Given the time horizon of these forecasts, the risk of climate change is not expected to have a material impact on these forecasts. 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 74% to trigger an event of default as at 30 June 2025. This scenario includes some mitigating actions to conserve cash, including reducing dividends and capital expenditure. Throughout this scenario, the Group continues to have significant liquidity headroom. The Directors do not consider this a plausible scenario. This is consistent with the bottom-up risk scenario modelling for the long-term viability statement which considered severe but plausible, individual, and combined scenarios, none of which trigger an event of default. 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, including the risks identified as part of the Task Force on Climate-related Financial Disclosures (TCFD) on pages 59 to 67. None of these risks had a material effect on the consolidated financial statements of the Group. In particular, the Directors have considered the impact of climate change in respect of the following areas.

- Going concern and viability of the Group over the next three years;
- Post-retirement benefit obligations;
- Carrying value and useful economic lives of property, plant and equipment; and
- The discounted cash flows included in the value in use calculation used in the annual goodwill impairment testing.

Whilst there is currently no material impact expected from climate change, the Group is aware of the ever-changing risks related to climate change and will continue to developing its assessment of the impact on the financial statements.

Significant accounting judgements and estimates

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 significant if it has a significant effect on the amounts recognised in the financial statements or if the estimates have a risk of material adjustment to assets and liabilities within the next financial year.

The significant accounting judgement required when preparing the Group's accounts is as follows:

(i) Hedge accounting – On 6 February 2023 the Group agreed to acquire Solus Biotech Co Ltd ('Solus') for a total consideration of KRW350bn, a highly probable future business combination (hedged item). In line with the Group's currency risk management strategy, the currency exposure for the Group, which has a Sterling functional and presentational currency, was managed through the execution of a deal contingent foreign exchange forward contract (hedging instrument). This instrument was designated as a cash flow hedge and therefore hedge accounting was applied in the Group's consolidated financial statements.
The application of hedge accounting for a deal contingent instrument requires significant judgement to determine whether the underlying transaction was highly probable, which is a requirement for the initial application of hedge accounting. The Group's assessment that the underlying transaction was highly probable, and therefore hedge accounting can be applied, is a key judgement. The primary consideration in forming this conclusion was in relation to the required regulatory approval, which was considered highly probable to be achieved based on an assessment of internal and external evidence. This judgement, and the subsequent application of hedge accounting, resulted in a £19.3m FX loss being deferred in other comprehensive income, and subsequently reclassified to goodwill, rather than being recognised in the income statement. During the year, a hedge ineffectiveness loss of £4.6m was recognised in the income statement within administrative expenses and reported as an exceptional item as part of business acquisition costs. The forward contract was settled during the year resulting in a cash outflow of £23.9m.

The significant accounting estimates 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, including the impact of climate change on life expectancy. 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:

- Cash flow projections – based on management's most recent risk-adjusted view of future trading specific to the individual CGU, with assumptions on term and EBITDA growth (calculated as operating profit before depreciation and amortisation) as a result of fluctuating revenue and operating margins through the ability to pass on future raw material price increases.
- Terminal value growth in EBITDA – 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.

The significant accounting estimate relates to the goodwill impairment review of the Flavours and Croda Korea CGUs. Given the impairment charge reported in the prior year the Flavours CGU has low headroom. The recoverable amount, and therefore level of headroom, is predominantly dependent upon judgements used in arriving at these key assumptions. The assumptions selected and associated sensitivity analysis are disclosed in note 12. Although it is not management's current expectation, these sensitivities provide the impact on the recoverable amount when applying a reasonably possible change in the assumptions. The goodwill impairment review of Croda Korea CGU represents a further source of significant estimation uncertainty due to the proximity of acquisition and resultant low level of headroom. Post-acquisition trading is in line with expectations. Given the size of the goodwill balances and the carrying values' sensitivity to the underlying assumptions, small changes could result in a material adjustment to the carrying values in the next financial year.

The impact of climate change risks, with a particular focus on the impact of carbon pricing, has been considered as part of the impairment testing. The discounted cash flows included in the value in use calculations reflect the carbon costs of the CGU based on the latest scope 1 and 2 emissions data and applying a shadow carbon price of £124/tonne in line with the UK Government Green Guide. The cost of carbon has an immaterial effect on the recoverable amount of each standalone CGU and as such carbon costs are not deemed to be a key assumption. The Directors are aware of the ever-changing risks attached to climate change and will regularly assess these risks against judgements and estimates made in future impairment testing.

The Group's accounts include other areas of estimation. While these areas do not meet the definition of significant accounting estimates, the recognition and measurement of certain material assets and liabilities are based on assumptions. The other areas of accounting estimates are:

(i) Valuation of acquired intangible assets (note 28) – 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. The acquisition date fair value of intangible assets acquired are based on a number of assumptions including discount rate, royalty rates, growth rates and customer attrition.

(ii) Goodwill impairment review of the Avanti and Fragrances CGUs (note 12) – the recoverable amount, and therefore level of headroom, is predominantly dependent upon judgements used in arriving at the cash flow projections, terminal value growth rate, and the discount rate.

Changes in accounting policy

(i) The Group adopted the following new accounting policies on 1 January 2023 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:

- IFRS 17 'Insurance Contracts' and Amendments to IFRS 17 'Insurance Contracts';
- Amendments to IAS 1 'Disclosure of Accounting Policies';
- Amendments to IAS 1 'Classification of Liabilities as Current or Non-Current';
- Amendment to IAS 8 'Definition of Accounting Estimates'; and
- Amendment to IAS 12 'Deferred Tax related to Assets and Liabilities arising from a Single Transaction' and 'International Tax Reform—Pillar Two Model Rules'.

IFRS 17 'Insurance Contracts'

IFRS 17 'Insurance Contracts' became effective on 1 January 2023 and establishes requirements for the recognition, measurement, presentation, and disclosure of insurance contracts within the scope of the Standard and is applied retrospectively. An impact assessment has been performed and has not resulted in a material impact to the Group financial reporting.

As part of this review it was identified that the Group issues product warranties as part of the normal course of business which would meet the definition of an insurance contract. As the warranties are issued in connection to the sale of goods, the Group is exempt from applying the requirements of IFRS 17 and instead applies IFRS 15 'Revenue' and IAS 37 'Provisions, Contingent Liabilities and Contingent Assets'.

The Group operates a captive insurance company to self-insure certain risks either in full or in part. As this self-insurance operates within the Group, IFRS 17 has no impact on the consolidated financial statements.

The Group has also issued Parent Company guarantee arrangements. The Group has not previously asserted that these arrangements are considered insurance contracts and has therefore taken advantage of the accounting policy choice to apply IAS 32 'Financial Instruments: Presentation', IFRS 7 'Financial Instruments: Disclosures' and IFRS 9 'Financial Instruments' rather than apply IFRS 17.

(ii) The IASB has issued the following pronouncements for annual periods beginning on or after 1 January 2024 or 1 January 2025:

- Amendments to IAS 21 'Lack of exchangeability';
- Amendments to IAS 7 and IFRS 7 'Supplier Finance Arrangements';
- Amendments to IAS 1 'Non-current Liabilities with Covenants';
- Amendments to IFRS 16 'Lease Liability in a Sale and Leaseback'; and
- Amendments to SASB standards.

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 2024 or 1 January 2025 as applicable.

Group accounts

General information

Croda International Plc is a public limited company, which is listed on the London Stock Exchange and incorporated and domiciled in the United Kingdom. It is registered in England and Wales and the address of its registered office can be found on page 205.

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. For the acquisition in the year the following intangible asset types recognised and valuation methodologies applied were:

- Technology processes (relief-from-royalty)
- Customer relationships (income approach)

Following initial recognition, the assets will be written down on a straight-line basis over their useful lives, which range from 7 to 20 years for technology processes and from 3 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 adjustments 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.

Segmental reporting
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.

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 and hyperinflation

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.

Certain subsidiaries of the Group operate in hyperinflationary economies. Where considered significant, the results of those subsidiaries are adjusted to reflect the current purchasing power of that currency at the year end, as if that rate had applied to the results of the entity for the whole period. Any gain or loss on monetary assets and liabilities is recognised within operating costs in the Group income statement as a net monetary gain or loss.

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 and are not considered to be hyperinflationary are translated into the presentation currency as follows:

(i) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
(ii) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and
(iii) all resulting exchange differences are recognised as a separate component of equity.

For subsidiaries operating in hyperinflationary economies, the results and financial position are translated into the Group's presentation currency using the closing rate for all transactions, rather than at an average rate for income and expense items.

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. 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.

The Group has determined that the global minimum top-up tax, which is a liability under Pillar Two legislation, is an income tax in the scope of IAS12. The Group has applied a temporary mandatory relief from deferred tax accounting for the impacts of the top-up tax and accounts for it as a current tax when it is incurred.

Following adoption of amendments to IAS12 the Group has recognised a separate deferred tax asset in relation to its lease liabilities and a deferred tax liability in relation to its right of use assets.

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 a goodwill impairment to the carrying value of the Chinese SIPO cash generating unit in Industrial Specialties, acquisition costs and restructuring costs associated with changes to the Group's operating model. Exceptional items in the prior year related 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. Details can be found in note 3 on pages 165 and 166.

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, sites decarbonisation road maps, 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.

The TCFD on pages 59 to 67 highlights the riverine flood risk across specific sites. The sites with significant risk of flood account for 14.9% of Group revenue in 2023 and include 12.2% of the Group's property, plant and equipment net book value. Due to the mitigations detailed in the TCFD, climate change does not have a material impact on the net book value or remaining useful life of property, plant and equipment at the balance sheet date.

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.

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.

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. Contingent 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, restructuring, site restoration and other provisions

The Group is exposed to certain 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 38 to 46.

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.

	2023 £m	2022 £m
Income statement		
Revenue		
Consumer Care	**886.1**	897.8
Life Sciences	**602.3**	682.3
Industrial Specialties	**206.1**	509.2
Total Group revenue	**1,694.5**	2,089.3
Adjusted operating profit		
Consumer Care	**160.3**	204.7
Life Sciences	**150.3**	229.4
Industrial Specialties	**9.4**	81.0
Total Group operating profit (before exceptional items and amortisation of intangible assets arising on acquisition)	**320.0**	515.1
Exceptional items and amortisation of intangible assets arising on acquisition[1]	**(72.5)**	(70.4)
Total Group operating profit	**247.5**	444.7

1. Relates to Consumer Care £32.5m (2022: £60.2m), Life Sciences £18.6m (2022: £9.1m) and Industrial Specialties £21.4m (2022: £1.1m).

In the following table, revenue has been disaggregated by sector and destination. This is the primary management information that is presented to the Group's Executive Committee.

	Europe, Middle East & Africa £m	North America £m	Latin America £m	Asia £m	**Total £m**
Revenue 2023					
Consumer Care	375.1	189.7	89.4	231.9	**886.1**
Life Sciences	245.9	167.6	87.7	101.1	**602.3**
Industrial Specialties	69.2	39.3	8.3	89.3	**206.1**
Total Group revenue	690.2	396.6	185.4	422.3	**1,694.5**
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**

	2023 £m	2022 £m
Depreciation and amortisation (before amortisation of intangible assets arising on acquisition)		
Consumer Care	**45.7**	40.4
Life Sciences	**32.6**	26.7
Industrial Specialties	**11.2**	19.3
Total Group	**89.5**	86.4

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, Korea and Australia; and South Africa and Tunisia.

The Group's revenue from external customers in the UK is £42.8m (2022: £66.3m), in France is £99.0m (2022: £121.5m), in Germany is £80.4m (2022: £120.9m), in China is £155.9m (2022: £189.3m), in the US is £362.9m (2022: £491.0m) and the total revenue from external customers from other countries is £953.5m (2022: £1,100.2m). 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 £249.6m (2022: £177.6m), in the US is £607.1m (2022: £618.4m) and in other countries is £747.3m (2022: £677.4m). Goodwill has not been split by geography as this asset is not attributable to a geographical area.

2. Operating costs

	2023 £m	2022 £m
Analysis of net operating expenses by function:		
Distribution costs	**77.2**	101.8
Administrative expenses	**405.3**	439.1
	482.5	540.9

Additional information on the nature of operating expenses, including depreciation and employee costs, is provided in note 3.

3. Profit for the year

	2023 £m	2022 £m
The Group profit for the year is stated after charging/(crediting):		
Depreciation and amortisation (notes 12, 13 & 14)	**126.2**	120.7
Goodwill impairment (exceptional) (note 12)	**20.8**	34.6
Property, plant and equipment impairment (exceptional) (note 13)	**–**	7.6
Property, plant and equipment impairment (non-exceptional) (note 13)	**1.2**	–
Staff costs (note 9)	**340.8**	389.9
Redundancy costs (non-exceptional)	**0.6**	1.2
Redundancy costs (exceptional)	**5.4**	–
Gain on business disposal (exceptional) (note 28)	**–**	(356.0)
Net-monetary adjustment arising from application of IAS 29 'Hyperinflation'	**6.3**	–
Impairment of investment (non-exceptional) (note 16)	**1.5**	–
Inventories – cost recognised as expense in cost of sales	**964.5**	1,102.9
Inventories – provision movement in the year	**11.6**	15.0
Research and development	**62.3**	66.3
Net foreign exchange	**7.0**	(4.2)
Bad debt charge (note 18)	**1.4**	2.7

	2023 £m	2022 £m
Adjustments:		
Exceptional items – operating profit		
Business acquisition costs (note 27)	**(9.6)**	–
Restructuring costs (note 21)	**(5.4)**	–
Goodwill impairment (note 12)	**(20.8)**	(34.6)
Property, plant and equipment impairment (note 13)	**–**	(7.6)
Fair value movement on contingent consideration (note 19)	**–**	6.1
Exceptional items – financial costs		
Unwind of discount on contingent consideration (note 19)	**–**	(1.7)
Gain on business disposal (note 28)	**–**	356.0
Exceptional items	**(35.8)**	318.2
Amortisation of intangible assets arising on acquisition	**(36.7)**	(34.3)
Total adjustments	**(72.5)**	283.9

3. Profit for the year continued

The exceptional items in the current year relate to a goodwill impairment to the carrying value of the Chinese SIPO Cash Generating Unit (CGU) in Industrial Specialties, acquisition costs and restructuring costs associated with changes to the Group's operating model. The goodwill impairment, acquisition costs and restructuring costs have all been presented as exceptional due to their size and one-off nature. The exceptional items in the prior year related to 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 CGU and an impairment relating to the write-off of unusable manufacturing plant in Japan.

	2023 £m	2022 £m
Services provided by the Group's auditor		
Audit services		
Fees payable to the Group's auditor for the audit of Parent Company and consolidated financial statements	**0.6**	0.3
Fees payable to the Group's auditor and its associates for the audit of the Company's subsidiaries	**1.9**	1.9
Other audit services		
Audit-related assurance and other services including fees payable in relation to the Group's interim review	**0.3**	0.2
	2.8	2.4

4. Net financial costs

	2023 £m	2022 £m
Financial costs		
US$100m 3.75% fixed rate 10 year note	**3.0**	3.0
2019 Club facility due 2026	**9.9**	5.9
US$200m 3 year term loan due 2023	**–**	0.6
€30m 1.08% fixed rate 7 year note	**0.1**	0.3
€70m 1.43% fixed rate 10 year note	**0.9**	0.9
£30m 2.54% fixed rate 7 year note	**0.4**	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**	1.8
Interest on lease liabilities	**2.6**	2.5
Other bank loans and overdrafts	**3.1**	2.9
Other interest costs	**–**	1.2
Unwind of discount on contingent consideration (exceptional)	**–**	1.7
Preference share dividend	**0.1**	0.1
	26.0	25.8
Financial income		
Bank interest receivable and similar income	**(9.4)**	(2.7)
Net interest on post-retirement benefits	**(5.4)**	(2.4)
	(14.8)	(5.1)
Net financial costs	**11.2**	20.7

5. Tax

	2023 £m	2022 £m
(a) Analysis of tax charge for the year		
UK current corporate tax[1]	**(1.5)**	28.1
Overseas current corporate taxes	**62.1**	100.0
Current tax	**60.6**	128.1
Deferred tax (note 6)	**3.6**	(1.4)
	64.2	126.7

1. The UK has a current year tax credit, which is offset against a higher deferred tax charge, due to the impact of capital allowance claims

	2023 £m	2022 £m
(b) Tax on items (credited)/charged to other comprehensive income or equity		
Deferred tax on remeasurement of post-retirement benefits (OCI)	**(5.5)**	22.4
Deferred tax on share-based payments (equity)	**0.5**	1.1
Deferred tax on provisions (OCI)	**(0.2)**	0.5
	(5.2)	24.0

	2023 £m	2022 £m
(c) Factors affecting the tax charge for the year		
Profit before tax	**236.3**	780.0
Tax at the standard rate of corporation tax in the UK, 23.5% (2022: 19.0%)	**55.5**	148.2
Effect of:		
Non-taxable gain on business disposal	**–**	(46.1)
Tax rate changes	**0.5**	(0.1)
Prior year over-provisions	**(10.9)**	(2.9)
Tax cost of remitting overseas income to the UK	**3.7**	5.5
Expenses and write-offs not deductible for tax purposes	**11.3**	10.3
Tax incentives	**(2.6)**	(0.6)
Unutilised tax losses not recognised through deferred tax	**1.3**	0.9
Effect of higher overseas tax rates	**5.4**	11.5
	64.2	126.7

The effective adjusted corporate tax rate before exceptional items of 23.9% (2022: 22.8%) is slightly higher than the UK's standard tax rate of 23.5%. The reported corporate tax rate after exceptional items is 27.2% (2022: 16.2%).

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. Croda's effective corporate tax rate has also increased as a result of incurring expenditure which is deemed capital in nature for tax purposes, including the impairment of goodwill, which is not tax deductible. The factors increasing the effective tax rate are largely offset by the prior year release of tax provisions. Otherwise, there are no significant adjustments between the Group's expected and reported tax charge based on its reported 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.

The prior year 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 2022 standard tax rate of 19%. This has reduced the reported corporate tax rate after exceptional items in the prior year.

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, which has resulted in a blended UK rate of corporation tax of 23.5% in 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, brought 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. Croda's effective tax rate would not have been materially impacted had Pillar 2 applied in 2023. 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 in 2024.

6. Deferred tax

	2023 £m	2022 £m
The deferred tax balances included in these accounts are attributable to the following:		
Deferred tax assets		
Retirement benefit liabilities	**4.5**	3.6
Provisions	**46.6**	45.2
Gross deferred tax asset	**51.1**	48.8
Offset with deferred tax liabilities	**(36.7)**	(38.5)
Net deferred tax asset	**14.4**	10.3
Deferred tax liabilities		
Accelerated capital allowances	**110.8**	103.9
Revaluation gains	**–**	1.9
Acquired intangibles	**87.9**	74.2
Retirement benefit assets	**26.3**	28.5
Other	**4.5**	2.9
Gross deferred tax liability	**229.5**	211.4
Offset with deferred tax assets	**(36.7)**	(38.5)
Net deferred tax liability	**192.8**	172.9
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	**(12.0)**	(4.8)
Adjustments and exceptional items	**8.4**	6.2
Deferred tax charged/(credited) directly to other comprehensive income or equity (note 5(b))	**5.2**	(24.0)
Disposals	**–**	8.8
Acquisitions	**(21.2)**	–
Exchange differences	**3.8**	(10.9)
	(15.8)	(24.7)
Net balance brought forward	**(162.6)**	(137.9)
Net balance carried forward	**(178.4)**	(162.6)
Deferred tax (charged)/credited through the income statement relates to the following:		
Retirement benefit obligations	**(2.2)**	0.3
Accelerated capital allowances	**(7.7)**	(6.6)
Provisions	**0.3**	2.1
Other	**6.0**	5.6
	(3.6)	1.4

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 2024 and beyond has been measured using the rate due to prevail in the year of reversal.

Following the amendment to IAS12, requiring the separate recognition of deferred tax in relation to lease liabilities and the corresponding right of use assets, deferred tax balances have been recognised separately on these items.

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 2023, the unrecognised deferred tax asset was £9.9m in respect of losses of £40.4m (2022: unrecognised deferred tax asset of £9.6m on losses of £39.1m) 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 £19.1m (2022: £15.8m) of tax would be payable on unremitted earnings of £469m (2022: £462m).

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, £1.0m 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

	2023 £m	2022 £m
Adjusted profit after tax for the year attributable to owners of the parent	**234.0**	379.2
Exceptional items and amortisation of intangible assets	**(72.5)**	283.9
Tax impact of exceptional items and amortisation of intangible assets	**9.5**	(13.8)
Profit after tax for the year attributable to owners of the parent	**171.0**	649.3

	Number m	Number m
Weighted average number of 10.61p (2022: 10.61p) ordinary shares in issue for basic calculation	**139.6**	139.4
Deemed issue of potentially dilutive shares	**0.2**	0.3
Average number of 10.61p (2022: 10.61p) ordinary shares for diluted calculation	**139.8**	139.7

	Pence	Pence
Basic earnings per share	**122.5**	465.8
Adjusted basic earnings per share	**167.6**	272.0
Diluted earnings per share	**122.3**	464.8
Adjusted diluted earnings per share	**167.4**	271.4

Basic earnings per share is calculated by dividing the profit after tax attributable to owners of the parent by the weighted average number of ordinary shares in issue during the year, excluding those shares held in treasury or employee share trusts (note 24). Shares held in employee share trusts are treated as cancelled because, except for a nominal amount, dividends have been waived.

For diluted earnings per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all potentially dilutive ordinary shares.

Additional earnings per share calculations are included above to give a better indication of the Group's underlying performance.

8. Dividends

	Pence per share	2023 £m	Pence per share	2022 £m
Ordinary				
Interim				
2022 interim, paid October 2022	**–**	**–**	47.0	65.6
2023 interim, paid October 2023	**47.0**	**65.6**	–	–
Final				
2021 final, paid June 2022	**–**	**–**	56.5	78.8
2022 final, paid May 2023	**61.0**	**85.1**	–	–
	108.0	**150.7**	103.5	144.4

The Directors are recommending a final dividend of 62.0p per share, amounting to a total of £86.5m, in respect of the financial year ended 31 December 2023.

Subject to shareholder approval, the dividend will be paid on 29 May 2024 to shareholders registered on 19 April 2024 and has not been accrued in these financial statements. The total dividend for the year ended 31 December 2023 will be 109.0p per share amounting to a total of £152.1m.

9. Employees

	2023 £m	2022 £m
Group employment costs including Directors		
Wages and salaries	**269.2**	307.3
Share-based payment charges (note 23)	**1.7**	3.5
Social security costs	**51.7**	55.5
Post-retirement benefit costs	**18.2**	23.6
Redundancy costs	**6.0**	1.2
	346.8	391.1

Included in the above are £5.4m charges (2022: £1.7m credits) related to exceptional items (note 3).

	2023 Number	2022 Number
Average employee numbers by function		
Production	**3,650**	3,656
Selling and distribution	**1,307**	1,311
Administration	**898**	939
	5,855	5,906

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 2023, the Group had 5,852 (2022: 5,825) employees in total.

10. Directors' and key management compensation

Detailed information concerning Directors' remuneration, interests and options is shown in section D of the Directors' Remuneration Report, which is subject to audit, on pages 120 to 130 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:

	2023 £m	2022 £m
Key management compensation including Directors		
Short-term employee benefits	**6.9**	10.5
Post-retirement benefit costs	**0.1**	0.1
Share-based payment charge	**1.0**	5.9
	8.0	16.5

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.

	2023 £m	2022 £m
Balance sheet:		
Retirement benefit assets	**113.5**	123.2
Retirement benefit liabilities	**(26.8)**	(23.1)
Net asset in Group balance sheet	**86.7**	100.1
Net balance sheet assets/(liabilities) for:		
Defined pension benefits	**99.8**	110.9
Post-employment medical benefits	**(13.1)**	(10.8)
	86.7	100.1
Income statement charge included in profit before tax for:		
Defined pension benefits	**3.9**	9.3
Post-employment medical benefits	**0.7**	0.6
	4.6	9.9
Remeasurements included in other comprehensive income for:		
Defined pension benefits	**20.9**	(84.2)
Post-employment medical benefits	**2.4**	(4.7)
	23.3	(88.9)

Defined benefit pension schemes

The Group operates defined benefit pension schemes in the UK, US and several other territories under broadly similar regulatory frameworks.

The UK scheme, which remains open to new members and future service accrual, is a Career Average Revalued Earnings (CARE) defined benefit scheme, with annual pensionable earnings capped and pensions in payment indexed based on CPI. The US Retirement Plan, which is closed to new members, operates a cash balance pension scheme that provides a guaranteed rate of return on pension contributions until retirement (other than for a small number of 'grandfathered' employees). 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 174 and 175.

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 majority of the Group's retirement benefit asset relates to the Group's UK pension scheme. The UK pension scheme is open to future service accrual and therefore the surplus is recognised on the basis that this could be recovered through a reduction in future service contributions.

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 2022 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 was recognised in the Group income statement as part of the gain on business disposal.

11. Post-retirement benefits continued

The amounts recognised in the balance sheet in respect of these schemes are as follows:

	2023 £m	2022 £m
Present value of funded obligations		
UK pension scheme	**(735.5)**	(726.2)
US pension scheme	**(105.3)**	(108.3)
Rest of world	**(18.4)**	(15.6)
	(859.2)	(850.1)
Fair value of schemes' assets		
UK pension scheme	**840.8**	840.1
US pension scheme	**111.9**	116.6
Rest of world	**14.4**	12.6
	967.1	969.3
Net asset in respect of funded schemes	**107.9**	119.2
Present value of unfunded obligations	**(8.1)**	(8.3)
Net asset in Group balance sheet (excluding post-employment medical benefits)	**99.8**	110.9

	2023 £m	2022 £m
Movement in present value of retirement benefit obligations in the year:		
Opening balance	**858.4**	1,318.7
Current service cost	**9.8**	15.9
Past service cost – curtailments	**–**	(3.9)
Acquisitions	**2.9**	–
Business disposal	**–**	(1.8)
Interest cost	**39.5**	30.7
Remeasurements		
Change in demographic assumptions	**(11.7)**	(1.6)
Change in financial assumptions	**18.4**	(481.9)
Experience (losses)/gains	**(1.3)**	16.8
Contributions paid in		
Employee	**2.8**	2.7
Benefits paid	**(45.0)**	(51.3)
Exchange differences on overseas schemes	**(6.5)**	14.1
	867.3	858.4
Movement in fair value of schemes' assets in the year:		
Opening balance	**969.3**	1,340.1
Interest income	**45.4**	33.4
Remeasurements		
Return on scheme assets, excluding amounts included in financial expenses	**(15.5)**	(382.5)
Contributions paid in		
Employee	**2.8**	2.7
Employer	**14.2**	11.5
Acquisitions	**2.5**	–
Business disposal	**–**	(0.3)
Benefits paid out	**(45.0)**	(51.3)
Exchange differences on overseas schemes	**(6.6)**	15.7
	967.1	969.3

As at the balance sheet date, the present value of funded and unfunded retirement benefit obligations comprised approximately £147m in respect of active employees, £221m in respect of deferred members and £499m in relation to members in retirement.

Total employer contributions to the schemes in 2024 are expected to be £12.3m.

The actuarial assumptions used to determine the present value of the defined benefit obligations were as follows:

	2023 UK	2023 US	2022 UK	2022 US
Discount rate	**4.5%**	**5.0%**	4.8%	5.3%
Inflation rate – RPI	**3.0%**	**3.0%**	3.2%	3.0%
Inflation rate – CPI	**2.5%**	**n/a**	2.6%	n/a
Rate of increase in salaries	**4.5%**	**4.0%**	4.6%	4.0%
Rate of increase for pensions in payment	**2.9%**	**n/a**	3.0%	n/a
Duration of liabilities (i.e. life expectancy) (years)	**14.3**	**9.6**	15.0	9.6
Remaining working life	**9.3**	**10.2**	9.5	9.9

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 CMI 2022, in order to reflect the most recent CMI model with default weight parameters for 2020 (0%), 2021 (0%) and 2022 (25%) to provide for uncertainty around the long-term impact of Covid-19 on life expectancy. Applying the mortality tables adopted, the expected future average lifetime of members currently at age 65 and members at age 65 in 20 years' time is as follows:

	Current age 65		Age 65 in 20 years	
	UK	US	UK	US
Male	19.6	21.0	20.9	22.2
Female	22.9	22.9	24.3	24.0

The sensitivity of the defined benefit obligation to changes in the significant assumptions is as follows:

	Impact on retirement benefit obligation		
	Sensitivity	Of increase	Of decrease
Discount rate	0.5%	-6.3%	7.1%
Inflation rate	0.5%	4.4%	-4.5%
Mortality (assumes a one-year change in life expectancy)	1 year	4.0%	-4.1%

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 13.7 years (2022: 14.3 years).

The assets in the schemes comprised:

	2023 £m	2023 %	Restated 2022 £m	Restated 2022 %
Quoted				
Equities	**74.4**	**8%**	70.1	7%
Government bonds	**394.5**	**40%**	336.9	36%
Corporate bonds	**57.5**	**6%**	56.3	6%
Other quoted securities	**22.8**	**2%**	24.2	2%
Unquoted				
Cash and cash equivalents	**61.0**	**6%**	98.1	10%
Real estate (pooled investment vehicles)	**40.1**	**4%**	60.3	6%
Derivatives	**5.7**	**1%**	(46.1)	-5%
Hedge funds	**–**	**0%**	205.3	21%
Infrastructure funds	**159.6**	**17%**	164.2	17%
Other	**151.5**	**16%**	–	0%
	967.1	**100%**	969.3	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. Hedge funds consists of a fund of multiple investment managers across both traditional markets such as equities and credit and also more specialist diversified strategies. Infrastructure funds consists of infrastructure type investments that hold assets linked to the value and income from UK and overseas infrastructure. In the prior year, these were disclosed as other unquoted assets totalling £369.5m, the presentation has been disaggregated to provide more information on the nature of the scheme's assets. At the year end, the hedge fund asset had been redeemed but the cash had not yet been received and reinvested and therefore this has been classified as an other asset.

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 healthcare costs of 5.0% a year (2022: 5.0%).

The amounts recognised in the balance sheet in respect of this scheme are as follows:

	2023 £m	2022 £m
Present value of unfunded obligations		
US scheme	**13.1**	10.8

	2023 £m	2022 £m
Movement in present value of retirement benefit obligations in the year:		
Opening balance	**10.8**	13.5
Current service cost	**0.2**	0.3
Interest cost	**0.5**	0.3
Remeasurements – change in financial assumptions	**3.3**	(4.4)
Remeasurements – experience gains	**(0.9)**	(0.3)
Benefits paid	**(0.2)**	(0.2)
Exchange differences on overseas schemes	**(0.6)**	1.6
	13.1	10.8

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 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 is 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 2023 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 Trustee and Company are working on the 30 September 2023 triennial valuation, and initial results shared with the Company show that the funding position has improved and that the cost of providing benefits has fallen. The Trustee and Company are working closely with their advisers to secure the long-term security of members' benefits, with changes such as a further reduction in investment risk completed in 2023. The next triennial valuation of the UK scheme will be as at 30 September 2026. The funding review of our US scheme is undertaken annually. As at 1 December 2022 the scheme was 122.4% funded.

The expected distribution of the timing of discounted benefit payments is as follows:

	Less than a year £m	Between 1–2 years £m	Between 2–5 years £m	Beyond 5 years £m	Total £m
Pension benefits	49.3	46.1	142.8	629.1	867.3
Post-employment medical benefits	0.5	0.5	1.7	10.4	13.1
	49.8	46.6	144.5	639.5	880.4

Defined contribution schemes

	2023 £m	2022 £m
Contributions paid charged to operating profit	**8.2**	11.3

12. Intangible assets

	Goodwill £m	Software £m	Technology processes £m	Customer relationships £m	Trade names and brands £m	Other intangibles £m	Total £m
Cost							
At 1 January 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**
At 1 January 2023	879.2	34.4	149.9	241.9	95.0	6.7	1,407.1
Exchange differences	(14.5)	(0.6)	(3.0)	(6.1)	(2.3)	(0.2)	(26.7)
Additions	–	3.4	–	–	–	5.4	8.8
Acquisitions	129.5	–	96.2	7.7	–	0.4	233.8
Disposals and write-offs	–	–	–	–	–	(1.0)	(1.0)
Reclassifications from property, plant and equipment	0.4	0.3	–	–	–	(0.5)	0.2
At 31 December 2023	**994.6**	**37.5**	**243.1**	**243.5**	**92.7**	**10.8**	**1,622.2**
Accumulated amortisation and impairment losses							
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**
At 1 January 2023	34.6	17.9	46.7	38.8	13.3	2.6	153.9
Exchange differences	0.9	(0.4)	(1.2)	(0.9)	(0.3)	(0.1)	(2.0)
Charge for the year (note 3)	–	3.6	18.0	13.6	5.3	0.5	41.0
Reclassifications	0.4	0.4	–	–	–	(0.8)	–
Impairments	20.8	–	–	–	–	–	20.8
At 31 December 2023	**56.7**	**21.5**	**63.5**	**51.5**	**18.3**	**2.2**	**213.7**
Net carrying amount							
At 31 December 2023	**937.9**	**16.0**	**179.6**	**192.0**	**74.4**	**8.6**	**1,408.5**
At 31 December 2022	844.6	16.5	103.2	203.1	81.7	4.1	1,253.2
At 1 January 2022	852.0	16.0	116.2	203.3	81.6	2.5	1,271.6

12. Intangible assets continued

During the year goodwill was impaired by £20.8m. This impairment is recorded in the income statement on page 152 as an exceptional item within operating costs and is within the Industrial Specialties operating business segment. Intangible asset amortisation is also recorded in operating costs. During the prior year, goodwill was impaired by £34.6m. This impairment was recorded in the income statement as an exceptional item within operating costs and was within the Consumer Care operating business segment.

The table below shows the carrying amounts and remaining useful economic life of the Group's material intangible assets:

	2023 Carrying value £m	**2023 Remaining period Years**	2022 Carrying value £m	2022 Remaining period Years
Avanti technology	**17.3**	**11**	19.9	12
Avanti customer relationships	**39.7**	**16**	44.4	17
Avanti brand	**14.9**	**16**	16.6	17
Incotec customer relationships	**15.1**	**11**	16.7	12
Fragrances technology	**25.5**	**5**	31.3	6
Flavours technology	**16.1**	**6**	19.1	7
Fragrances customer relationships	**78.4**	**17**	84.5	18
Flavours customer relationships	**30.1**	**17**	32.4	18
Fragrances trade name & brand	**46.1**	**17**	49.7	18
Croda Korea Limited (formerly 'Solus Biotech') technology	**82.3**	**19**	–	–

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.

As discussed in the accounting policies note on page 159, goodwill is tested annually 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:

- Five year cash flow projections – based on management's most recent risk-adjusted view of future trading specific to the individual CGU, with assumptions on EBITDA growth (calculated as operating profit before depreciation and amortisation) as a result of fluctuating revenue and operating margins through the ability to pass on future raw material price increases.
- Terminal value growth in EBITDA – 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% given the markets and territories the Group operates in.
- Discount rate – set using a weighted average cost of capital adjusted for the specific risk profile of each CGU.

The carrying amount of goodwill is allocated to operating business segments as follows:

	2023			2022		
	Standalone CGUs £m	**Allocated goodwill £m**	**Total £m**	Standalone CGUs £m	Allocated goodwill £m	Total £m
Consumer Care	**461.7**	**215.2**	**676.9**	370.3	219.2	589.5
Life Sciences	**190.6**	**70.4**	**261.0**	163.3	69.2	232.5
Industrial Specialties	**–**	**–**	**–**	22.6	–	22.6
	652.3	**285.6**	**937.9**	556.2	288.4	844.6

The allocated goodwill primarily relates to £63m (2022: £63m) associated with the 2020 acquisition of Iberchem as it relates to revenue synergies with Croda's existing Consumer Care business and £192m (2022: £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 11.4% pre-tax (2022: 9.9%). 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 2023.

Standalone CGUs

The carrying amount of goodwill (post impairment) is allocated to Standalone CGUs as follows:

	2023 £m	2022 £m
Incotec	**70.0**	71.2
Biosector	**25.5**	26.0
Sipo	**–**	22.6
Avanti	**62.6**	66.1
Fragrances	**264.8**	269.3
Flavours	**92.8**	94.4
Alban Muller	**6.5**	6.6
Croda Korea Limited (formerly 'Solus Biotech')	**130.1**	–
	652.3	556.2

For all Standalone CGUs the recoverable amount was based on value in use calculations. Cash flow projections have been based on specific risk adjusted estimates taking management's most recent view of medium-term trading prospects. All cashflow projections are over a 5 year period unless the Directors believe that steady state growth will not be achieved over this timeframe. Croda Korea Limited's cash flow projections have been extended to 10 years to better reflect the early growth phase of the acquired business and when it will reach a steady state. 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. Discount rates have been calculated for standalone CGUs set using specific weighted average cost of capital adjusted for the specific risk profile of each CGU. The terminal value growth rates and discount rates applied in these CGU level calculations are set out below:

	Terminal value growth rate **2023**	Terminal value growth rate 2022	Pre-tax discount rate **2023**	Pre-tax discount rate 2022
Incotec	**3.0%**	3.0%	**14.5%**	11.0%
Biosector	**3.0%**	3.0%	**13.8%**	13.6%
Sipo	**3.0%**	3.0%	**12.8%**	12.4%
Avanti	**3.0%**	3.0%	**13.5%**	12.8%
Fragrances	**3.0%**	3.0%	**12.3%**	10.6%
Flavours	**3.0%**	3.0%	**12.3%**	10.5%
Alban Muller	**3.0%**	3.0%	**13.9%**	12.8%
Croda Korea Limited (formerly 'Solus Biotech')	**3.0%**	n/a	**13.1%**	n/a

An impairment of £20.8m was recorded in relation to goodwill arising on the acquisition of Sipo. This principally reflected the decline in the profitability of the business in the period driven by adverse external market conditions, impacting both demand and pricing, which are expected to continue over the medium term. The assumptions underpinning the cash flow projection used in the value in use calculation reflect management's most recent forecast combined with an appropriate view of past experience, specifically EBITDA compound average growth rates (CAGR) as a result of changing revenue, cost of sales and operating costs over the period.

Excluding SIPO, based on the annual impairment testing performed for all standalone CGUs no impairment has been recognised for the year ended 31 December 2023 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 a range of possibilities on key assumptions, both individually and in combination, and considered whether these would give rise to an impairment. Excluding Flavours & Croda Korea Limited, 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.

For Croda Korea Limited, the assumptions underpinning the cash flow projections used in the value in use calculation reflect delivery of the acquisition business plan, which the business remains on track to achieve in the medium to long term. The estimated recoverable amount of the CGU exceeded their carrying value by approximately £19m and therefore the Directors concluded that no impairment was required; however, the calculation is sensitive to achieving the acquisition plan, specifically that operating margins will improve and sales growth targets will be achieved over the 10 year projections.

The estimated recoverable amount of Avanti, Fragrances and Flavours CGUs exceeded their carrying value therefore the Directors concluded that no impairment was required; however, the calculations are sensitive to changes in key assumptions. The range of key assumptions considered by the Directors, where a change could give rise to an impairment, were the EBITDA compound annual growth rates as a result of increasing revenue growth rates and improving operating margins through cost of sales and operating costs, pre-tax discount rate and long-term growth rate. Sensitivity disclosures are set out below.

12. Intangible assets continued

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, terminal value growth rate, and the discount rate. Although it is not management's current expectation, and not reasonably possible for Avanti and Fragrances, the impact on the recoverable amount when applying a consistent, meaningful change relative to the size and nature of these assumptions would be as follows for the year ended 31 December 2023:

	Assumption %	Sensitivity %	Increase £m	Decrease £m
Avanti				
Headroom/(impairment charge): £52m (2022: £89m)				
Incremental increase/(decrease) in recoverable amount				
Change in EBITDA compound annual growth rate by:	**15.8%**	**5.0%**	**68.5**	**(57.9)**
Change in terminal value growth rates by:	**3.0%**	**1.0%**	**30.9**	**(24.1)**
Change in pre-tax discount rate by:	**13.5%**	**1.0%**	**(26.0)**	**31.1**
Fragrances				
Headroom/(impairment charge): £39m (2022: £111m)				
Incremental increase/(decrease) in recoverable amount				
Change in EBITDA compound annual growth rate by:	**16.7%**	**5.0%**	**145.5**	**(123.3)**
Change in terminal value growth rates by:	**3.0%**	**1.0%**	**71.6**	**(53.7)**
Change in pre-tax discount rate by:	**12.3%**	**1.0%**	**(58.7)**	**73.0**
Flavours				
Headroom/(impairment charge): £4m (2022: £(35)m)				
Incremental increase/(decrease) in recoverable amount				
Change in EBITDA compound annual growth rate by:	**18.5%**	**5.0%**	**44.6**	**(39.7)**
Change in terminal value growth rates by:	**3.0%**	**1.0%**	**21.7**	**(16.3)**
Change in pre-tax discount rate by:	**12.3%**	**1.0%**	**(17.7)**	**22.1**

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.

Climate risk and impairment testing

The impact of climate change risks including the risks identified as part of the TCFD disclosures on page 59 to 67, with a particular focus on the impact of carbon pricing, has been considered as part of the impairment testing. The discounted cash flows included in the value in use calculations reflect the carbon costs of the CGU based on the latest scope 1 and 2 emissions data and applying a shadow carbon price of £124/tonne in line with the UK Government Green Guide.

The cost of carbon has an immaterial effect on the recoverable amount of each of the standalone CGUs and as such carbon costs are not deemed to be a key assumption. The Directors are aware of the ever-changing risks attached to climate change and will regularly assess these risks against judgements and estimates made in future impairment testing.

13. Property, plant and equipment

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
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**
At 1 January 2023	305.2	1,117.4	1,422.6
Exchange differences	(12.9)	(49.6)	(62.5)
Additions	25.6	155.5	181.1
Acquisitions	2.3	6.9	9.2
Other disposals and write-offs	(1.8)	(11.5)	(13.3)
Reclassifications to intangible assets	2.0	(2.2)	(0.2)
At 31 December 2023	**320.4**	**1,216.5**	**1,536.9**
Accumulated depreciation and impairment losses			
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**
At 1 January 2023	78.5	379.6	458.1
Exchange differences	(3.9)	(21.2)	(25.1)
Charge for the year (note 3)	11.9	57.8	69.7
Other disposals and write-offs	(0.5)	(10.5)	(11.0)
Reclassifications	0.1	(0.1)	–
Impairments	–	1.2	1.2
At 31 December 2023	**86.1**	**406.8**	**492.9**
Net book amount			
At 31 December 2023	**234.3**	**809.7**	**1,044.0**
At 31 December 2022	226.7	737.8	964.5
At 1 January 2022	209.1	779.0	988.1

During the current year the Group recognised government grant funding of £18.3m (2022: £6.1m) relating to the US cGMP scale up project and the UK Pharma production capacity expansion project.

During the year plant and equipment was impaired by £1.2m. This impairment is recorded in the income statement within operating costs. During the prior year, plant and equipment was impaired by £7.6m relating to the write-off of unusable manufacturing plant in Japan. This impairment was recorded in the income statement as an exceptional item within operating costs and was 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:

	2023 £m	2022 £m
Assets under construction		
Land and buildings	**21.4**	18.8
Plant and equipment	**219.9**	134.8
	241.3	153.6

14. Leases

Right of use assets

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
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**
At 1 January 2023	118.7	20.3	139.0
Exchange differences	(4.4)	(0.6)	(5.0)
Additions	7.1	1.8	8.9
Remeasurements	0.5	0.8	1.3
Acquisitions	0.8	0.1	0.9
Other disposals and write-offs	(5.6)	(1.3)	(6.9)
At 31 December 2023	**117.1**	**21.1**	**138.2**
Accumulated depreciation and impairment losses			
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**
At 1 January 2023	35.3	6.8	42.1
Exchange differences	(1.5)	(0.3)	(1.8)
Charge for the year (note 3)	12.3	3.2	15.5
Other disposals and write-offs	(4.0)	(1.1)	(5.1)
At 31 December 2023	**42.1**	**8.6**	**50.7**
Net book amount			
At 31 December 2023	**75.0**	**12.5**	**87.5**
At 31 December 2022	83.4	13.5	96.9
At 1 January 2022	75.8	12.1	87.9

Lease liabilities

	2023 £m	2022 £m
Lease liabilities included in the Group balance sheet		
Current	**13.7**	12.9
Non-current	**71.3**	79.2
	85.0	92.1

A maturity analysis of contractual undiscounted cash flows relating to lease liabilities is presented within note 20.

Amounts recognised in the Group income statement

	2023 £m	2022 £m
Interest on lease liabilities	**2.6**	2.5
Expenses relating to short-term leases	**0.4**	0.3
Expenses relating to low value leases, excluding short-term leases of low value assets	**0.2**	0.3
Expenses relating to variable lease components	**0.6**	0.4
Depreciation of right of use assets	**15.5**	14.8
Profit on disposal of right of use assets	**–**	(0.2)
	19.3	18.1

Total cash outflow for leases

	2023 £m	2022 £m
Payment of lease liabilities	**17.0**	17.4
Payment of short-term, low value and variable lease components	**1.2**	1.0
	18.2	18.4

15. Future commitments

	2023 £m	2022 £m
Group capital projects		
At 31 December the Directors had authorised the following expenditure, excluding grant income, on capital projects:		
Contracted, but not provided for		
Property, plant and equipment	**85.1**	45.6
Intangible assets	**4.7**	1.3
Authorised, but not contracted for		
Property, plant and equipment	**161.5**	165.9
Intangible assets	**4.0**	3.8
	255.3	216.6

16. Investments

The amounts recognised in the balance sheet are as follows:

	2023 £m	2022 £m
Other investments	**1.9**	3.4

During the year following a review, the value of the Group's investment in Entekno was reduced to £nil resulting in an impairment charge of £1.5m. The impairment charge has been reported within administrative expenses in the Group income statement. All remaining assets recognised as other investments on the Group balance sheet are non-quoted equity securities measured at fair value.

17. Inventories

	2023 £m	2022 £m
Raw materials	**98.3**	135.9
Work in progress	**35.6**	45.8
Finished goods	**207.3**	282.3
	341.2	464.0

The Group consumed £964.5m (2022: £1,102.9m) of inventories during the year.

18. Trade and other receivables

	2023 £m	Restated 2022 £m
Amounts falling due within one year		
Trade receivables	**324.8**	320.4
Less: provision for impairment of receivables	**(6.8)**	(5.8)
Trade receivables – net	**318.0**	314.6
Value added taxes	**41.5**	28.8
Other receivables	**24.3**	18.3
Prepayments	**11.9**	14.1
	395.7	375.8

Prior year other receivables of £47.1m have been disaggregated to £28.8m VAT receivables and £18.3m other receivables to provide more information on the nature of the amounts.

The ageing of the Group's year end overdue receivables against which no material provision has been made is as follows:

	2023 £m	2022 £m
Not impaired		
Less than three months	**49.9**	60.1
Three to six months	**7.1**	8.9
Over six months	**8.0**	6.0
	65.0	75.0

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:

	2023 £m	2022 £m
Sterling	**18.2**	15.9
US Dollar	**152.5**	130.5
Euro	**105.5**	108.7
Other	**119.5**	120.7
	395.7	375.8

Movements on the Group's provision for impairment of trade receivables are as follows:

	2023 £m	2022 £m
At 1 January	**5.8**	2.9
Exchange differences	**0.1**	0.4
Charged to the income statement	**1.4**	2.7
Net write-off of uncollectible receivables	**(0.5)**	(0.2)
At 31 December	**6.8**	5.8

Amounts charged to the income statement are included within administrative expenses.

19. Trade and other payables

	2023 £m	2022 £m
Trade payables	**125.8**	120.9
Taxation and social security	**12.2**	16.9
Other payables	**34.2**	45.4
Accruals and deferred income	**80.9**	131.4
Contingent consideration	**–**	9.9
	253.1	324.5

All trade payables are payable within one year. Included in the above are balances payable after one year of £nil (2022: £3.5m) accruals and deferred income and £1.0m (2022: £1.0m) other payables. During the period, contingent consideration has decreased £nil (2022: £6.1m) due to fair value movements, £nil (2022: £0.7m) due to business divestment, £9.6m (2022: £13.7m) due to payments and £0.3m decrease (2022: £2.6m increase) due to foreign exchange. There was no impact of discount unwind in the period (2022: £1.7m increase).

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 47 to 50.

	2023 £m	2022 £m
Assets		
Non-current assets – Investments	**1.9**	3.4
Current assets – Trade and other receivables (excluding prepayments)	**383.8**	361.7
	385.7	365.1
Current liabilities		
Trade and other payables (excluding taxation, social security, contingent consideration, accruals and deferred income)	**158.9**	161.8
€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	**28.4**	42.8
Other loans	**8.3**	22.6
Lease liabilities	**13.7**	12.9
	209.3	296.6
Non-current liabilities		
2019 Club facility due 2026	**216.8**	18.0
US$100m 3.75% fixed rate 10 year note	**78.5**	83.0
€70m 1.43% fixed rate 10 year note	**60.8**	61.9
£70m 2.80% fixed rate 10 year note	**70.0**	70.0
€50m 1.18% fixed rate 8 year note	**43.5**	44.2
£65m 2.46% fixed rate 8 year note	**65.0**	65.0
US$60m 3.70% fixed rate 10 year note	**47.1**	49.8
Other secured bank loans	**5.6**	8.6
Other unsecured bank loans	**–**	0.2
Preference share capital	**1.1**	1.1
Lease liabilities	**71.3**	79.2
	659.7	481.0

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 (to 30 June 2023), SOFR (from 1 July 2023) or EURIBOR, depending upon the drawdown currency, plus a variable margin. In June 2023, the existing £30m and €30m fixed rate 7 year notes matured and were repaid.

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

	2023 £m	2022 £m
Maturity profile of financial liabilities		
Repayments fall due as follows:		
Within one year		
Bank loans and overdrafts	**28.4**	99.3
Other loans	**8.3**	22.6
	36.7	121.9
Lease liabilities	**13.7**	12.9
	50.4	134.8
After more than one year		
Loans repayable		
Within one to two years	**2.7**	3.4
Within two to five years	**459.0**	264.6
Five years and over	**125.6**	132.7
	587.3	400.7
Preference share capital	**1.1**	1.1
Lease liabilities	**71.3**	79.2
	659.7	481.0
The minimum lease payments under lease liabilities fall due as follows:		
Within one year	**15.5**	14.8
Within one to two years	**12.9**	12.3
Within two to five years	**25.4**	27.3
Five years and over	**47.6**	55.0
	101.4	109.4
Future finance charges on lease liabilities	**(16.4)**	(17.3)
Present value of lease liabilities	**85.0**	92.1

	2023 £m	2022 £m
Undiscounted maturity analysis of financial liabilities		
Within one year		
Bank loans and overdrafts	**30.1**	101.6
Other loans	**8.6**	23.5
Lease liabilities	**15.5**	14.8
	54.2	139.9
After more than one year		
Loans repayable		
Within one to two years	**25.0**	14.3
Within two to five years	**502.2**	295.8
Five years and over	**133.1**	143.8
Lease liabilities		
Within one to two years	**12.9**	12.3
Within two to five years	**25.4**	27.3
Five years and over	**47.6**	55.0
	746.2	548.5

The analysis above includes estimated interest payable to maturity on the underlying loans. For the loans due after more than one year £22.3m (2022: £10.9m) of the interest falls due within one year of the balance sheet date, £22.3m (2022: £10.9m) within one to two years, £25.5m (2022: £25.3m) within two to five years and £2.9m (2022: £6.2m) beyond five years.

Interest rate and currency profile of Group financial liabilities

	Total £m	Fixed £m	Floating £m	Fixed rate weighted average Interest rate %	Fixed rate weighted average Fixed period Years
Sterling	345.9	135.0	210.9	2.64	3.0
US Dollar	186.3	125.6	60.7	3.73	5.9
Euro	132.9	104.3	28.6	1.33	2.9
Other	45.0	–	45.0	–	–
At 31 December 2023	**710.1**	**364.9**	**345.2**	**2.64**	**4.0**
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**

Fair values

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 (£70m and £30m) and €100m (€70m and €30m) of fixed rate notes. On 6 June 2019, the Group issued a further £65m, €50m and US$60m of fixed rate notes. In June 2023, the existing £30m and €30m fixed rate 7 year notes matured and were repaid.

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 2023 £m	**Fair value 2023 £m**	Book value 2022 £m	Fair value 2022 £m
Cash deposits	**172.5**	**172.5**	320.6	320.6
Other investments	**1.9**	**1.9**	3.4	3.4
2019 Club facility due 2026	**(216.8)**	**(216.8)**	(18.0)	(18.0)
US$100m 3.75% fixed rate 10 year note	**(78.5)**	**(71.5)**	(83.0)	(74.4)
€30m 1.08% fixed rate 7 year note	**–**	**–**	(26.5)	(26.3)
€70m 1.43% fixed rate 10 year note	**(60.8)**	**(58.2)**	(61.9)	(57.8)
£30m 2.54% fixed rate 7 year note	**–**	**–**	(30.0)	(29.7)
£70m 2.80% fixed rate 10 year note	**(70.0)**	**(66.1)**	(70.0)	(64.8)
€50m 1.18% fixed rate 8 year note	**(43.5)**	**(40.9)**	(44.2)	(40.1)
£65m 2.46% fixed rate 8 year note	**(65.0)**	**(59.8)**	(65.0)	(58.1)
US$60m 3.70% fixed rate 10 year note	**(47.1)**	**(43.7)**	(49.8)	(45.4)
Other bank borrowings	**(34.0)**	**(34.0)**	(51.6)	(51.6)
Other loans	**(8.3)**	**(8.3)**	(22.6)	(22.6)
Contingent consideration	**–**	**–**	(9.9)	(9.9)
Preference share capital	**(1.1)**	**(1.1)**	(1.1)	(1.1)
Forward foreign currency contracts	**–**	**–**	(1.3)	(1.3)

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.

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

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

	2023 £m	2022 £m
The authorised, issued and fully paid preference share capital comprises:		
615,562 5.9% preference shares of £1 (2022: 615,562)	**0.6**	0.6
498,434 6.6% preference shares of £1 (2022: 498,434)	**0.5**	0.5
21,900 7.5% preference shares of £1 (2022: 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 2023, the Group had undrawn committed facilities of £381.2m (2022: £579.3m). In addition, the Group had other undrawn facilities of £70.5m (2022: £53.1m) available. All of the Group's total committed facilities of £1,050.0m expire after 2024. 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 in the prior year.

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 2023, 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 £19.0m (2022: £27.6m) 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 £204.8m (2022: £162.4m) lower/higher.

Cash flow hedging

During the year, the Group held an instrument to hedge an exposure to changes in foreign currency on a highly probable future business combination (hedged item). At commencement, the nominal value of the contract was £223.6m and the average forward contract rate was 1480 (KRW:GBP). The contract, which was contingent on the successful completion of the business acquisition, was designated as a cash flow hedge and provided certainty over approximately 97% of the estimated FX exposure on the forecast future transaction. The forecast future transaction was completed in the year ended 31 December 2023 and the associated instrument settled. The cumulative cash flow hedging reserve of £19.3m debit was reclassified to goodwill, presented as part of the cash consideration amount in note 27. During the year ended 31 December 2023, the associated hedge ineffectiveness of £4.6m has been recognised in the Group income statement within operating costs (administrative expenses) and reported as an exceptional item (business acquisition costs). The cash flow in relation to both the effective and ineffective portions of the hedge has been recorded as an investing activity in the Group statement of cash flows in accordance with the underlying hedged cash flow. In the prior year, the cumulative cash flow hedging reserve of £6.5m credit and cost of hedging reserves of £6.0m debit were reclassified to the income statement and reported within the gain on business disposal.

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 2.5 years and interest rate of 2.16%. 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 4.1 years and interest rate of 2.48%. 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%. In June 2023, the existing £30m and €30m fixed rate 7 year notes matured and were repaid. At 31 December 2023, approximately 51% of Group borrowings were at fixed rates.

At 31 December 2023, 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 2023, the Group's fixed rate debt was at a weighted average rate of 2.64% (2022: 2.55%). As at 31 December 2023, the Group's floating rate liabilities are based on SONIA, SOFR 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 £2.7m (2022: £3.6m) 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 47 to 50.

Underlying growth coupled to Return on Invested Capital (ROIC) is the key perceived driver of shareholder value within the Group. The definition of ROIC has been revised in the year to exclude the Group's net retirement benefit balances from invested capital, given they are not operating in nature. Comparative information presented in the Five year record has been restated to reflect the new definition. The Group's ROIC now stands at 8.3% against a post-tax Weighted Average Cost of Capital (WACC) of 8.1%. 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 2023. Further details can be found in the Finance Review on pages 47 to 50. 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 34 to 37.

21. Provisions

	Environmental £m	Restructuring £m	Site restoration £m	Other £m	Total £m
At 1 January 2023	5.6	–	7.9	4.1	17.6
Exchange differences	(0.1)	–	(0.3)	(0.3)	(0.7)
Reclassifications	1.6	–	–	–	1.6
Released to the income statement	(0.5)	–	–	(0.6)	(1.1)
Charged to the income statement	–	5.4	–	1.3	6.7
Cash paid against provisions and utilised	(1.6)	(1.0)	–	(2.4)	(5.0)
At 31 December 2023	**5.0**	**4.4**	**7.6**	**2.1**	**19.1**

Analysis of total provisions

	2023 £m	2022 £m
Current	**8.6**	6.1
Non-current	**10.5**	11.5
	19.1	17.6

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, potential groundwater and other contamination on a number of sites, both currently in use and previously occupied, in Europe and the Americas. The provisions are based on most recently available facts and prior experience and are recorded at the estimated amount as at the balance sheet date. The Directors expect that the balance will be utilised within 10 years.

The site restoration provisions relate to certain leased sites with an existing obligation to restore the environment or dismantle assets. The provisions are based on most recently available facts and prior experience and are recorded at the estimated amount as at the balance sheet date. The associated leased sites have remaining terms of between 17 and 43 years.

During the year, a restructuring provision has been created associated with changes to the Group’s operating model. This provision is expected to be utilised within one year.

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 (2022: 10.61p)	**2023 £m**	2022 £m
Allotted, called up and fully paid		
At 1 January and 31 December – 142,536,884 (2022: 142,536,884) ordinary shares	**15.1**	15.1

During 2023, options were granted to employees under the Croda International Plc Sharesave Scheme to subscribe for 120,998 ordinary shares at an option price of 3977p per share. Conditional awards over 162,761 ordinary shares were granted under the Performance Share Plan during the year. Also granted in the year were 21,951 shares under the Deferred Bonus Share Plan and 8,513 shares under the Restricted Share Plan. There were no shares granted during the year under the Free Share Plan.

During the year consideration of £0.2m was received on the exercise of options over 5,686 shares. The options were satisfied with shares transferred from the Group's employee share trusts. Since the year end a further 2,823 shares have been transferred from the trusts. During the year, the Group purchased 155,413 of its own ordinary shares to satisfy awards under various share-based payment schemes for consideration of £10.8m.

The outstanding options to subscribe for ordinary shares were as follows at the balance sheet date:

	Year option granted	Number of shares	Price	Options exercisable from
Croda International Plc Sharesave Scheme	2019	92	3898p	1 Nov 2022 to 30 Apr 2023
	2020	36,521	4804p	1 Nov 2023 to 30 Apr 2024
	2021	14,996	7327p	1 Nov 2024 to 30 Apr 2025
	2022	50,487	5509p	1 Nov 2025 to 30 Apr 2026
	2023	120,226	3977p	1 Nov 2026 to 30 Apr 2027
Croda International Plc Performance Share Plan (2014)	2021	120,368	Nil	24 Mar 2024
	2022	116,737	Nil	22 Mar 2025
	2023	153,530	Nil	17 Mar 2026
	2023	4,569	Nil	02 May 2026
Croda International Plc Deferred Bonus Share Plan	2022	17,474	Nil	22 Mar 2025
	2023	22,377	Nil	17 Mar 2026
Croda International Plc Restricted Share Plan	2021	6,812	Nil	17 Mar 2024
	2022	6,356	Nil	29 Mar 2025
	2023	8,356	Nil	21 Mar 2026

23. Share-based payments

The impact of share-based payment transactions on the Group's financial position is as follows:

	2023 £m	2022 £m
Analysis of amounts recognised in the income statement:		
Charged in respect of equity settled share-based payment transactions	**1.8**	8.7
Credited in respect of cash settled share-based payment transactions	**(0.1)**	(5.2)
	1.7	3.5
Analysis of amounts recognised in the balance sheet:		
Liability in respect of cash settled share-based payment transactions	**2.5**	8.4

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.

23. Share-based payments continued

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:

	2023	2022
Grant date	**14 Sep 2023**	15 Sep 2022
Share price at grant date	**5006p**	6568p
Exercise price	**3977p**	5509p
Number of employees	**678**	646
Shares under option	**120,988**	69,318
Vesting period	**Three years**	Three years
Expected volatility	**27%**	26%
Option life	**Six months**	Six months
Risk free rate	**4.5%**	3.1%
Dividend yield	**2.2%**	1.6%
Possibility of forfeiture	**7.5% p.a.**	7.5% p.a.
Fair value per option at grant date	**1518.8p**	1758.1p
Option pricing model	**Black Scholes**	Black Scholes

A reconciliation of option movements over the year is as follows:

	2023		2022	
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**155,551**	**5592p**	212,421	5082p
Granted	**120,988**	**3977p**	69,318	5509p
Forfeited	**(48,349)**	**5899p**	(35,999)	6340p
Exercised	**(5,868)**	**4049p**	(90,189)	4028p
Outstanding at 31 December	**222,322**	**4687p**	155,551	5592p
Exercisable at 31 December	**36,725**	**4802p**	5,561	3898p
For options exercised in year, weighted average share price at date of exercise		**6555p**		6789p
Weighted average remaining life at 31 December (years)	**2.3**		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:

	2023	2022
Grant date	**14 Sep 2023**	15 Sep 2022
Share price at grant date	**5006p**	6568p
Exercise price	**3977p**	5509p
Number of employees	**2,870**	2,660
Shares under option	**430,668**	243,807
Vesting period	**Three years**	Three years
Expected volatility	**28%**	27%
Option life	**One month**	One month
Risk free rate	**3.5%**	3.4%
Dividend yield	**2.1%**	1.6%
Possibility of forfeiture	**7.5% p.a.**	7.5% p.a.
Fair value per option at 31 December	**1480.0p**	1814.7p
Option pricing model	**Black Scholes**	Black Scholes

A reconciliation of option movements over the year is as follows:

	2023 Number	2023 Weighted average exercise price	2022 Number	2022 Weighted average exercise price
Outstanding at 1 January	**547,706**	**5778p**	653,245	5227p
Granted	**430,668**	**3977p**	243,807	5509p
Forfeited	**(274,528)**	**5225p**	(101,670)	5917p
Exercised	**(2,576)**	**4881p**	(247,676)	3960p
Outstanding at 31 December	**701,270**	**4842p**	547,706	5778p
For options exercised in year, weighted average share price at date of exercise		**6099p**		6664p
Weighted average remaining life at 31 December (years)	**2.3**		2.0	

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 106 to 134). 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:

	2023 Market condition	2023 Non-market condition	2023 Market condition	2023 Non-market condition	2022 Market condition	2022 Non-market condition
Grant date	**02 May 2023**	**02 May 2023**	**17 Mar 2023**	**17 Mar 2023**	22 Mar 2022	22 Mar 2022
Share price at grant date	**6962p**	**6962p**	**6401p**	**6401p**	7390p	7390p
Number of employees	**2**	**2**	**68**	**68**	67	67
Shares under conditional award	**1,599**	**2,970**	**55,367**	**102,825**	42,676	79,254
Vesting period	**Three years**	**Three years**	**Three years**	**Three years**	Three years	Three years
Expected volatility	**27%**	**27%**	**27%**	**27%**	24%	24%
Dividend yield	**1.6%**	**1.6%**	**1.8%**	**1.8%**	1.4%	1.4%
Possibility of forfeiture	**3.45% p.a.**	**3.45% p.a.**	**3.45% p.a.**	**3.45% p.a.**	3.45% p.a.	3.45% p.a.
Fair value per option at grant date	**3558p**	**6647p**	**3119p**	**5800p**	3111p	7098p
Option pricing model	**Closed form valuation**	**Closed form valuation**	**Closed form valuation**	**Closed form valuation**	Closed form valuation	Closed form valuation

A reconciliation of option movements over the year is as follows:

	2023 Number	2023 Weighted average exercise price	2022 Number	2022 Weighted average exercise price
Outstanding at 1 January	**399,115**	**–**	426,300	–
Granted	**162,761**	**–**	121,930	–
Forfeited	**(19,961)**	**–**	(14,536)	–
Exercised	**(146,711)**	**–**	(134,579)	–
Outstanding at 31 December	**395,204**	**–**	399,115	–
For options exercised in year, weighted average share price at date of exercise		**6641p**		6870p
Weighted average remaining life at 31 December (years)	**1.3**		1.2	

23. Share-based payments continued

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 106 to 134).

	2023	2022
Grant date	**17 Mar 2023**	22 Mar 2022
Share price at grant date	**6401p**	7390p
Number of employees	**10**	11
Shares under conditional award	**21,951**	16,914
Vesting period	**Three years**	Three years

A reconciliation of option movements over the year is as follows:

	2023			2022
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**17,160**	**–**	8,913	–
Granted	**21,951**	**–**	16,914	–
Dividend enhancement	**740**	**–**	246	–
Exercised	**–**	**–**	(8,913)	–
Outstanding at 31 December	**39,851**	**–**	17,160	–
For options exercised in year, weighted average share price at date of exercise		**–**		6904p
Weighted average remaining life at 31 December (years)	**1.8**		2.3	

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.

	2023		2022
Grant date	**21 Mar 2023**	24 Oct 2022	29 Mar 2022
Share price at grant date	**6412p**	6646p	7795p
Number of employees	**38**	1	57
Shares under conditional award	**8,513**	337	6,356
Vesting period	**Three years**	Three years	Three years
Dividend yield	**1.7%**	1.5%	1.3%
Possibility of forfeiture	**3.45% p.a.**	3.45% p.a.	3.45% p.a.
Fair value per option at grant date	**6110p**	6349p	7506p
Option pricing model	**Closed form valuation**	Closed form valuation	Closed form valuation

A reconciliation of option movements over the year is as follows:

	2023			2022
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**19,894**	**–**	20,958	–
Granted	**8,513**	**–**	6,693	–
Forfeited	**(825)**	**–**	(1,226)	–
Exercised	**(6,058)**	**–**	(6,531)	–
Outstanding at 31 December	**21,524**	**–**	19,894	–
For options exercised in year, weighted average share price at date of exercise		**6482p**		7260p
Weighted average remaining life at 31 December (years)	**1.3**		1.3	

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. No options were granted under this plan in 2023.

	2022
Grant date	6 Sep 2022
Share price at grant date	6648p
Number of employees	5,038
Shares under conditional award	50,440
Vesting period	One year
Dividend yield	1.6%
Possibility of forfeiture	7.5% p.a.
Fair value per option at grant date	6497p
Option pricing model	Closed form valuation

A reconciliation of option movements over the year is as follows:		**2023**		2022
	Number	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**49,390**	**–**	51,580	–
Granted	**–**	**–**	50,440	–
Forfeited	**(2,280)**	**–**	(2,470)	–
Exercised	**(47,110)**	**–**	(50,160)	–
Outstanding at 31 December	**–**	**–**	49,390	–
For options exercised in year, weighted average share price at date of exercise		**6962p**		7605p
Weighted average remaining life at 31 December (years)	**–**		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 2023 the QUEST had a net amount due from the Company of £20.0m (2022: £19.8m) and held 51,348 (2022: 57,216) shares transferred at a nil cost (2022: nil cost) with a market value of £2.6m (2022: £3.8m). As at 31 December 2023 there was no loan between the CIPEBT and the Company (2022: £37.8m) following the loan being forgiven in 2023. The CIPEBT held 791 (2022: 688) shares transferred at a nil cost (2022: nil cost) with a market value of £0.1m (2022: £0.1m).

As at 31 December 2023 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 2023 and, except for a nominal amount, the right to receive dividends has been waived.

As at 31 December 2023 the total number of treasury shares held was 2,901,442 (2022: 2,901,442) with a market value of £146.5m (2022: £199.3m).

25. Non-controlling interests in equity

	2023 £m	2022 £m
At 1 January	**15.5**	12.8
Exchange differences	**(1.0)**	0.4
Profit for the year	**1.1**	4.0
Acquisition of a non-controlling interest in an existing subsidiary	**–**	(1.4)
Adjustment to retained earnings	**–**	(0.3)
At 31 December	**15.6**	15.5

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

2023 Acquisition

On 4 July 2023 the Group successfully completed the acquisition of 100% share capital of Solus Biotech Co Ltd 'Solus', a global leader in premium, biotechnology-derived active ingredients for beauty care (Consumer Care sector) and pharmaceuticals (Life Sciences sector) employing 95 people in South Korea. The business was acquired for a total cash consideration of £227.4m. The acquisition provides access to Solus' existing biotech-derived ceramide and phospholipid technologies, and its emerging capabilities in natural retinol. This acquisition will significantly strengthen Croda's Beauty Actives portfolio and increases its exposure to targeted prestige segments. Located in South Korea, Solus expands Croda's Asian manufacturing capability and will create a new biotechnology R&D hub in the region. Post-acquisition the entity has changed its name to Croda Korea Ltd.

Acquisition-related costs of £9.6m have been charged to administrative expenses in the income statement for the year ended 31 December 2023 (2022: £nil). Post-acquisition, Solus contributed revenue of £13.3m and adjusted operating profit of £0.4m. Had the acquisition been made on 1 January 2023, the Group's revenue would have been £1,707.9m with adjusted operating profit of £320.9m.

The following table summarises the Directors' assessment of the consideration paid in respect of the acquisition, and the fair value of assets acquired and liabilities assumed.

	£m
Cash consideration	**227.4**
Fair value of assets and liabilities acquired	
Intangible assets	**104.3**
Property, plant and equipment	**9.2**
Right of use assets	**0.9**
Lease liabilities	**(1.0)**
Cash	**3.8**
Borrowings	**(6.1)**
Working capital	**8.4**
Retirement benefit liabilities	**(0.4)**
Deferred tax	**(21.2)**
Total identifiable net assets	**97.9**
Goodwill	**129.5**

28. Business disposal

On 30 June 2022, the Group completed the disposal of the majority of its Performance Technologies and Industrial Chemicals business for cash consideration of £651.0m. The divested business comprised four manufacturing facilities, together with associated laboratory facilities and sales operations, and formed part of Croda's integrated operating model prior to disposal. The following table summarises the effect of the disposal on the Group's consolidated financial statements.

	£m
Cash consideration received	651.0
Intercompany settlement	(24.1)
	626.9
Net assets of the divested business	(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

Company Financial Statements

Company Balance Sheet

at 31 December 2023

	Note	2023 £m	2022 £m
Fixed assets			
Intangible assets	D	**0.4**	0.6
Tangible assets	E	**1.0**	1.2
Investments			
Shares in Group undertakings	F	**1,567.0**	1,411.1
Retirement benefit assets	K	**5.1**	5.6
		1,573.5	1,418.5
Current assets			
Debtors	G	**1,296.8**	1,318.9
Deferred tax asset	H	**0.3**	0.1
Cash and cash equivalents		**27.6**	176.1
		1,324.7	1,495.1
Creditors: Amounts falling due within one year			
Creditors	I	**(73.9)**	(74.0)
Borrowings	J	**(4.5)**	(56.5)
		(78.4)	(130.5)
Net current assets		**1,246.3**	1,364.6
Total assets less current liabilities		**2,819.8**	2,783.1
Creditors: Amounts falling due after more than one year			
Deferred tax liability	H	**(1.3)**	(1.2)
Borrowings	J	**(403.5)**	(242.2)
		(404.8)	(243.4)
Net assets		**2,415.0**	2,539.7
Capital and reserves			
Ordinary share capital		**15.1**	15.1
Share premium account		**707.7**	707.7
Reserves[1]		**1,692.2**	1,816.9
Total shareholders' funds		**2,415.0**	2,539.7

1.Included within Reserves is profit after tax of £35.9m (2022: £505.9m).

The financial statements on pages 195 to 200 were approved by the Board on 26 February 2024 and signed on its behalf by

Dame Anita Frew DBE
Chair

Louisa Burdett
Chief Financial Officer

Registered in England number 206132

Company Statement of Changes in Equity

for the year ended 31 December 2023

	Note	Share capital £m	Share premium account £m	Capital redemption reserve £m	Revaluation reserve £m	Other reserves £m	Retained earnings £m	Total £m
At 1 January 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**
At 1 January 2023		15.1	707.7	0.9	1.2	–	1,814.8	2,539.7
Profit for the year attributable to equity shareholders		–	–	–	–	–	35.9	35.9
Other comprehensive expense		–	–	–	–	–	(2.0)	(2.0)
Transactions with owners:								
Dividends on equity shares	8	–	–	–	–	–	(150.7)	(150.7)
Share-based payments		–	–	–	–	–	1.9	1.9
Transactions in own shares		–	–	–	–	–	(9.8)	(9.8)
Total transactions with owners		–	–	–	–	–	(158.6)	(158.6)
Total equity at 31 December 2023		**15.1**	**707.7**	**0.9**	**1.2**	**–**	**1,690.1**	**2,415.0**

Of the retained earnings, £939.5m (2022: £1,226.4m) are realised and £750.6m (2022: £588.4m) 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 195 to 200 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 157 to 163, 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. Other Company specific policies include;

- 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.
- Provisions against amounts owed by Group undertakings, based on lifetime expected losses, are not material.
- The Company operates employee share trusts for the purpose of setting share-based payment arrangements. The Croda International Plc Employee Benefit Trust is treated as a branch of the Company with assets and liabilities accounted for as assets and liabilities of the Company.

The Group accounting policy for financial risk factors is also relevant to the preparation of the Company financial statements and is disclosed on pages 186 and 187.

B. Profit and loss account

Of the Group's profit for the year, £35.9m (2022: £505.9m) is included in the profit and loss account of the Company which was approved by the Board on 26 February 2024 but which is not presented as permitted by Section 408 of the Companies Act 2006.

C. Employees

	2023 £m	2022 £m
Company employment costs including Directors		
Wages and salaries	**11.3**	15.8
Share-based payment charges (note L)	**1.2**	5.4
Social security costs	**1.5**	2.4
Post-retirement benefit costs	**0.3**	1.6
	14.3	25.2

	2023 Number	2022 Number
Average employee numbers by function		
Production	**31**	28
Administration	**49**	45
	80	73

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 2023, the Company had 80 (2022: 77) employees in total.

Detailed information concerning Directors' remuneration, interests and options is shown in section D of the Directors' Remuneration Report, which is subject to audit, on pages 120 to 130 which forms part of the Annual Report and Accounts.

D. Intangible assets

	Computer software £m
Cost	
At 1 January 2023	1.8
At 31 December 2023	**1.8**
Accumulated amortisation	
At 1 January 2023	1.2
Charge for the year	0.2
At 31 December 2023	**1.4**
Net carrying amount	
At 31 December 2023	**0.4**
At 31 December 2022	0.6

E. Tangible assets

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
At 1 January 2023	2.2	1.5	3.7
Disposals	–	(0.1)	(0.1)
Reclassifications	0.1	(0.1)	–
At 31 December 2023	**2.3**	**1.3**	**3.6**
Accumulated depreciation			
At 1 January 2023	1.5	1.0	2.5
Charge for the year	0.1	0.1	0.2
Disposals	–	(0.1)	(0.1)
Reclassifications	0.1	(0.1)	–
At 31 December 2023	**1.7**	**0.9**	**2.6**
Net book amount			
At 31 December 2023	**0.6**	**0.4**	**1.0**
At 31 December 2022	0.7	0.5	1.2

F. Shares in Group undertakings

	Shares £m	Loans £m	Total £m
Cost			
At 1 January 2023	1,119.7	320.7	1,440.4
Exchange differences	–	(2.7)	(2.7)
Additions	428.5	90.8	519.3
Disposals	(0.7)	–	(0.7)
Amounts repaid or capitalised	–	(360.0)	(360.0)
At 31 December 2023	**1,547.5**	**48.8**	**1,596.3**
Impairment			
At 1 January 2023	27.8	1.5	29.3
At 31 December 2023	**27.8**	**1.5**	**29.3**
Net book value			
At 31 December 2023	**1,519.7**	**47.3**	**1,567.0**
At 31 December 2022	1,091.9	319.2	1,411.1

The undertakings which affect the financial statements are listed on pages 201 to 203.

Additions to shares in the year of £428.5m related to the continued investment in Croda Investments No 3 Limited including £206.0m in relation to the acquisition of Solus Biotech Co Ltd and £222.5m of intercompany loans which have been capitalised. The Directors believe that the carrying value of the investments is supported by their underlying net assets or forecast cash generation.

G. Debtors

	2023 £m	2022 £m
Amounts owed by Group undertakings	**1,293.0**	1,287.1
Trade and other receivables	**2.2**	5.0
Corporation tax	**–**	25.0
Prepayments	**1.6**	1.8
	1,296.8	1,318.9

Although the amounts owed by Group undertakings have no fixed date of repayment, £1,281.8m (2022: £1,279.6m) is expected to be collected after one year. Of the amount at 31 December 2023, £1,281.2m will continue to attract interest from 1 January 2024 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:

	2023 £m	2022 £m
Retirement benefit obligations	**(1.3)**	(1.2)
Provisions	**0.3**	0.1
	(1.0)	(1.1)
The movement on deferred tax balances during the year is summarised as follows:		
At 1 January	**(1.1)**	0.2
Deferred tax (charged)/credited through the profit and loss account	**(0.3)**	0.1
Deferred tax credited/(charged) to other comprehensive income	**0.4**	(1.4)
At 31 December	**(1.0)**	(1.1)

Deferred tax assets were recognised in all cases where such assets arose, as it was probable that the assets would be recovered.

I. Creditors

	2023 £m	2022 £m
Amounts falling due within one year		
Trade payables	**0.5**	0.4
Taxation and social security	**1.6**	1.6
Amounts owed to Group undertakings	**66.5**	56.0
Other payables	**1.3**	3.8
Accruals and deferred income	**4.0**	12.2
	73.9	74.0

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 162 which forms part of the Annual Report and Accounts. Short-term receivables and payables have been excluded from all of the following disclosures.

J. Borrowings continued

	2023 £m	2022 £m
Maturity profile of financial liabilities		
2019 Club facility due 2026	**163.1**	–
€30m 1.08% fixed rate 7 year note	**–**	26.5
€70m 1.43% fixed rate 10 year note	**60.8**	61.9
£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	**43.5**	44.2
£65m 2.46% fixed rate 8 year note	**65.0**	65.0
Bank loans and overdrafts payable on demand	**4.5**	–
Preference share capital	**1.1**	1.1
	408.0	298.7
Repayments fall due as follows:		
Within one year		
Bank loans and overdrafts	**4.5**	56.5
	4.5	56.5
After more than one year		
Loans repayable		
Within one to five years	**402.4**	241.1
Preference share capital	**1.1**	1.1
	403.5	242.2

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 171 to 175. The table below shows the movement in the obligation during the year.

	2023 £m	2022 £m
Opening balance:		
Assets	**41.2**	56.5
Liabilities	**(35.6)**	(55.7)
Net opening retirement benefit asset	**5.6**	0.8
Movements in the year:		
Service cost – current	**(0.4)**	(0.6)
Interest income	**0.3**	0.1
Contributions	**1.4**	1.5
Remeasurements	**(1.8)**	3.8
Closing balance	**5.1**	5.6

L. Share-based payments

The total charge for the year in respect of share-based remuneration schemes was £1.2m (2022: £5.4m). 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 £179.4m as at 31 December 2023 (2022: £153.5m).

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 194 of the Group financial statements.