

Chemring Group PLC

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Chemring Group PLC
Annual report and accounts 2019

Registered number
86662

A year of progress

It has been an exceptionally busy year in which we continued to deliver our current mission of building a stronger business. We have implemented significant changes to improve safety, strengthen leadership and corporate governance, and embed continuous improvement across the Group. We have also changed the structure of the business and the way in which we operate. In doing so we are improving the quality of the business and redefining our purpose. Collectively we are changing the culture of Chemring to one of close collaboration, responsible behaviour and belief in our core values of Safety, Excellence and Innovation.

With a number of significant operational and strategic milestones achieved this year we have made real progress; moving away from commoditised product lines to focus on higher quality, sustainable business areas where we have a competitive advantage.

As we continue to develop, over time our focus will move to strategic opportunities that further enhance the Group's growth potential and the delivery of positive returns for all our stakeholders.

Michael Ord

Group Chief Executive

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2019 performance

Revenue

£335m

(+13%)

The increase in revenue principally reflected the growth in Sensors & Information driven by the start of the HMDS IDIQ contract in the year and a strong year at Roke.

Order book

£449m

(+14%)

Building in the Countermeasures & Energetics sector in line with strategy. Targeted 2020 revenue from continuing operations approximately 76% covered by orders in hand.

Underlying operating profit*

£44m

(+42%)

Reflects revenue growth and improving margins in both sectors as operational gearing and performance both positively impacted margins.

Statutory operating profit

£31m

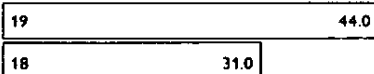
(2018: £16m loss)

The difference to underlying operating profit reflects the amortisation of acquired intangible assets which is the only item treated as non-underlying in 2019.

Underlying operating profit (£m)*

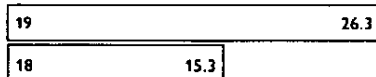
Group

£44.0m



Sensors & Information

£26.3m



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Page 20

Countermeasures & Energetics

£27.5m



Read more on
Page 22

Progress

Building a stronger business approach to ensure solid foundations are in place to deliver medium-term growth opportunities.

Safety

As part of our commitment to continuous improvement, we have established three core values: Safety, as paramount, Excellence and Innovation.

2020 outlook

Countermeasures & Energetics order book, opportunities under the US Programs of Record and the strong market for Roke's services all support improving medium-term expectations.

Key points

- Overall performance was slightly ahead of our initial expectations, reflecting strong Sensors & Information sector performance; Countermeasures & Energetics sector impacted by planned site recommissioning in the UK and Australia. The UK countermeasures site has achieved steady state manufacturing. Results include £15m of insurance recoveries, offsetting costs of remediation and site operating costs.
- Safety remains our key priority and, together with enhancing operational stability and efficiency, is driving investment in the Group's manufacturing infrastructure.
- Sale of Chemring Military Products and Chemring Defence UK and closure of Chemring Prime Contracts completed in the year. The sale of Chemring Ordnance was announced on 21 November 2019.
- Australian subsidiary, which has been offline for the majority of the year to enable the changeover to F-35 Lightning II countermeasure manufacturing, received two significant countermeasures contracts, as previously announced.
- Continued progress on various US Programs of Record. Further delivery orders received for the next phase of the HMDS IDIQ, valued at \$30m. Successful critical design review on AVCAD led to a further 75 unit order.
- Strong order intake in Countermeasures & Energetics resulted in a Group order book for the continuing business at year end of £449m (2018: £394m), £287m currently due as revenue in FY20, approximately 76% coverage of FY20 targeted revenue.
- Net debt has decreased year on year, reflecting the strong operating cash generation offset by the start of the investment in the Tennessee facility. Net debt: EBITDA of 1.24x (2018: 1.64x) and pension fund in IAS 19 surplus.
- Board recommending a final dividend of 2.4p per ordinary share, giving a total dividend of 3.6p per ordinary share (2018: 3.3p).
- Board's expectations for FY20 trading performance remain unchanged, again with the usual seasonal H2 weighting.

* References to underlying operating profit and earnings per share throughout this strategic report are to underlying measures from continuing operations; see note 3 for a reconciliation to the statutory profit after tax from both continuing and discontinued operations of £21.9m (2018: £105.8m loss).

At a glance

Relentlessly innovating to protect

Chemring designs and delivers high-tech solutions to solve difficult problems, relentlessly innovating to protect people, platforms, missions and information against constantly changing threats.

We challenge convention and use our extensive science and engineering expertise to turn ideas into reality, delivering practical results that protect and safeguard in an uncertain world.

Chemring is organised under two sectors:

Sensors & Information

Innovation is core to solving our clients' difficult problems. Operating across commercial, national security and defence domains, we enable our clients to deliver competitive advantage, defend their people, assets and secrets and defeat their adversaries.

With over 350 scientists, engineers and consultants, our Sensors &

Information sector continues to invest in technologies that safeguard and protect in an uncertain world.

Our sensor technologies detect threats with a very high degree of confidence, be they explosive, biological, chemical, radio or cyber.

Our Roke business draws on a 60-year heritage of innovation in sensors, communications, cyber and artificial intelligence to secure, combine and apply these technologies in new ways.

We operate across the whole life cycle providing advice, engineering, design, research and solutions created from our products and services.

Revenue

£131.9m

(2018: £87.3m)

Underlying operating profit

£26.3m

(2018: £15.3m)

Countermeasures & Energetics

Chemring is the world leader in the design, development and manufacture of advanced expendable countermeasures and countermeasure suites for protecting air, sea and land platforms against the growing threat of guided missiles.

We combine a deep understanding of platform signatures, missile seekers and chemical formulations to develop new decoys against new threats.

Our world-class energetics capabilities include cutting-edge raw materials to meet unique client product requirements, actuators, air crew safety systems, and missile and rocket components.

Every day, our products, services and experts assist customers including NASA to take rockets into orbit, provide demolition stores for militaries and security forces, and enable navies to ensure their missiles self-destruct.

Revenue

£203.3m

(2018: £210.1m)

Underlying operating profit

£27.5m

(2018: £23.9m)

Where we operate

Our customers are national defence and security agencies, defence prime contractors, and increasingly those in the commercial sector. Our home markets in the UK, the US, Australia and Norway represent some of the most demanding users in the world, with well-funded militaries and international credibility, which helps achieve export sales. The percentages below represent the proportion of the Group's total 2019 revenue (see note 1 on page 95).

US

55%

The US maintains the largest defence budget in the world, and remains our core market. Our exposure to key long-term US programmes, particularly in the Sensors & Information segment but also in Countermeasures & Energetics, enables us to take advantage of growing budgets.

UK

27%

In the UK we are seeing growing customer demand for our cyber and information security solutions in national security, defence and to an increasing extent commercial sectors.

Europe

9%

In Europe, our Norwegian business has achieved record order intake delivered through long-term supply agreements and efforts to enhance capacity.

Asia Pacific and ROW

9%

Steady year-on-year growth in key regional markets as defence spending increases in response to increased threats and our Australian business enables us to maintain, support and evolve next-generation capabilities for the Australian military.

Why invest in Chemring?

In the past eighteen months Chemring has been restructured and repositioned for future growth. A significant proportion of the Group's safety procedures, management teams and corporate governance has been strengthened, and the Group has made excellent progress on our strategy to exit our commoditised energetics businesses. These actions have been enhanced by a focus on embedding a culture of safe and continuous improvement across the Group.

We are a business that relentlessly innovates to protect its customers

Well positioned in niche segments

Against the background of renewed future growth in defence budgets, in particular in the US, Chemring is well positioned in niche segments of the defence market which have the opportunity to outperform the broader sector over the next few years. These segments include the Group's global market-leading position on mission-critical airborne and naval countermeasures, advanced sensors and software engineering.

Exposure to major international programmes

Chemring is exposed to a substantial pipeline of major international programmes that have the potential to deliver strong long-term growth. These include being a qualified source for the F-35 Joint Strike Fighter countermeasure programme, as well as having technologies and products to address the next-generation US programmes in explosive hazard detection, biological detection and chemical detection.

Strong growth in consulting, technology and R&D service activities

Chemring's Roke consulting, technology and R&D service activities are experiencing strong growth driven principally by information security end markets and growing opportunities in the commercial sector.

Proven management with momentum

Chemring's executive management team has significant sector experience with a proven track record of business restructuring, strategic investment and the delivery of profitable growth. In the past eighteen months Chemring has been restructured, the portfolio reshaped with the sale of the commoditised energetics businesses, and significant investment has been made in the modernisation and automation of our facilities, and these actions provide strong foundations for future top-line growth and margin expansion.

Balance sheet strength

Chemring has a robust balance sheet and strong ongoing operating cash generation, providing a platform for future investment in the business and sustainable dividend payments.

Pipeline of attractive opportunities

The Group's strong order book provides good medium-term visibility. A significant proportion of our revenue is generated from sole or dual source positions, often from long-term partnering agreements. Market-leading positions, incumbent supplier status and high barriers to entry position Chemring well for the future.

Market-leading niche positions
in both sectors

Growing
order book

Significant organic revenue
growth potential

Improving operating margins

Strong operating
cash generation

Sustainable and
growing dividend

Improving quality and value
creation

Positioned for growth

Carl-Peter Forster Chairman

“Chemring is now a stronger, more resilient business, with market-leading positions and a clear strategy.”

Revenue

£335.2m

(2018: £297.4m)

Dividend

3.6p

(2018: 3.3p)

2019 was a year of solid recovery in which significant changes were implemented across the Group and I am pleased with the progress that has been made. Chemring is now a stronger, more resilient business, with market-leading positions and a clear strategy. We are now well placed to take advantage of the growth opportunities that are available to us.

Safety

Safety is at the core of our operating philosophy and the basis of our safety culture that is felt throughout the business. As a Board we believe that all injuries are preventable and as such continue to maintain a healthy sense of unease that challenges the way we operate and seeks ways to reduce the risk of harm to our people. In our commitment to zero harm we continue to invest in our people, plant and processes so

that our people can operate safely with plant and processes that are designed and maintained to reduce people's exposure to hazardous situations. Further details on the significant progress made on safety over the last year are set out in the Group Chief Executive's review.

2019 performance

Meaningful progress was made during 2019 to improve the quality of Chemring. It has been a busy year for the Group in which significant changes have been implemented in addition to ongoing operational management. These include the introduction of a new safety strategic framework, a Group-wide safety review and strategic plan, and the introduction of new frameworks to strengthen risk management and corporate governance. In addition to a capability review and strengthening of the senior management team, a number of key operational and strategic milestones were achieved.

Following the closure of our UK countermeasures site after the incident in August 2018, the site progressed through a phased restart with chaff and naval decoy lines operational in the first half of the year. Spectral and MTV lines began operations in the third quarter and the overall site reached steady state manufacturing by the end of the financial year, as planned.

Our Australian countermeasures facility was closed for the majority of the year to be fitted and qualified for F-35 flare production, and in May we were pleased to announce that the facility had been awarded two significant contracts from the US DoD in support of the F-35 and other platforms. This was a key moment for Chemring and followed a multi-year effort to establish Chemring Australia as the second qualified source for F-35 countermeasures, alongside our US facility in Tennessee.

In order to protect and grow Chemring's position as the number one global supplier of countermeasures, significant investment is being made over the next two years to modernise and automate our facilities, and to increase our capacity to meet expected market demand. The £50m investment project to upgrade, automate and increase capacity at the Group's countermeasures facility in Tennessee is progressing to plan. This project is expected to be completed in 2021 and will mean that we have fully automated production lines in all three of our countermeasures businesses in the US, the UK and Australia. The Board believes that this investment, together with the consolidation of the three geographical countermeasures businesses into a single, global structure that is aligned to our key customers and market opportunities, will be a key driver of the Group's future prosperity.

Elsewhere, the Group made excellent progress on its strategy to move away from commoditised product lines to focus on higher margin and more predictable revenue streams. On 15 November 2018 the Board announced that it had decided to exit the commoditised energetics businesses located in Florida and Derby. These businesses were treated as discontinued operations and shown as held for sale in the 2018 annual report and accounts.

The sale of Chemring Military Products, Inc. and Chemring Defence UK Limited and the closure of Chemring Prime Contracts were all completed during the year, and the sale of Chemring Ordnance, Inc. was announced on 21 November 2019. This concludes our programme of disposals which has reduced the Group's exposure to a significant amount of operational and reputational risk, and enables greater focus on the niche specialist energetic devices and materials businesses in Chicago and Scotland, where the Group has strong intellectual property and high barriers to entry. These businesses enjoyed a stronger year driven by favourable market conditions and the consolidation of our California site into Chicago.

The high-quality high explosives business in Norway was adversely impacted in the first half of the year as a result of the failure of aged manufacturing equipment. This equipment was replaced and this, together with further investment plans, is expected to deliver a significant increase in capacity to meet growing customer demand.

The Sensors & Information sector had a strong year, with growth being driven by increased revenues from both US and UK businesses. The Sensors & Information business in the US has moved into the delivery phase of the Husky Mounted Detection System ("HMDS"), the US Department of Defense's ("US DoD") Explosive Hazard Detection Program of Record,

and received delivery orders of a further \$30m in the year. The transition from R&D progressed to plan with the ramp-up in production being achieved and customer deliveries being made on schedule. This sole-source contract is expected to provide a recurring level of business over the next decade.

The Group's position on the US chemical and biological detection Programs of Record continues to progress, with activity focusing on the engineering, manufacturing and development ("EMD") phases, and in ensuring that we have a technically and commercially winning solution to the Aerosol and Vapor Chemical Agent Detector ("AVCAD"). In October 2019, following a successful critical design review, we received an order for a further 75 units under the EMD phase of the program. The DoD's sourcing strategy is expected to be determined once the EMD phase concludes in late 2020.

It was an excellent year for Roke, our information-security business, where the focus on investing in its people and in ensuring they have the right mix of skills to meet market needs has supported strong revenue growth.

Roke's data science capabilities, especially in machine learning, streaming analytics and autonomous systems, have grown rapidly. These capabilities are vital to help customers interpret and exploit the diverse data challenges that are critical for modern competitive advantage.

Roke and Chemring Technology Solutions ("CTS") were restructured in the year, with CTS's electronic warfare ("EW") and individual electronic countermeasures ("IECM") capabilities consolidated into Roke's existing defence business. This has both removed cost and created a business with global reach and one that is able to support defence customers, whether government or other defence contractors, at

each part of the value chain from pre-concept research and innovation right through to design, manufacture and in-service support.

In August, Roke was chosen as a prime industrial partner on the Defence Science and Technology Laboratory's SERAPIS framework. The six-year research framework will focus on new and mission-critical capabilities for C4ISR communication systems and networks, space systems, synthetic environments and simulation technology to support human capability development. Roke was awarded Lot 1 of six capability areas, and will also work with industrial partners on Lots 3 and 6.

We continue to actively explore opportunities to expand Roke's capabilities and offerings, particularly into commercial and international markets. As part of this we have recently established Roke USA, Inc. which provides the platform from which to transition technologies created in the UK into the US.

Revenue from continuing operations for the year was up 13% to £335.2m (2018: £297.4m), driven by strong performance in the Sensors & Information segment, as deliveries commenced on the HMDS IDIQ contract and Roke enjoyed a strong year.

The underlying operating profit from continuing operations of £44.0m (2018: £31.0m) resulted in an underlying operating margin of 13.1% (2018: 10.4%). The increase in margin primarily reflects the positive impact of the phased restart of our Salisbury site and growth in our niche energetics businesses, combined with a stronger year in Sensors & Information due to increased revenues on the HMDS IDIQ contract and in Roke's information-security business.

The Group's order book at 31 October 2019 was £449m (2018: £394m), of which approximately £287m is scheduled for delivery during 2020, representing cover of approximately 76% of expected FY20 revenue (2018: 70%). The increase since 31 October 2018 is primarily attributable to the F-35 countermeasures order received by our Australian subsidiary and the continued growth in our niche businesses.

Statutory operating profit from continuing operations was £31.3m (2018: £15.9m loss) and after statutory finance expenses of £4.6m (2018: £6.1m), statutory profit before tax from continuing operations was £26.7m (2018: £22.0m loss), giving statutory earnings per share from continuing operations of 8.2p (2018: 14.6p loss). The statutory loss from discontinued operations was £1.2m (2018: £65.0m loss), including a loss on disposal of £2.8m relating to the sale of Chemring Military Products, Inc. and Chemring Defence UK Limited, giving a statutory profit of £21.9m (2018: £105.8m loss) from continuing and discontinued operations.

Chairman's statement continued

Governance and ethics

We have taken significant steps to strengthen our governance during the year with the introduction of the Operational Framework and the issue of an updated Code of Conduct. These both underpin our drive to ensure that our employees always do the right thing and that Chemring conducts its business in a responsible and ethical manner.

Strategy

The Group's strategy is to deliver profitable growth by operating in markets where we have differentiators such as intellectual property, niche technology and high barriers to entry.

In a number of our markets we are already market leader, or one of the market leaders. This is particularly so in Countermeasures & Energetics and to a growing extent in Sensors & Information as a result of our recent long-term contract wins.

We will maintain and grow our positions in Countermeasures & Energetics, investing in modernisation and automation to improve operational effectiveness and reliability, and to increase capacity. In Sensors & Information our focus is on expanding the Group's product, service and capability offerings in the areas of tactical electronic warfare and cyber-security, and in building a technology-based strategy for growth beyond current US DoD Programs of Record.

We will continually review the portfolio, to ensure that we maintain sustainable niche positions where technical and qualification barriers to entry enable high margins.

In recent years, significant focus has been placed on building a safe and resilient business that is able to deliver margin progression through continuous improvement in operational performance and execution. We shall continue to invest in both our infrastructure and people in order to deliver this strategy.

People

I am delighted that this year our commitment as a Board to ensuring that we spend time with employees has led to a different level of interaction with teams at different sites globally. Meeting with small groups of people at all levels has reinforced the Board's view of the talent within the business and it is impressive to hear first hand the commitment and passion of individuals to meeting the needs of our customers.

Continuous development of our people is core to the focus on improving the quality of our business.

Technical training in operations processes and safety continues to have a high profile and I am very pleased that the Group has invested

in resources to develop this further, alongside broader management and leadership skills in 2019.

On behalf of the Board I thank all employees for their high level of commitment and enthusiasm.

Dividends

The Board is recommending a final dividend in respect of the year ended 31 October 2019 of 2.4p (2018: 2.2p) per ordinary share. With the interim dividend of 1.2p per share (2018: 1.1p), this results in a total dividend of 3.6p (2018: 3.3p) per share.

If approved, the final dividend will be paid on 24 April 2020 to shareholders on the register on 3 April 2020. In accordance with accounting standards, this final dividend has not been recorded as a liability as at 31 October 2019.

Board of directors

On 8 August 2018, Daniel Dayan gave notice of his intention to step down as a non-executive director of the Board and Chairman of the Group's Remuneration Committee. He formally stepped down from the Board on 30 November 2018.

Andrew Davies assumed the role of Chairman of the Remuneration Committee on 8 August 2018. He will be stepping down as Chairman following the Annual General Meeting in March 2020 but will remain on the Remuneration Committee.

Stephen King was appointed as a non-executive director on 1 December 2018 and was appointed as Chairman of the Audit Committee on 1 August 2019.

Laurie Bowen was appointed as a non-executive director on 1 August 2019. She will assume the role of Chairman of the Remuneration Committee following the Annual General Meeting in March 2020.

Nigel Young, who has now served as a non-executive director for nearly seven years, has indicated his intention to retire on 30 April 2020, when his current appointment comes to an end.

Current trading and outlook

Trading since the start of the current financial year has been in line with expectations across all businesses.

While we continue to work towards a more balanced delivery of revenue and profit, the expected profile of orders, revenue and margins in 2020, combined with routine seasonality within the business, means that the Group expects its trading performance to be weighted towards the second half of the financial year.

The order book of continuing businesses as at 31 October 2019 was £449m, of which £287m is currently expected to be recognised as revenue in 2020.

The Board's expectations for the Group's 2020 trading performance from continuing operations remain unchanged.

The Board is focused on continuing to restructure, simplify and build a stronger business with a renewed purpose. With high-technology products and market-leading positions Chemring has the platforms for long-term future growth.

Carl-Peter Forster

Chairman
16 December 2019

Group Chief Executive's review

Executing our strategy

It has been an exceptionally busy year in which we continued to deliver our current mission of building a stronger business. We have implemented significant changes to improve safety, strengthen leadership and corporate governance and embed continuous improvement across the Group.

We have also changed the structure of the business and the way in which we operate. In doing so we are improving the quality of the business and redefining our purpose. Collectively we are changing the culture of Chemring to one of close collaboration, responsible behaviour and belief in our core values – Safety, Excellence and Innovation.

Introduction

2019 was my first full year as Chief Executive of Chemring and I have been heartened by the positive manner in which our people have embraced the challenge of building a stronger and improved business.

Whilst much has changed since I joined the Group, my initial impressions of our significant capabilities and strengths remain unchanged. The depth and spread of our technology and know-how, the robustness of our market positions across our home markets of the US, the UK, Europe and Australia, and the quality of our people, combine to provide a significant opportunity for future growth.

To remain competitive and successful we must relentlessly deliver on our commitments to all of our stakeholders, be they customers, industry partners, shareholders or employees; it is through this that we will continue to forge greater credibility, trust and belief in the future of Chemring. It was therefore pleasing to report that, despite some operational challenges in the first half of the year, overall performance for the year was in line with our expectations.

Safety

Our goal remains zero harm which will be achieved through establishing and embedding a proactive safety culture which focuses on the control and interaction of people, plant and process. In the past year we have invested significant effort on the journey to achieve this imperative, and this effort is resulting in the continued improvement in safety performance globally.

Michael Ord Group Chief Executive

Our strategy

01

Target growing niches

02

Win market share

03

Grow our US business

04

Manage the portfolio

Read more on
Pages 14 and 15

Our values

Our values form the foundation of our organisation and our strategy.

Safety

We place safety at the heart of everything we do.

Excellence

We are focused on ensuring we consistently meet high standards in all that we do.

Innovation

We create world-class solutions and develop world-class thinking.

Group Chief Executive's review continued

Safety continued

We have introduced a new three-year safety strategy and plan across the Group. This has progressed well, with all key milestones of the plan having been met. Revised health, safety and environmental standards and guidelines have been implemented, as have our Fundamental Safety Rules.

The Group KPI of Total Recordable Injury Frequency ("TRIF") has tracked reduction in injuries over the past fourteen months with the rate dropping from 2.77 to 0.79. This KPI monitors the number of recordable injuries per 200,000 man-hours worked over a rolling twelve-month period. In addition, our process safety indicators are driving improvement actions that reduce the potential for an energetic event that could cause harm to our people and facilities.

As part of the plan, we continue to introduce stronger HSE assurance processes that ensure compliance to our standards and benchmarks the business against best practice. This, in addition to our facility surveys and our increased focus on process hazard reviews for both new and legacy assets, will ensure that we design, maintain and operate our processes with the highest levels of integrity.

Strategy and structure

Following a review of the business portfolio the Board concluded that our future focus should be on those niche areas of the market where we have sustainable competitive advantage through incumbent supplier status and high barriers to entry, and where our products and services are underpinned by our rich intellectual property and know-how.

We therefore announced that we would exit the commoditised energetics businesses, located in Derby and Florida, and that we would be reorganised under two high-quality business sectors, Sensors & Information and Countermeasures & Energetics. We also

concluded that we would protect and grow our positions across defence, security and commercial sectors and focus on our home markets of the US, the UK, Europe and Australia.

Exiting the commoditised energetics sector was an area of attention during the year and it is therefore very pleasing to report that the sales of Chemring Military Products and Chemring Defence UK and the closure of Chemring Prime Contracts were all completed in year. The sale of the remaining business, Chemring Ordnance, was announced on 21 November 2019 and is expected to complete by the end of Q2 FY20. These disposals will enable a greater focus on our niche specialist energetic devices and materials businesses in Chicago, Scotland and Norway.

We have already seen the benefits of this reorganisation in our Sensors & Information sector, where we have world-leading technologies and development capabilities. The integration of Chemring Technology Solutions ("CTS") capabilities into Roke's existing defence business has created a business with extended reach and one that is able to support defence customers, whether government or other defence contractors, at all stages of technical readiness, from pre-concept research and innovation, through to design, manufacture and in-service support. It has also provided the platform to transition our electronic warfare technology created in the UK into the US market. To facilitate this Roke established a US footprint with the incorporation of Roke USA, Inc.

There is growing collaboration between our US and UK businesses and for the first time Roke and Chemring Sensors & Electronic Systems ("CSES") have a single aligned strategy capturing shared technology development and shared business winning campaigns. This provides a strong foundation for our Sensors & Information sector.

We also have significant opportunities in the Countermeasures & Energetics sector where we are investing in safety, automation, modernisation and capacity expansion in order to meet expected market demand. We are taking steps to consolidate our three geographical countermeasures businesses into a single, global structure that is aligned to our key customers and market opportunities. This move will enable us to more effectively leverage our countermeasures businesses to improve our strategic growth opportunities and market competitiveness. The creation of a single integrated multinational business will be a significant step forward for the Group.

Culture

The realignment of the sectors has created the opportunity for greater levels of interaction and collaboration across the Group which is both

Read more about Sensors & Information
Page 20

delivering positive results in terms of financial and operational performance, and is assisting the work being done to embed our values based Chemring culture.

The new structure is enabling greater focus on our strategic investments and a more robust implementation of our Operational Framework, which was introduced in January 2019 and is now embedded across the business. This is the reference source to all mandated policies across the Group and is the backbone for our values, behaviours and ways of working, and provides the necessary governance to enable us to operate in a safe, consistent and accountable way.

This year, alongside the resetting of the structure around two sectors, we made further progress towards the strengthening of the leadership team in the UK and the US. There were changes made to the leadership at seven of the Group's operating subsidiaries, and I have assumed the responsibilities previously held by the centralised role of Group Strategy Director.

In addition, a comprehensive review of the culture at Chemring, carried out through face-to-face discussions with over 350 of our colleagues at all locations and at all levels, provided insights for each of the business leaders to enable them to take positive action in creating a cohesive, supportive and collaborative values-based culture.

Conclusion

With a number of significant operational and strategic milestones achieved this year, our near-term imperative is to continue on the journey to build a stronger business; however we will balance our focus and actions on both short-term performance and long-term value creation.

I would like to thank all my colleagues at Chemring for their commitment and sheer hard work over the past year.

While we are still in the early stages of our transformation, we have collectively made significant progress, and I have every confidence in our future success.

Michael Ord
Group Chief Executive
16 December 2019

Q&A with Michael Ord

What has been the most rewarding aspect during your first 12 months as Chief Executive at Chemring?

Working with such a positive team of people within Chemring has been by far the most rewarding aspect of the job to date. All meaningful and lasting change comes from inside to out; it is never the other way around. We have some hugely talented and extremely passionate people across our Company, at all levels, and I have been impressed by the way that they have embraced change. In driving excellence and collaboration I am certain that we will make a success of Chemring.

What have you done to ensure that safety is paramount?

Safety is one of our core values. We have introduced a new health and safety strategy and plan, in addition to new safety KPIs and performance monitoring tools. Revised HSE standards and guidelines have been implemented, as have our Fundamental Safety Rules which focus on high-risk behaviour. But what I am most pleased with is the huge amount of work that has been done by all of our 2,500 employees across the whole business with regard to strengthening our approach to safety in everything we do. That doesn't just apply to staff who work at our Countermeasures & Energetics businesses, but employees who work in an office environment too. I'm really pleased to see that people are grasping that everyone going home safely at the end of the day is our number one priority.

What is the most immediate challenge that Chemring faces?

I think that our biggest collective challenge is around building our credibility and confidence in our ability to deliver. It's about making promises, and keeping them. Whether they be promises to external customers or shareholders or internally to colleagues. As a business we have to generate a track record of people being able to trust Chemring as a company which is able to deliver. I see people around the business working very hard to do this. We have a values framework within the Company: Safety, Excellence and Innovation. Performance doesn't counteract any of these. I want our staff to feel empowered to deliver their promises and commitments, but by doing that safely, with an eye for excellence and looking at new ideas and what innovation can be brought into the business.

What has been done to improve the culture of the Company?

We have worked hard to make sure that the culture within Chemring is one that our staff want to work within. Having the ethos of always doing the right thing is so important to our business. Two areas that we have used to really strengthen this across the Company is by rolling out the Operational Framework. This sets out all of the policies and procedures by which we run the Company, to make it far stronger and more successful. The next part is the Code of Conduct, which is essentially about our employee behaviours and the behaviour that is expected of them. The Code of Conduct sets out how our employees should do the right thing in their interactions with colleagues, customers, suppliers and local communities, and should take personal responsibility for their actions. The Code of Conduct provides guidance on this.

Can you explain the restructuring of the business sectors?

Over the last 12 months, we have really looked at the structure of the business to make sure that we are organised in a way that makes us as successful as we can be. Early on, we looked closely at the businesses that were within the Company, and determined that some of the businesses within the commoditised energetics area would be better owned by someone else. We have since sold Chemring Ordnance, Chemring Military Products and Chemring Defence UK and closed Chemring Prime Contracts. This will allow us to really focus on the two new sectors that we have organised the Company into: Sensors & Information and Countermeasures & Energetics. Both of these have unique niche positions. We have great intellectual property and know-how, and growth plans in both of these areas. The Board fully supports the direction of travel with regard to looking to maximise our opportunities.

How have you determined the strategic direction of the Company?

The strategic direction of the Company was an area I was determined to improve when I joined Chemring. What I wanted to do was to make sure that all of the leaders of our businesses across Chemring had a strong voice in the direction in which we are heading. To that end, all of the businesses completed a strategic planning round on an individual and sectorial basis. We then merged these together to produce a total business strategy. This was then reviewed by the Board, which endorsed the direction of travel. All of the businesses put down ambitious plans, with growth and investment for now and the future.

Can we expect any M&A activity during 2020?

Business restructuring and site consolidation has been a key element of the Group's focus over recent years, as we have sought to integrate earlier acquisitions and right-size the business to match current market demand. A lot of heavy lifting has taken place over the past year as we have sought to divest non-core activities, realign the sectors and invest in the opportunities that are available to us. We've always said that we are open to acquisitions but only if they enhance shareholder value and fit in with our wider growth plans. If a suitable acquisition target presented itself then we would assess it on a case-by-case basis but there is more than enough organic growth for us to be pursuing at present.

Business model

Creating value

We focus on providing innovative solutions that meet our customer requirements efficiently and on time.

Key strengths	Our values	What we do
Employees Highly skilled workforce operating in niche capability areas	Safety We place safety at the heart of everything we do. • We operate safely and manage risk. • We promote best safety practice across the business and beyond. • We ensure we minimise our impact on the environment.	Invest in people, processes and products Chemring is a technology business with approximately 2,500 employees worldwide. We invest in our future by developing the capabilities of our people, maintaining safe and efficient operations and developing next-generation solutions to meet our customers' current and emerging needs.
Customer relationships Long-term, high-quality customer relations, often at Tier 1 level with "Five Eyes" governments	Excellence We are focused on ensuring we consistently meet high standards in all that we do. • An ethos of continuous improvement is core to our approach. • We take actions to ensure that we maintain and deliver operational excellence. • We deliver on our promises.	Win orders We operate in niche markets in the global defence and security market. Our targeted investments ensure we are competitively positioned to offer reliable, state-of-the-art solutions to meet customers' needs. In Countermeasures & Energetics, we are the world's largest supplier of countermeasures, with our leading technology and manufacturing position. In Energetics, we win based on the technical superiority of our products. In Sensors & Information, we maintain our technological leadership to meet ever more demanding customer requirements.
Supplier collaboration Key partnerships with supply chain to deliver customer value	Innovation We create world-class solutions and develop world-class thinking. • We inspire imaginative solutions. • We work together to turn ideas into technologies and solutions. • We value collaboration and sharing experience.	Deliver solutions We focus on providing innovative solutions that meet our customer requirements efficiently and on time. In addition to our capital and technology investments, we also invest in continuous improvement, which is key to minimise cycle time from order to delivery.
Facilities Investment in facilities, including automation to deliver quality and efficiency		

Outcomes

Investment

Our investment in property, plant and equipment in the year totalled £40.7m. In addition, we invested £56.2m in product development, of which £47.2m was customer funded.

Good progress is being made on the capacity expansion project at the Tennessee countermeasures site and, excluding significant investments such as this, we aim that investment at least matches depreciation and amortisation each year.

Investment

£96.9m (2018: £64.9m)

Cash flow

We aim to convert 100% of underlying EBITDA to underlying operating cash flow over the medium term, accepting timing differences will arise at individual period ends.

In 2019, the conversion ratio was 104%, reflecting strong operating cash generation and the continued focus on managing working capital.

Cash conversion

104% (2018: 89%)

Dividends

For the year ended 31 October 2019, our dividend will be 3.6p per share, an increase of 9% on the prior year, subject to the approval of the final dividend at the Annual General Meeting.

Dividend

3.6p

(+9%)

Stakeholder value

Shareholders

We return money to our shareholders through dividends and, through the execution of our strategy, we grow the value of their investment over time.

Employees

We provide development opportunities and a safe and rewarding working environment for our employees.

Suppliers

Our suppliers are supported by the procurement of goods and services that we require.

Customers

We provide innovative solutions in response to our customers' requirements.

Communities

We support local jobs and skills and contribute to the communities in which we operate.

Governments

Through paying taxes in the jurisdictions in which we operate, we support the development of public infrastructure and services.

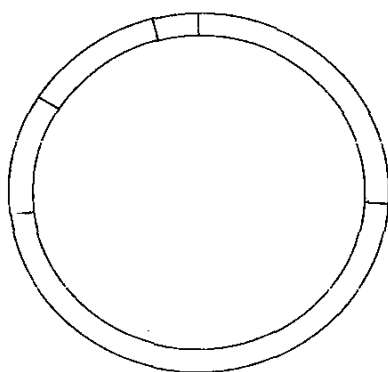
Target markets

Building leading positions

Chemring is an international technology company. Our home markets are the US, the UK, Europe and Australia.

Global sales

% of Chemring's global sales (2015–2019)



UK 26%

US 47%

Europe 11%

Asia Pacific 12%

Rest of the world 4%

US

We are capitalising on our successful investment in explosive hazard detection and next-generation chemical and biological detection technologies where we have won a number of Programs of Record.

The largest part of our investment is in the US Countermeasures sector. We are in the process of expanding capacity at our North American manufacturing operations in order to capitalise on the growing F-35 fleets. F-35 will become the primary fighter for the US Navy, Air Force and Marine Corps, and is intended to remain in service well beyond 2040, likely creating opportunity for a large, stable and recurring countermeasures business in the US as well as with multiple

partner nations in the programme, including both the UK and Australia. Flare countermeasures are expected to remain a priority for manned aircraft fleets, and will continue to be procured alongside other technologies.

Technology and innovation

We have world-leading technologies, incumbent supplier advantage and a depth of expertise in research, design and engineering in many fields, most notably chemical and biological detection, artificial intelligence, autonomous systems, communications and network security and data science.

The US is the world's largest defence market and our US businesses are well positioned to benefit from this growing defence budget.

The FY20 National Defense Authorization Act was passed in July 2019 with a base budget for FY20 of \$545bn. The President's Budget Request also projects the DoD five-year program to settle at \$747bn in FY24*, providing growth to sustain personnel increases in all four services, major equipment programmes such as the F-35 and Investments in technology innovation in electronic warfare, the increased use of unmanned systems and cyber capabilities, as well as renewed emphasis on space-based surveillance systems.

Our US businesses are well positioned to benefit from this increase in budgeted spend:

- F-35 fleet ramp-up will drive a stock build for its new countermeasures to deliver full operational capability for the aircraft. This is expected to continue into the mid-2020s as the fleet achieves full operating capability.
- HMDS is a Program of Record with a planned fleet of 369 systems.
- Procurement spend for chemical and biological situational awareness is set to more than double from FY18 levels.

In addition, several of the identified technology innovation initiatives align with Chemring's Group-wide capabilities in electronic warfare, autonomy, cyber, artificial intelligence and space.

- Source: US Defense Budget Briefing presentation March 2019

The UK is Europe's largest defence market. Chemring sells directly to the MOD and security agencies, as well as to prime contractors.

Expenditure levelled in 2015 but recovery has been slow, with budgets squeezed by major programme commitments in armoured vehicles and ships, but also the continued acquisition of new platforms including the F-35 and the P-8 maritime patrol aircraft.

This pressure on defence spending is likely to remain for the foreseeable future, despite planned increases of over 2% to 2021. For Chemring, the UK MOD accounts for less than 5% of Group revenues, however it is an important partner for developing and qualifying new products.

In the security domain, Chemring is a key provider of capability to our clients, and with a growing concern about many national and international threats, our customers are continuing to increase demand for our services.

Europe combines modern, well-equipped forces with budget-constrained new NATO members on its Eastern borders.

European defence spending is returning to growth, with most Western European and Nordic members increasing 2019 and 2020 budgets and projecting additional equipment procurement. The UK, France and Germany remain key contributors to spend and actively contribute to growth in NATO Europe defence spending, with all three investing in aircraft and wider sensors and electronic warfare. Long-term co-operative programmes are also making a resurgence, with the Franco-German-Spanish Future Combat Air System and the UK-Italian & Swedish Tempest fighter aircraft expected to drive R&D spending through the 2020s.

European defence spending currently falls well short of NATO's 2% GDP target, with only five countries in Europe meeting this target in 2018. Major contributors to spend, such as Germany, have committed to reaching 1.5% of GDP by 2024, suggesting that most markets will not reach the NATO mandated targets by the mid-2020s. Although Chemring competes with highly capable rivals and national champions in Europe, we have succeeded in selling countermeasures, electronic warfare ("EW") and improvised explosive devices ("IED") detectors to customers including Germany, France, Italy and Spain. In addition, we supply energetic materials and components to several leading prime contractors across the region.

The outlook for the market is potentially more positive, and there are some niche opportunities as new NATO members seek to upgrade their capabilities and begin positioning for next-generation development programmes.

Australia is Chemring's fourth home market, and it aims to grow its defence spend to 2% of GDP by 2021.

Australia has a well-equipped military, which draws on both US and UK products as well as highly capable local suppliers. Australia is in the midst of a large-scale equipment and capability refresh. Its 2019–2020 budget of AUD 38.7bn is an uplift on the previous year, and this is likely to continue as the Commonwealth aims to meet its 2% of GDP target by 2021.

Chemring Australia provides the Commonwealth with an on-shore capability in countermeasures manufacture, building on manufacturing know-how shared across the Group. It is positioned to benefit from the global F-35 programme as it gears up to share with our countermeasures business in the US the production of countermeasures for F-35 operators around the world.



Our US businesses are well positioned to benefit from this growing defence budget.

HMDS is a Program of Record with a planned fleet of

369
systems

Australia is Chemring's fourth home market and it aims to grow its defence spending to

2%
of GDP by 2021

Our strategy

Sustainable growth

Our strategy is to deliver profitable growth by focusing on niche markets where we can be the world leader, where there are significant barriers to entry, and where we can grow faster than the wider defence market.

01

Target growing niches

Global defence budgets are growing at 2–3% per year, but military investment in specific capabilities varies more widely. New capabilities to meet new perceived threats, such as electronic warfare and cyber, are growing. Others, such as countermeasures, are subject to catch-up funding, and others are declining as military needs are changing. Our strategy is to target growing niches within the defence and security markets, based on our detailed understanding of customers' new and emerging needs and targeted investment in innovation, largely in the Sensors & Information sector.

Strategy in action

In the US, we are capitalising on our successful investment in next-generation explosive hazard detection and chemical and biological detection technologies where we have won the HMDS and JBTDS Programs of Record. In the UK, we are developing next-generation land electronic warfare and electronic countermeasures to detect and defeat threats in the Cyber and Electromagnetic Activity ("CEMA") domain; and in our national security business, we are increasing our capacity, growing our capability and expanding our footprint to grow with the increasing market demand.

Risks

Our principal risks are documented on pages 30 to 36.

KPI Order book

£449m ↑ 14%
(2018: £394m)

02

Win market share

In addition to targeting innovation-driven growth niches, we also aim to win market share by focusing on meeting customer needs, cost effectively and on time.

The largest part of our current investment is in the Countermeasures & Energetics sector to expand capacity at our North American manufacturing operations to capitalise on the surge in demand for countermeasures driven by the growing F-35 fleets.

Strategy in action

The US

The investment in the US manufacturing operations for our Countermeasures & Energetics sector will improve safety through remote operations, improve quality through automation and deliver extrusion capacity required for next-generation flare production.

Norway

The other target for investment is in Chemring Nobel's explosives facility in Norway to improve productivity and capacity to capitalise on growing demand for its high-quality products.

KPI Order intake

£411m ↑ 14%
(2018: £360m)

03

Grow our US business

Our US businesses deliver more than half the Group's revenue, and their recent successes in the F-35 countermeasures and Sensors & Information Programs of Record affirm their excellent access and insight into the US military needs, including classified programmes.

We will leverage this access to launch our non-US capabilities into the largest market in the world.

Strategy in action

In Countermeasures & Energetics we are sharing conventional, spectral and kinematic flare products and processes developed in the UK and Australia with our US operations and are promoting the benefits of these capabilities to the US customer.

In Sensors & Information, the next-generation HMDS will incorporate a Roke-developed wire detector for which the technology has been transferred into our US operations, and we will extend this to include our developments in land-based Cyber and Electromagnetic activity ("CEMA") and Electronic Countermeasure ("ECM") products.

KPI Revenue

£335m ↑ 13%
(2018: £297m)

04

Manage the portfolio

We continually review our portfolio to ensure it aligns with our strategy and medium to long-term goals.

Strategy in action

The Group required reshaping to align with our strategy. We announced the disposal of our commoditised energetics businesses in November 2018 and this leaves the Group with two sectors, Countermeasures & Energetics and Sensors & Information. This has simplified the Group and enabled greater focus on our growing differentiated Sensors & Information and Countermeasures & Energetics positions, where we have recently made significant progress.

KPI Underlying operating margin

13.1% ↑ 2.7%
(2018: 10.4%)

Key performance indicators

Measuring our progress

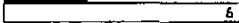
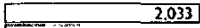
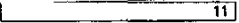
The Group's strategy is underpinned by focusing on a number of key performance indicators ("KPIs").

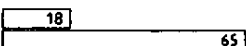
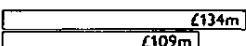
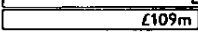
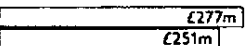
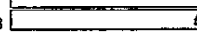
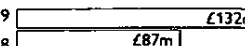
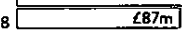
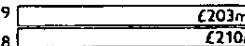
These KPIs enable progress to be monitored on the implementation of the Group's strategy, levels of investment, operational performance and business development. They also give an early insight into how well the principal risks and uncertainties are being managed.

Similar indicators are used to review performance by each of the Group's businesses, albeit that the exact nature of these varies between business units to reflect the differing nature of their operations.

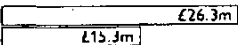
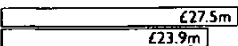
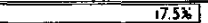
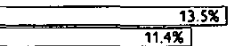
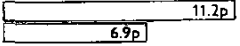
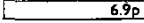
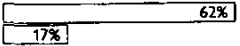
Following a Group-wide safety review in 2019, the safety KPIs have been expanded to include total recordable injuries number and rate and hazard reports.

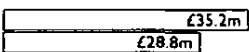
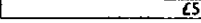
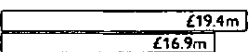
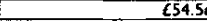
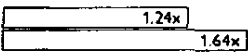
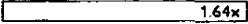
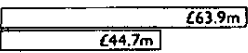
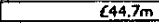
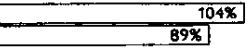
The KPIs that the Board and senior management utilise to assess Group performance are set out below. All financial KPIs refer to continuing operations and therefore exclude businesses classified as discontinued and held for sale.

Strategic priority	Safety		
KPI	1 Number of energetic events causing harm or injury 2 (2018: 6) 2019  2 2018  6	2 Number of near miss and potential hazard reports 2,033 (2018: 2,447) 2019  2,033 2018  2,447	3 Lost time injuries number and frequency rate Number 8 (2018: 11) 2019  8 2018  11 Rate 0.35 (2018: 0.38) 2019  0.35 2018  0.38
Description	Number of energetic events causing harm or injury.	Number of near miss and potential hazards reported.	Number of lost time injuries per 200,000 man hours worked.
Why is it a KPI?	A process safety event is one of the key strategic safety risks of the business. This indicator measures those events that have caused injury or harm.	This indicates employee awareness of hazards and the greater the reporting the more engaged our people are.	Industry standard indicator that provides a measure of injuries that result in a person being away from work for more than one day.
2019 performance	Two events this year compared to six last year. Neither of these events caused life-altering injuries. We will introduce a new indicator next year which measures those events with the potential to cause harm to give a wider performance indicator.	This level of reporting demonstrates that the workforce are engaged and feel comfortable reporting near misses and potentially hazardous situations.	The rate has remained stable. The total numbers are low and the wider Total Recordable Injury Frequency rate provides a better indicator of performance.

	Orders		Revenue
4 Total recordable injuries number and frequency rate Number 18 (2018: 65) 2019  65 Rate 0.79 (2018: 2.77) 2019  2.77	5 Order intake Group £411m (2018: £360m) Sensors & Information 2019  £134m 2018  £109m Countermeasures & Energetics 2019  £277m 2018  £251m	6 Order book Group £449m (2018: £394m) Sensors & Information 2019  £80m 2018  £75m Countermeasures & Energetics 2019  £369m 2018  £318m	7 Revenue Group £335m (2018: £297m) Sensors & Information 2019  £132m 2018  £87m Countermeasures & Energetics 2019  £203m 2018  £210m
Number of recordable injuries per 200,000 man hours worked.	Order intake is measured at expected sales value and represents the last 12 months' activity.	Order book is measured at expected sales value and indicates future potential.	Revenue is measured at sales value less any applicable sales taxes.
This is the rate for all injuries including medical treatment, restricted workday and lost time injuries. It is a more sensitive indicator of occupational safety than Lost Time Injury frequency rates, as more minor events are captured.	The trend of order intake gives an indication of market conditions and our competitiveness within our markets.	The level of order book, in particular for delivery in the next year, gives a degree of confidence in expected future financial performance.	The trend of revenue gives an indication of both the state of the end market and our business' ability to execute orders on time to satisfy customer needs.
In 2018 the reported Total Recordable Injury Frequency Rate ("TRIF") was 2.77, at the end of 2019 this has reduced to 0.79. The reduction has been driven through an increased consistency in the classification of events and the reduction of incidents following the introduction of a Group-wide HSE Management System Framework Standard and HSE Improvement Plan that has improved risk management and increased engagement and the sharing of best practices.	Strong order intake in Countermeasures & Energetics resulted in an order book for the continuing business at year end of £449m (2018: £394m), £287m currently due as revenue in FY20, approximately 76% coverage of FY20 targeted revenue.		Group revenue growth was in line with our expectations, reflecting strong Sensors & Information sector performance driven by the start of the HMDS IDIQ contract and a strong year at Roke. Countermeasures & Energetics sector was impacted by planned site recommissioning in the UK and Australia.

Key performance indicators continued

Strategic priority	Underlying operating profit and margin	Continuing underlying earnings per share	
KPI	8 Underlying operating profit and margin Underlying operating profit Group £44.0m (2018: £31.0m) Sensors & Information 2019  2018  Countermeasures & Energetics 2019  2018  Underlying operating margin Group 13.1% (2018: 10.4%) Sensors & Information 2019  2018  Countermeasures & Energetics 2019  2018 	9 Continuing underlying earnings per share 11.2p (2018: 6.9p) 2019  2018  Change from previous year up 62% (2018: up 17%) 2019  2018 	
Description	Underlying operating profit excludes non-underlying items that could, by their size or nature, distort the Group's underlying quality of earnings. Underlying operating margin is calculated as underlying operating profit divided by revenue.	Calculated as adjusted earnings after tax divided by the number of shares in issue.	
Why is it a KPI?	Underlying operating profit provides a consistent year-on-year measure of the trading performance of the Group's operations. A focus on operating margin allows the impact of changes in revenue and cost base to be monitored, enabling comparisons to be made of management performance and trading effectiveness.	The measurement of underlying EPS reflects all aspects of the Group's income statement including the management of interest and tax.	
2019 performance	The continuing underlying operating profit increased by 42% during the year. The changes in margin of each sector reflect the market conditions, volume changes and performance improvement actions, as set out in this strategic report.	Underlying EPS increased by 62% in 2019, driven by increased underlying operating profit and lower interest costs.	

	Working capital and inventory		Net debt and cash flow	
	10 Working capital Group £90.5m (2018: £83.7m) Sensors & Information 2019  2018  Countermeasures & Energetics 2019  2018 	11 Inventory Group £78.1m (2018: £71.4m) Sensors & Information 2019  2018  Countermeasures & Energetics 2019  2018 	12 Net debt: continuing underlying EBITDA 1.24x (2018: 1.64x) 2019  2018 	13 Continuing underlying operating cash flow £63.9m (2018: £44.7m) 2019  2018  Conversion of EBITDA into operating cash 104% (2018: 89%) 2019  2018 
	Working capital is defined as inventories, trade and other receivables, less trade and other payables.	Inventory is measured at cost.	Measured as net debt divided by EBITDA for the previous 12 months.	Cash flow from continuing operating activities before tax outflows, non-underlying items and pension payments.
	Efficiently turning profit into cash demands a degree of control over working capital.	The primary focus for improvement in working capital is inventory.	This is a measure of leverage within the business and is a banking covenant.	This is a key measure to ensure profit turns into cash in short order.
	Working capital as a percentage of revenue improved from 28% to 27%.	Inventory increased as preparation made for Q1 deliveries with all sites expected to be operational in H1 FY20.	This has decreased in 2019, as EBITDA has increased and net debt has decreased.	Operating cash flow increased in 2019 as an increase in operating profit was supplemented by the enhanced focus on working capital.

Focus on

Sensors & Information

Chemring's Sensors & Information products include world-leading systems for detecting improvised explosive devices ("IEDs"), chemical and biological agents, and technologies for detecting, intercepting and jamming electronic communications. The Group is also a leading contract research and development supplier, trusted by government and industrial partners worldwide to solve the most technically challenging mission-critical issues.

Operating across commercial, national security and defence domains, the Sensors & Information sector is constantly innovating and evolving to enable customers to deliver competitive advantage, and to defend their people, assets and information.

Key facts

Revenue

£131.9m

(2018: £87.3m)

Underlying operating profit

£26.3m

(2018: £15.3m)

Order book

£80m

(2018: £75m)

Underlying operating margin

19.9%

(2018: 17.5%)

Statutory operating profit

£19.7m

(2018: £5.2m)

Sensors & Information in action

Within the electronic warfare sector we deliver complete Signal Intelligence ("SIGINT") capabilities, from tactical mounted and dismounted systems through to strategic signals intelligence and monitoring.

Roke has expanded its offerings in national security resulting in recent contract wins with the National Crime Agency and the National Cyber Security Centre to increase resilience of critical national infrastructure.

Strategy

The Sensors & Information sector remains Chemring's principal area of focus for long-term growth, reflecting customer demand and opportunities in this area.

We continue to focus on expanding the Group's product, service and capability offerings in the areas of electronic warfare, cyber-security and data science, and in building a technology-based strategy for growth beyond current DoD Programs of Record in the areas of IED, chemical and biological threat detection.

The Group's specialist contract research and development business, Roke, operates in the advanced cyber-security market, and investing in recruiting, developing and retaining our people, together with expanding our geographical and customer coverage, is key to profitable growth in this area.

Roke's data science capabilities, especially in machine learning, streaming analytics and autonomous systems, have grown rapidly. These capabilities are vital to help customers interpret and exploit the diverse data challenges that are critical for modern competitive advantage.

We continue to actively explore opportunities to expand Roke's capabilities and offerings, particularly into commercial and international markets. As part of this we have recently established Roke USA, Inc. in the US which provides the platform from which to transition the electronic warfare and other technologies created in the UK and commercialise it in the US.

There is growing collaboration between our US, UK and Australian businesses and for the first time Roke and CSES have a single aligned strategy which captures the individual businesses' focus areas and also their shared campaigns.

Markets

Customer budgets are rising, as are research and development efforts in support of US Programs of Record in the counter-IED, chemical and biological detection markets.

The increasing threat to information security, together with the proliferation of autonomous systems and artificial intelligence, is resulting in customer budgets for Roke's services continuing to improve. Continued investment in capability in this area is ongoing to optimise the opportunity for Chemring.

Performance

Revenue for Sensors & Information increased significantly by 51% to £131.9m (2018: £87.3m) and underlying operating profit increased by 71.9% to £26.3m (2018: £15.3m), as underlying operating margin improved to 19.9% (2018: 17.5%). The Sensors & Information business in the US has moved into the delivery phase of the HMDS Program of Record and continues to focus on the engineering, manufacturing and development

("EMD") and testing phases of the biological and chemical detection Programs of Record. Roke's information security business continues to grow.

On a constant currency basis revenue would have risen 47% to £128.3m and underlying operating profit would have been up 67% to £25.6m.

The statutory operating profit for the year was £19.7m (2018: £5.2m).

Key developments in the year on the major US Programs of Record are summarised below.

The US DoD's Explosive Hazard Detection ("EHD") program, through the Husky Mounted Detection System ("HMDS") program, which is a spiral development program, with concurrent development, trialling, and manufacturing to be undertaken, continues to progress as expected. Under the previously awarded IDIQ sole-source contract vehicles, further delivery orders of \$30m were received in the year. The ramp-up to production progressed as planned and customer deliveries were made on schedule in the year.

We expect this program to run for the next decade providing a recurring level of business as the US Army moves to its objective of producing and fielding a fleet of 369 HMDS by mid-2021. The new fleet will be comprised of both refurbished and new HMDS and this activity will run alongside technology upgrade programs.

The Joint Biological Tactical Detection System ("JBTD") program moved into the Biological Point System Assessment phase in March 2018. The DoD is undertaking testing of our product, after which we expect a production decision in early 2020.

In 2018, we bid and won a second biological program, the Enhanced Maritime Biological Detection System ("EMBD"), where the customer is the US Navy. Our initial contract award for Engineering Manufacturing Development ("EMD") and LRIP was in the form of a \$24m IDIQ, against which we received delivery orders of \$5m in 2018 and a further delivery order in this year of \$9m. The program is expected to be worth up to \$100m over five to ten years once in full rate production.

The Aerosol and Vapor Chemical Agent Detector ("AVCAD") is progressing through the EMD phase as expected. The EMD and LRIP phases are expected to be worth approximately \$18m in the period to 2022. Following this the customer is expected to have a requirement of up to \$800m. Chemring is currently one of two contractors selected for this competitive program. In October 2019, following a successful critical design review, we received an order for a further 75 units under the EMD phase of the program. The next customer procurement decision point is expected to be at the conclusion of the EMD phase in early 2021.

The markets for electronic warfare, cyber-security and data science capabilities, in which Roke is a leading participant, have been buoyant in the

year. Roke has expanded its offerings resulting in recent wins with the National Crime Agency to tackle child abuse and sexual exploitation, the National Cyber Security Centre to increase resilience of critical national infrastructure and the Defence Science and Technology Laboratory ("DSTL") to research and develop new capabilities through the SERAPIS framework. This has driven double digit growth in both revenue and underlying operating profit.

Opportunities and outlook

The focus for Sensors & Information continues to be on expanding the Group's product, service and capability offerings in the areas of electronic warfare, cyber-security and data science, and securing positions on the US DoD Programs of Record.

In the US, focus has turned to the execution phase on contracts. Mobilisation has started, with strong initial deliveries in 2019 on the HMDS program and the focus continues to be ensuring the Virginia and North Carolina facilities are mobilised and resourced to deliver the AVCAD, EMBD, JBTD and HMDS contracts.

Supporting the UK Government across national security and defence, and non-governmental industries in high-value manufacturing and infrastructure, Roke will continue to focus on their customers' missions: to enable them to deliver competitive advantage, defend their people, assets and secrets, and defeat their adversaries. With a focus on emerging technologies in communications, cyber, automation and data science, Roke will deliver research, engineering and advisory services using its expert people and capabilities. Concurrently, Roke is seeking to expand its capabilities into commercial and international markets over the medium term.

The order book for Sensors & Information at 31 October 2019 was £80.0m (2018: £75.4m), of which £68m is expected to be delivered in 2020, providing 52% cover of expected 2020 revenue.

2020 trading performance for Sensors & Information is expected to show a continuation of the levels of business seen in 2019. No new US Programs are expected to commence in the year.



We continue to focus on expanding the Group's product, service and capability offerings. 

Health & safety

Our goal is zero harm, not as a statistical target but as a moral imperative that will be achieved by establishing a strong proactive safety culture.

Our approach

Our approach is to establish a strong proactive safety culture through the interaction between people, plant and process. This will be delivered through a Group Strategic HSE Improvement Plan that has three themes:

- the control of major accident hazards;
- injury prevention; and
- HSE risk management.

To inform our approach we commissioned an independent safety review to benchmark the business against other major accident hazard industry sectors.

Achievements

2019 has been a year of reflection that has resulted in a step change in safety and risk management to ensure the safe delivery of our business. Our key milestone achievements:

- implementation of Group Strategic HSE Improvement Plan;
- new HSE Management System Framework Standard;
- implementation of Fundamental Safety Rules;
- stronger assurance and risk management processes;
- improved learning from HSE events across the Group; and
- executive leadership HSE meetings.

Control of major accident hazards

Parts of our business involve managing the risk of major accident hazards. These hazards are different from managing the hazards associated with personal injuries and require the proactive management of process safety to ensure that we design, maintain and operate with integrity. We continue to invest in both new processes and in the remediation of legacy processes, the design of which are subject to rigorous process hazard reviews. These reduce the likelihood of energetic events and remove the requirement for people to be exposed to energetic material.

We recognise that process safety is not only achieved through design, but also through the maintenance of barriers designed to prevent and mitigate energetic events.

As such, we have introduced new requirements for all our major accident hazard facilities to conduct regular reviews to identify potential process safety events and ensure that barriers are proactively managed and maintained.

Injury prevention

Injury prevention focuses on the reduction of injuries through the adoption of safety as an inherent part of everything we do. This is enacted through safety leadership, clear expectations, accountability and establishing a safety culture that drives learning and improvement, not blame.

In the last year we have introduced regular HSE leadership meetings to review, challenge and inform the Group HSE plan. These are attended by all business leaders and chaired by the Group Chief Executive. Further to this we recognised that applying basic controls at the point of risk can reduce the exposure of our people to serious harm. For this reason we have introduced our Group-wide "Fundamental Safety Rules". These are a set of non-negotiable rules, which reinforce individual accountability at both front-line and leadership levels, and clearly set out our behavioural expectations to protect our people from harm. We know that occupational injuries are often the symptom of systemic issues. It is therefore important to go beyond immediate "active failures" to create and embed a learning culture that identifies and addresses the underlying "root causes". Taking a learning approach that goes beyond the individual we have established monthly learning review panels that maximise and share our learnings from incidents, near misses and best practices across the Group to drive continual improvement and the prevention of incidents.

Our philosophy of injury prevention goes beyond physical harm and looks towards the prevention of psychological harm. This year we have started a journey on addressing mental health through our "It's OK to say, you are not OK" campaign. Moving forward we are conducting pilot work to examine the management of workplace stress that will then be implemented across the Group.

HSE risk management

Safe delivery of our business is achieved through the management of risk and is built around understanding our risks, establishing clear expectations and consistency. To evolve this we have retired the Group Safety Policy Manual and replaced it with the HSE Management System

Framework Standard. This framework puts our HSE Policy into practice by setting standards on eight core elements across the Group to drive a more robust and common approach to the management of HSE. Each business is audited at least every two years to ensure compliance, with high-priority non-compliances being reported and monitored at Executive Committee level.

We have invested significant effort over the last twelve months in order to realise our goal of zero harm, strengthening the foundations for improvement; we are now starting to see improvement in our safety performance.

Policies and practices

The Board recognises that the highest levels of safety are required in order to protect employees, product users and the general public. The Board believes that all incidents and injuries are preventable, and that all employees have the right to expect to return home safely at the end of every working day.

The Group Chief Executive has overall responsibility for health, safety and environmental matters across the Group. The Group Health & Safety Director reports directly to the Group Chief Executive, and is responsible for the effective administration and implementation of the Group's health, safety, security and environment strategy. The Group Health & Safety Director is a member of the Executive Committee and reports on the performance of all businesses against agreed targets and objectives. The Group Chief Executive reports monthly to the Board on all key health and safety issues.

The Board requires that all businesses systematically manage their health and safety hazards, set objectives and monitor progress by regular measurement, audit and review. Each managing director is responsible for the management of health and safety within their business, and for providing adequate resources to satisfy the Board's requirements. All managing directors have health and safety related objectives incorporated within their annual bonus plan.

Managers and supervisors in the Group's businesses are required to enforce procedures, and to provide leadership and commitment to promote and embrace a positive health and safety

culture. The Board emphasises the importance of individual responsibility for health and safety at all levels of the organisation, and expects employees to report potential hazards, to be involved in implementing solutions, and to adhere to rules and procedures.

A key element in the continuous improvement of health and safety management is sharing best practice and lessons learnt from incidents across the Group's businesses and the wider industry. Accidents, incidents and near misses are investigated, with actions generated to prevent recurrence.

Our HSE performance

We measure our HSE performance to reflect both occupational safety and process safety.

Occupational safety

Occupational safety is measured through lost time injury rates ("LTI") and total recordable injury frequency rates ("TRIF") in line with OSHA reporting based on 200,000 working hours.

In 2019 our lost time injury rate was 0.35 compared to 0.38 in 2018 showing a slight improvement. This reflected eleven injuries that resulted in people being away from work for more than one day. We are pleased to report there were no fatalities or life-changing injuries. Our total recordable injury frequency rate was 0.79 compared to 2.77 in 2018, showing a significant reduction; this represented a total of eighteen injuries. The reduction in the TRIF rate was the result of improvements in reporting and an increased focus on recordable injury reduction. In addition to our incident frequency rates we

proactively measure safety through near miss reporting. More specifically we monitor High Potential Near Miss events; these are near miss events that have the potential for serious injury. These are investigated and prioritised as if the serious injury had occurred and the lessons learnt are shared across the Group. In 2019 we had a total of five High Potential Near Miss events.

Process safety

Process safety is measured through both reactive and proactive indicators, namely the number of energetic events that caused harm or injury and process safety near miss events. In 2019 a total of two energetic events were reported compared to six in 2018. There were no life-altering injuries as a result of these events. One of the incidents occurred at our flare manufacturing facility in Kilgore in the US. A full investigation has been conducted and actions have been taken to prevent the incident from occurring again in the future. In addition to our reactive metrics we also measure process safety near miss events, with a total of 901 recorded in 2019 compared to 1,154 in 2018.

During 2019 we trialled a new leading indicator that classifies the near miss energetic events based on their potential to cause harm. This type of event is a precursor to people being harmed by a process event and tracking this metric allows the organisation to focus on and learn from these precursor events before anyone is exposed to harm. Having completed the trials during 2019, we will introduce this as a performance indicator for our businesses during the current financial year.

UK countermeasures incident – August 2018

In August 2018, an incident occurred at our UK countermeasures facility that resulted in the death of one of our colleagues. The incident was subject to extensive investigation both internally and by the Health and Safety Executive. Lessons learnt from the incident have been shared across the Group.

0.35

LTI rate
(2018: 0.38)

0.79

TRIF rate
(2018: 2.77)

2

Injuries from energetic events
(2018: 6)

Environment

Our goal of zero harm goes beyond the management of safety. We are committed to environmental sustainability, both globally and in our local communities, and reducing our environmental impact.

Our approach

We are actively seeking ways to reduce our impact on the environment through the reduction of energy consumption and waste through local projects and the setting of improvement goals.

Policy and practice

Our goal of zero harm goes beyond the management of safety and recognises our impact on the environment. All of the Group businesses are certified to the environmental management system ISO 14001, which requires the setting of environmental goals and objectives within our businesses to deliver local improvements with performance monitored at Group level. As we move forward we will be setting Group milestones, focusing on energy usage and waste generation, to drive further improvements in this area. In the UK we have taken the decision to source our electricity supply from renewable energy suppliers.

Land quality

The Chemring Energetic Devices facility in Chicago, US, is located on a site which has "superfund" status under the US contaminated land regime. The business continues to work with consultants and the regulatory authorities to ensure that its legal obligations in relation to this matter are fully satisfied. The Group carries a £3.2m (2018: £3.2m) provision in respect of environmental liabilities, which the Board considers to be adequate (see note 22).

Environmental incidents

There were no significant environmental incidents in the year.

Performance –

greenhouse gas emissions

The Group is required to report on all of the emission sources of entities that fall within its consolidated financial statements, as specified under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013. The Group does not have responsibility for any emission sources of entities which are not included in its consolidated financial statements.

Absolute values have been converted to carbon dioxide equivalents using the UK Government Conversion Factors for Company Reporting 2017. The reporting period covered aligns with the Group's financial year ended 31 October 2019. The Group is not required to report on its Scope 3 emissions.



We are actively seeking ways to reduce our impact on the environment. 

Scope 1 emissions

Combustion of fuel in any premises, machinery or equipment operated, owned or controlled by the Group	Quantity (Mwh)	Conversion factor	CO ₂ e (tonnes)
Gas	33,264	0.184	6,116
Heating oil	10,288	0.268	2,755
Liquid petroleum gas	1,075	0.214	230
Fuels consumed by company-owned and leased vehicles, excluding business travel and employee commuting	Quantity (tonnes)	Conversion factor	CO₂e (tonnes)
Diesel	45	3.088	139
Liquid petroleum gas	66	2.937	193
Petroleum	91	2.998	273
The operation or control of any manufacturing process by the Group			CO₂e (tonnes)
On-site waste incineration			1,834
Total Scope 1 emissions			11,540

With reference to the six Kyoto substances, the Group does not emit hydrofluorocarbons, perfluorocarbons or sulphur hexafluoride. Values for carbon dioxide, methane and nitrous oxides are included in the above figures.

Scope 2 emissions

Electricity:	Quantity (Mwh)	Conversion factor	CO ₂ e (tonnes)
Australia	1,108	0.750	831
Norway	46,931	0.008	375
UK	17,983	0.279	5,012
US	24,916	0.435	10,833
Total Scope 2 emissions			17,051

The Group uses revenue for intensity measurement, which it considers to be the most reliable comparator.

	2019	2018
Total emissions (tonnes CO ₂)	28,591	30,589
Group revenue (£m) continuing and discontinued operations	378.6	436.0
Total CO₂ tonnes per £m of revenue	76	70

The UK businesses participate in the CRC Energy Efficiency Scheme, with the exception of Chemring Energetics UK, which operates under a Climate Change Agreement.

Waste

	2019 (tonnes)	2018 (tonnes)	2017 (tonnes)	2016 (tonnes)	2015 (tonnes)
Recycled, non-hazardous	474	700	945	956	968
Recycled, hazardous	154	393	652	64	287
Not recycled, non-hazardous	537	716	1,343	782	748
Not recycled, hazardous	795	478	321	942	696
Total	1,960	2,287	3,261	2,744	2,699
	2019 m ³	2018 m ³	2017 m ³	2016 m ³	2015 m ³
Total water consumption	790,286	802,776	663,917	682,185	721,401

People

Chemring people are at the heart of our business. It is through our people that we will progress our strategy and ensure that we realise the potential for growth within each sector.

Our approach

Our focus on people capability continued in 2019 with the introduction of new leaders into many parts of the business and a comprehensive review of culture in every location.

Continuous improvement is our core ethos, underpinned by our values of Safety, Excellence and Innovation. Our people approach focuses on the core areas of talent and culture, investing in our people in support of business growth.

Talent

"The acquisition, development and retention of talent for Chemring today and tomorrow."

Culture

"How we behave and the environment we create to enable our talent, processes and brand to flourish."

Our future is predicated on our ability to attract, develop and retain talented individuals.

Leadership

During the year we refreshed the leaders at a significant number of our business units as well as formalising our leadership approach within the US with the appointment of a President for the region. Two key leadership events were hosted in the year, bringing together the senior leaders and their teams, from all our businesses. These events had a common theme – Building a Stronger Business. The focus was on creating a strong and cohesive leadership team, with clear expectations and accountability.

Investing in our people

Development and training at all levels is a cornerstone of the drive to continuously improve the quality of our business. The addition of a senior role overseeing people development across the Group, and the creation of a Development Framework for the business are key indicators of our commitment to employee development.

In 2019 there has been renewed focus on the development of a network of Early Careers employees. The Group continues to target and attract increasing numbers of early careers joiners, both direct from school or following degree-level study.

The annual UK Early Careers Conference was established, bringing together all current graduates from the UK and Norway. In the US, a similar

conference for those employees who are graduates in the early stages of their career was hosted in April 2019. These two events have created a global network of graduate calibre employees.

The Board also reviews future management requirements and succession plans on a regular basis.

Future talent

The inaugural Emerging Leaders Programme was completed in the year. Twenty-two high potential future leaders from around the Group commenced this multi-faceted programme in August 2018. The programme included learning modules, one-to-one coaching, live business projects run by senior level sponsors and group work on specific work challenges. Twenty participants successfully completed the programme which will now form part of a wider development approach across the Group.

Our culture

In 2019, a programme of discussion around the culture at Chemring saw over 350 colleagues meeting in small groups to discuss what it is like to work at Chemring, and their thoughts on how this could be developed. Culture is a key part of progressing our strategy and preparing ourselves for future growth.

There are elements of our current culture, especially our pride in the work we do and how this supports our customers and end users, and our sense of purpose, which we must nurture and enhance. There are also some areas of our culture that must evolve. We will continue to do this by focusing on governance, and by embedding our core values of Safety, Excellence and Innovation. This will ensure that all our colleagues can enjoy the same standards of leadership, work environment and support across the organisation.

Particular areas of focus in 2019 have been around communication, wellbeing and development.

Internal communications and engagement

Highlighted in many areas of the culture review was the importance of how we communicate both within and across the business.

We are actively encouraging participation and engagement across Chemring. Our aim is to provide a number of different channels for knowledge sharing, engagement and listening, and to allow employees to hear about and discuss key developments, business performance and to contribute their views.

There are a range of formal and informal channels including all-hands meetings, smaller team briefings, employee forums, direct email addresses and the CEO's vlog, with active Q&A encouraging anyone from across the business to ask a question, and through the Chemring magazine, Chemring-i.

Towards the end of 2019, and in response to feedback from the culture review, we launched a real-time engagement tool which provides dashboard information on employee sentiment across the Group on a continuous basis, and enables employees to provide immediate feedback to changes.

Diversity and inclusion

We are committed to ensuring that we have an inclusive and diverse culture across the Group which reflects the communities we operate in, as well as providing an environment where all our people are able to be their best at work.

The Group's policy is to provide equal opportunities for all employees, irrespective of race, nationality, gender, sexual orientation, marital status, religious or political belief, disability or age. As a Group we are committed to meeting, at a minimum, the labour rights and legislation requirements in each country in which we operate. In practice, we often exceed these requirements. Our employment practices and policies are introduced at newly acquired businesses at the earliest opportunity after they join the Group.

We have a number of formal and informal groups around the business who support and connect people with shared characteristics or interests. These include Women in Engineering groups, Women and Gender Diversity groups, LGBT+ groups and faith based groups.

The Group makes no distinction between disabled and able-bodied persons in recruitment, employment and training, career development and promotion, provided that any disability does not make the particular employment impractical or impossible under the stringent regulatory requirements under which the Group operates.

Employee wellbeing

Throughout 2019 we have focused on raising awareness of wellbeing at work through a number of initiatives across the organisation. The Healthy Workplaces working group focuses on key initiatives to promote wellbeing at work and mental health has been a focus this year. A booklet on mental health and how individuals can help themselves to develop healthy habits has been distributed company wide. Alongside this we have piloted the training of mental health champions in the Roke business and are working with other business units to share these initiatives.

In the community

We recognise that each of the Group's businesses has an important role to play in its local community. We have a recognised community investment policy, which confirms our commitment to support selected charitable causes with a focus on the military and armed services, and those linked to the local communities in which the Group's businesses operate. Each business has its own locally held charity budget, and at a Group level, charitable donations are considered by the Executive Committee.

In June this year, a large number of Chemring UK employees supported the Armed Forces Day event in Salisbury. This event took place over three days and saw school children and the wider local community enjoying demonstrations of Chemring's capability and technology as part of a Science, Technology, Engineering and Maths ("STEM") village set up for the event.

In addition to making cash donations, the Group also encourages and supports employees who undertake voluntary work in the local community, where appropriate. During the year, employees donated their time and services on a wide range of projects, several of which had an educational bias.

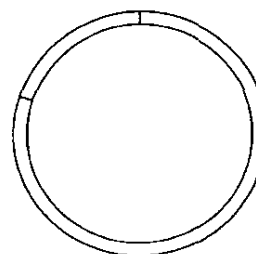
Across the business, our people are involved with a number of educational initiatives and as a business we have relationships with several universities, whereby funding is provided for students' research activities.

We are aware that on occasion our manufacturing activities can impact on the local community. This impact may be due to product proofing or testing for example. In these instances, the businesses seek to actively liaise with local residents and community groups to minimise any impact. The Group is also cognisant of the potential impact of its operations on the local environment, and is addressing this through its environmental strategy.

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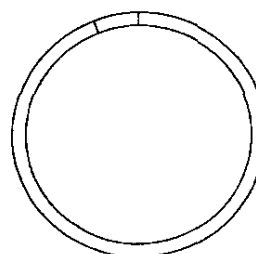
Graduates and apprentices hired in 2019

Graduates and apprentices



Male 80%
Female 20%

Graduates and apprentices



Technical 94%
Business support 6%

Ethics and business conduct

Chemring is committed to conducting its business in an ethical and responsible manner at all times, and in full compliance with all applicable laws and regulations.

Our approach

We are committed to developing a culture within Chemring where everyone does the right thing and takes personal responsibility for their actions. Our Operational Framework and Code of Conduct set out the standards of business conduct and behaviours we expect of all of our businesses, our employees and all third parties who act on our behalf.

We require all employees and third parties who act on our behalf to conduct business honestly and with integrity, and to take personal responsibility for ensuring that our commitment to sound and ethical business conduct is delivered.

Operational Framework

Our Operational Framework, which was implemented on 1 January 2019, incorporates a broad range of more than thirty five new and revised policies and procedures which have now been adopted by all of our businesses. The Operational Framework implements an enhanced governance and compliance framework to enable us to operate in a safe, consistent and accountable way. As part of this enhanced governance framework, we have introduced a requirement for all businesses to complete an operational assurance statement on a half-yearly basis, providing a detailed assessment of their compliance with the Operational Framework.

The output from the operational assurance process will enable us to drive continuous improvement in our governance and compliance framework. It will allow us to monitor and address the evolution of a number of the key risks we face and will become an important area of focus for our internal audit activities in future, as detailed below.

Code of Conduct

During the year the Group adopted an updated Code of Conduct. The Code of Conduct, which sits alongside our Operational Framework, embraces our fundamental values of Safety, Excellence and Innovation. It provides direction to all employees on legal, ethical and risk issues that they may encounter in their day-to-day activities. All employees and all third parties who act on the Group's behalf are required to comply with the Group's standards of behaviour and business conduct, as set out within the Code, and applicable laws and regulations in all of the countries in which the Group operates.

All employees, current and new, are provided with a copy of the Code of Conduct, and receive training on its application to their role within the business.

Our Chemring culture embraces transparency and openness, and we encourage all employees to speak up if they have any concerns. We have a whistleblowing policy and associated procedures

A statement of the Group's compliance with the Modern Slavery Act 2015 can be found on the Group's website at www.chemring.co.uk



We are committed to developing a culture within Chemring where everyone does the right thing. //

Operational
assurance process

Continuous
improvements to
the Operational
Framework

Identification of
risks and areas for
improvement

Internal audit
review and
consideration of
findings

Implementation
of new procedures
and training
programmes

in place which enable all employees to raise concerns, in confidence, about possible improprieties or wrongdoing within the business, without fear of reprisal or retaliation. Employees are able to raise issues by contacting our 24-hour ethics reporting service by phone, email or an external website. All issues reported by employees are taken seriously and investigated appropriately in a confidential manner.

Anti-bribery and corruption

The Group has well-established anti-corruption policies, which are included within our Operational Framework. Specifically, these cover bribery and corruption, gifts and hospitality, and facilitation payments. Our detailed anti-corruption procedures are incorporated within our Bribery Act Compliance Manual ("BACM"), which has been updated this year, and include requirements for:

- each business to routinely conduct informed bribery risk assessments as part of normal operating procedures, to determine the nature and extent of the Group's exposure to potential internal and external risks of bribery and corruption on its behalf by persons associated with it;
- the appointment of all sales partners and other third party advisers, which in all circumstances requires the completion of risk-based due diligence, appropriate management approvals, use of standard form contracts, and ongoing monitoring and review;

- regular mandatory training on BACM and its application to their role for management, supervisors and all employees working within commercial, business development, sales and marketing, finance, procurement, quality and human resource functions;
- the giving and receiving of reasonable, proportionate and appropriate gifts and hospitality in the normal course of business; and
- completion of a BACM Compliance Certificate by each business bi-annually, confirming that all policies and procedures within BACM have been complied with.

During the year, the Group terminated the appointment of a significant number of third party sales partners as part of an initiative to reduce the risk to which the businesses are exposed by virtue of the use of third parties in our routes to market. We have also enhanced our anti-corruption policies and procedures relating to the engagement of sales partners where it is necessary to use them by mandating:

- restrictions on the number of sales partners to be engaged in each territory;
- the preparation of a full business case to justify the appointment of all new third party sales partners in future, including a two-stage bribery risk assessment incorporating the requisite level of risk-based due diligence, which must be approved by the Group Chief Executive before the sales partner is appointed;



Our Code of Conduct embraces our fundamental values of Safety, Excellence and Innovation.

- a full annual reappointment process for all retained sales partners, including recommissioning of the appropriate risk-based due diligence and resubmission of a full business case for approval by the Group Chief Executive; and
- increased reporting requirements for all payments made to third party sales partners and higher risk service providers.

Relevant employees completed updated on-line training on BACM during the year and BACM compliance was a specific area of focus of our internal audit programme.

Human rights

The Group is committed to respecting human rights in the countries in which we do business. Our Code of Conduct and other applicable policies under the Operational Framework support our commitment to ensuring, as far as we are able, that there is no slavery or human trafficking in any part of our business or in our supply chain. All suppliers are provided with a copy of our Supplier Code of Conduct, which requires them to adhere to our ethical standards and expectations, including in relation to human rights. We do not knowingly support or do business with any suppliers who are involved in slavery.

A statement of the Group's compliance with the Modern Slavery Act 2015 can be found on the Group's website at www.chemring.co.uk.

We fully adhere to all relevant government guidelines designed to ensure that our products are not knowingly incorporated into weapons, or other equipment, used for the purposes of terrorism, international repression or the abuse of human rights.

Board of directors

Chairman

Carl-Peter Forster ^R
Non-Executive Chairman

Board length of service
(as at 16 December 2019):
3 years, 7 months

Experience:

- Board experience at Chairman and Chief Executive level
- Extensive international experience within the industrial goods and engineering sectors
- Expertise in operational excellence and lean manufacturing

Carl-Peter Forster joined the Group as an independent non-executive director and Chairman-designate on 1 May 2016, and was appointed Chairman of the Board on 1 July 2016.

Carl-Peter formerly held senior leadership positions in some of the world's largest automotive manufacturers, including BMW, General Motors and Tata Motors (including Jaguar Land Rover).

Carl-Peter is currently the Senior Independent Director at ifm plc and was previously a non-executive director of Rexam PLC, Rolls-Royce plc and Cosworth Ltd. He is also Chairman of Hella KGaA and Kinexon GmbH, a member of the Board of Envisics Ltd, and a member of the Advisory Boards of Rock Lithium, Inc. and PwC. He previously served as Chairman of The London Electric Vehicle Company Ltd and Friedla Tech GmbH, and as a member of the Boards of Volvo Cars Corporation and Geely Automobile Holdings.

Executive directors

Michael Ord
Group Chief Executive

Board length of service
(as at 16 December 2019):
1 year, 6 months

Experience:

- Extensive senior management experience in the defence sector
- International experience in both service and manufacturing industries

Michael Ord was appointed to the Board on 1 June 2018, and appointed as Group Chief Executive on 1 July 2018.

Michael formerly held a number of senior management roles with BAE Systems including Managing Director of their Naval Ships and F-35 Joint Strike Fighter businesses. Prior to his 1996 move to industry Michael had a successful career in the Royal Navy serving for twelve years in a number of engineering management roles.

An Aeronautical Systems Engineering graduate and a Chartered Engineer, Michael has also completed post-graduate management studies at Manchester Business School and is a graduate of Harvard Business School's Advanced Management Programme. He is a trustee of The Education & Training Foundation, and a member of the Royal Aeronautical Society.

Andrew Lewis
Group Finance Director

Board length of service
(as at 16 December 2019):
2 years, 11 months

Experience:

- Extensive international experience in the defence sector
- Board experience at Finance Director level
- Chartered Accountant

Andrew Lewis joined the Group on 9 January 2017 and was appointed to the Board as Group Finance Director on 19 January 2017.

Andrew spent eight years as Group Finance Director of Avon Rubber p.l.c., where he also performed the Interim CEO role during 2015, following the retirement of the previous CEO.

Prior to joining Avon, Andrew was Group Financial Controller of Rotork plc and before that he was a Director at PricewaterhouseCoopers in Bristol and New Zealand.

Sarah Ellard
Group Legal Director
& Company Secretary

Board length of service
(as at 16 December 2019):
8 years, 3 months

Experience:

- Legal, compliance and governance expertise
- Chartered Secretary

Sarah Ellard was appointed as Group Legal Director on 7 October 2011, having been Group Company Secretary since 1998.

Prior to joining the Group, Sarah trained and worked at Ernst & Young LLP. She is a Fellow of the Institute of Chartered Secretaries and Administrators.

Committee membership

- A Audit Committee
 N Nomination Committee
 R Remuneration Committee
 O Denotes Chairman

Non-executive directors

Laurie Bowen ^{A N R}
 Non-Executive Director

Board length of service
 (as at 16 December 2019):
 0 years, 5 months

Experience:

- Board experience at Chief Executive level
- International experience in the technology sector

Laurie Bowen was appointed as an independent non-executive director on 1 August 2019. She is also a non-executive director of Ricardo plc.

Laurie has over thirty years of leadership experience at large multinational telecommunications and technology companies including Cable & Wireless Communications plc, Tata Communications, BT Group plc and IBM. Most recently she was Chief Executive of Telecom Italia Sparkle in the Americas, a subsidiary of the international wholesale arm of Telecom Italia.

Laurie was previously a non-executive director at customer experience technology provider, Transcom Worldwide AB.

Andrew Davies ^{A N O}
 Non-Executive Director

Board length of service
 (as at 16 December 2019):
 3 years, 7 months

Experience:

- Board experience at Chief Executive level
- Extensive knowledge of the international defence industry

Andrew Davies was appointed as an independent non-executive director on 17 May 2016 and was appointed as Chairman of the Remuneration Committee on 8 August 2018.

Andrew is currently Chief Executive of Kier Group PLC. He has a wealth of relevant sector experience, having served in senior operational and strategic roles at executive committee level at BAE Systems plc for more than fourteen years. He was formerly Chief Executive of Wates Group Ltd.

Stephen King ^{A N R}
 Non-Executive Director

Board length of service
 (as at 16 December 2019):
 1 year, 1 month

Experience:

- Executive and non-executive board experience in public and private companies
- Chartered Accountant

Stephen King was appointed as an independent non-executive director on 1 December 2018 and as Chairman of the Audit Committee on 1 August 2019. He is the Senior Independent Director and Chairman of the Audit Committee at TT Electronics plc, and is a non-executive director of BBA Aviation plc, and Bristow Group Inc.

Stephen has a wealth of senior level experience within the industrial, engineering and manufacturing sectors, including a number of executive and non-executive roles. Stephen recently retired as Group Finance Director of Caledonia Investments plc. He was previously a non-executive director and Chairman of the Audit Committee at The Weir Group plc.

Stephen was Finance Director at De La Rue plc from 2003 to 2009, and prior to that at Midlands Electricity plc. A Chartered Accountant, Stephen has also held senior financial positions at Lucas Industries plc and Seaboard plc, and was a non-executive director of Camelot plc.

Nigel Young ^{A N R}
 Senior Independent
 Non-Executive Director

Board length of service
 (as at 16 December 2019):
 6 years, 8 months

Experience:

- Previously Interim Chief Financial Officer of the Group from August 2012 to January 2013
- Finance experience from previous CFO positions
- Chartered Accountant

Nigel Young became a non-executive director on 1 May 2013, following his appointment as Interim Chief Financial Officer in August 2012. He was appointed as Senior Independent Director in March 2016 and served as Chairman of the Audit Committee from 1 May 2013 to 31 July 2019.

Nigel's previous appointments include Finance Director of ALVIS PLC, First Technology PLC, Babcock International Group PLC and Morgan Advanced Materials Plc. Nigel has also undertaken a number of interim finance roles, including one at McBride Plc. He is currently a non-executive director and Chairman of P2i Limited, a provider of liquid repellent nanotechnology, and is a trustee and Board member of Orbis UK, a leading global eye charity.

Corporate governance report

Carl-Peter Forster Chairman

The Board is committed to upholding high standards of corporate governance, protecting and growing shareholder value, and engaging in a fair and transparent manner with all of the Group's stakeholders.

On behalf of the Board, I am pleased to present the corporate governance report for the year ended 31 October 2019. The report explains how the Board operates and how corporate governance is addressed in Chemring.

UK Corporate Governance Code 2018

In the year under review, Chemring remained subject to the UK Corporate Governance Code issued in April 2016 by the Financial Reporting Council (the "2016 Code") and this year's report therefore sets out how we have complied with the 2016 Code. The new UK Corporate Governance Code published in July 2018 (the "2018 Code") became effective for Chemring on 1 November 2019 and we will report on our compliance with the 2018 Code in the 2020 annual report and accounts.

During the year, we developed a plan to address the new requirements of the 2018 Code and took a number of actions to ensure that we would be compliant in the current financial year. Stakeholder engagement is a key theme of the 2018 Code and we therefore instigated our Board-level employee engagement programme during the year, further details of which are set out below. In developing the new directors' remuneration policy which was approved by shareholders in March 2019, the Remuneration Committee also addressed a number of recommendations included in the 2018 Code on executive remuneration arrangements. Further details on the Remuneration Committee's approach to the 2018 Code are set out on pages 68 and 69. I look forward to reporting on our full compliance with the 2018 Code next year.

Board changes

We welcomed two new non-executive directors to the Board during the year. Stephen King joined the Board on 1 December 2018 and Laurie Bowen joined the Board on 1 August 2019.

Stephen has previously served as Finance Director of a number of substantial public companies and on 1 August 2019 he assumed the Chairmanship of the Audit Committee from Nigel Young. Nigel, who has served on the Board as a non-executive director for nearly seven years and has been the Senior Independent Director since March 2016, has indicated that he will retire on 30 April 2020, when his current appointment comes to an end. We thank him for his significant contribution to the Board over the last seven years.

Laurie Bowen, who is a US citizen, brings with her a wealth of experience in technology and engineering businesses, and her international experience is already proving very valuable to the Board. Laurie will assume the Chairmanship of the Remuneration Committee from Andrew Davies following the Annual General Meeting in March 2020. Andrew will continue as a member of the Committee and we thank him for his contribution as Chairman over the last eighteen months.

Details of the appointment process followed for the appointment of the two non-executive directors during the year are set out in the Nomination Committee report on pages 64 and 65.

With Nigel Young's planned retirement, we have instigated a search for another non-executive director and I hope that this will enable us to further enhance the diversity of the Board.

Board effectiveness

The Board as a collective visited several sites during the year and each of the non-executive directors also independently visited a number of our businesses. Our interactions with the management and other employees during these visits are very beneficial to improving the Board's understanding of both the challenges and opportunities within our businesses, and site visits will remain an important part of the Board's annual agenda.

We have continued to build on the strong relationship established with our US Board in recent years, and we held a joint meeting of the two Boards in October, which was also attended by the Presidents of our three US businesses. The President and Chairman of the US Board also attended two of our Board meetings in the UK. Given the importance of our US businesses, it is vital that we strive to maintain positive interactions with the US Board and this will continue to be an area of focus in the year ahead.

Board performance evaluation

In progressing the new Board appointments during the year, we considered on a number of occasions how we could improve our effectiveness by complementing and strengthening the existing range of skills and experience on the Board. We supplemented this with a more formal performance evaluation in the latter part of the year, which is described in detail on page 54. The suggestions made during the evaluation process will be taken into consideration as we continue to improve the effectiveness of the Board.

Governance and Operational Framework

Our new Operational Framework was implemented on 1 January 2019 and provides an enhanced governance framework to enable us to operate in a safe, consistent and accountable way. The first operational assurance statements under the new framework were also received during the year, and these will provide input into our risk management and internal audit activities in future.

Culture and values

The Board recognises its role in establishing the purpose and values of the Group, and embedding these throughout the business. Our core values of Safety, Excellence and Innovation now form the foundation for our organisation and our future strategy, and are reflected in the updated Code of Conduct which we issued during the year.

Our Code of Conduct sets out the standards of behaviour and business conduct we expect of all Chemring employees and all third parties acting on our behalf. It also reinforces the culture the Board wishes to embrace within Chemring of always doing the right thing and taking personal responsibility for our actions. We firmly believe that developing a Chemring culture which embraces responsible behaviour will contribute to the long-term success of the business and all of our stakeholders.

A comprehensive review of the culture within Chemring was carried out in the year through face-to-face discussions with over 350 employees at all businesses and at all levels of the organisation. This provides an important benchmark against which the Board will monitor changes in culture in future using the various engagement mechanisms which we now have in place across the Group.

Employee engagement

In recognition of the requirement under the 2018 Code for the Board to establish a mechanism for engaging directly with our employees, Andrew Davies has been designated as the non-executive director who will engage on behalf of the Board. Andrew held a number of meetings with employees in the UK and in the US during the year, at which he shared with employees a perspective on the role of the Board and provided an opportunity for them to ask questions of him. Further details are provided later in the report. Feedback from the meetings has been very positive, with employees welcoming the opportunity to meet with a non-executive member of the Board, and the insights from these interactions will provide valuable input to the Board's deliberations in future.

Carl-Peter Forster

Chairman

16 December 2019

Compliance with the UK Corporate Governance Code 2016

In the year under review, the Company was required to apply the main and supporting principles of good governance set out in the UK Corporate Governance Code issued in April 2016 by the Financial Reporting Council (the "2016 Code"). The Company was in compliance with the provisions of the 2016 Code throughout the year ended 31 October 2019.

Further details on how the Company applied the principles of the 2016 Code during the year can be found as follows:

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Division of responsibilities	51
The Chairman	51
Non-executive directors	51
Effectiveness	
The composition of the Board	50
Appointments to the Board	64
Commitment	54
Development	55
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Re-election	54
Accountability	
Financial and business reporting	56
Risk management and internal control	56
Audit Committee and auditors	60
Remuneration	
The level and components of remuneration	71
Procedure	66
Relations with shareholders	
Dialogue with shareholders	57
Constructive use of general meetings	57

Corporate governance report continued

Leadership

Governance framework

The Board is responsible for ensuring leadership of the Group through effective oversight and review, and aims to deliver the long-term sustainable success of the business. The Board discharges some of its responsibilities directly in accordance with the formal schedule of matters reserved to it for approval, and discharges others through Board committees and the executive management.

The key responsibilities of the Board, its committees and the executive management are set out below.

The schedule of matters reserved to the Board and the terms of reference of the Board committees are published on the Company's website (www.chemring.co.uk/investors/corporate-governance). The schedule of matters reserved and the terms of reference have been updated to reflect the requirements of the 2018 Code.

The Board

Responsible for promoting the long-term sustainable success of the Group; directing its purpose, values and strategy; oversight of financial and organisational control; ensuring that the Group's businesses have appropriate and effective internal control and risk management systems; and ensuring effective engagement with stakeholders.

Audit Committee

Monitors the integrity of the financial statements, and the effectiveness of the external and internal audit processes.

See page 60

(Audit Committee report)

Nomination Committee

Evaluates the size, structure and composition of the Board, and oversees Board appointments.

See page 64

(Nomination Committee report)

Remuneration Committee

Sets and reviews the directors' remuneration policy, and oversees remuneration arrangements for the senior leadership.

See page 66

(Directors' remuneration report)

The Chief Executive

Responsible for the leadership and day-to-day management of the business, and development and implementation of the Group's strategy.

Executive Committee

Oversees the delivery of the Group's strategy; monitors the operational and financial performance of the businesses; allocates resources across the Group; manages risk; and implements the Group's Operational Framework and governance policies.

The Group Chief Executive chairs the Executive Committee, which meets monthly. The members of the Committee are the executive directors, the President of the Group's US operations, the Group Health & Safety Director, the Chief People Officer and the Group Director of Corporate Affairs. Full details of the Executive Committee members can be found on the Group's website (www.chemring.co.uk).

Risk Management Committee

Oversees the implementation of the risk management policy and framework; identifies the principal risks to which the Group is exposed; monitors risk mitigation plans; and maintains the Group risk register.

Composition of the Board and independence

The Board currently comprises three executive directors and five non-executive directors (including the Chairman). The biographical details of individual directors, including details of their other business commitments, are set out on pages 46 and 47.

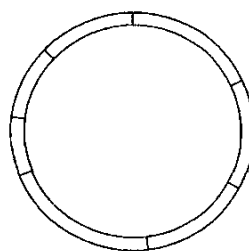
The Board considers all of the current non-executive directors to be independent in judgement and character, and considered Carl-Peter Forster to be independent on his appointment as Chairman. Nigel Young was employed as the Group's Chief Financial Officer for a period of six months from August 2012, prior to his appointment as a non-executive director, but the Board does not consider that this short period of employment impacted his independence, and his contribution to the Board continues to be impartial and objective. Mr Young was appointed as Senior Independent Director in March 2016.

The Board considers that the current balance of executive and non-executive influence on the Board is appropriate for the Company, taking into account its size and status, and serves to ensure that no single director or small group of directors dominate the Board's deliberations and decision making.

Experience of the Board

The members of the Board also maintain the appropriate balance of experience and knowledge of the business to enable them to discharge their duties and responsibilities effectively.

Number of directors with applicable specific experience



Manufacturing	7
Defence	6
Technology	6
International	8
Strategy	3
Marketing	4
Governance	5

Board roles

The roles of Chairman, Chief Executive and Senior Independent Director are separate and clearly defined in accordance with the requirements of the 2016 Code, with the division of responsibilities set out in writing and agreed by the Board.

The key responsibilities of the Board members are set out below.

Chairman

- Responsible for the leadership of the Board and ensuring its overall effectiveness in directing the Group
- Ensures that the Board is kept properly informed and is consulted in a timely manner on all decisions reserved to it
- Promotes a culture of openness and debate, and facilitates constructive relations between the executive and non-executive directors
- Ensures that the training and development needs of directors are identified

Chief Executive

- Responsible for the leadership and day-to-day management of the business
- Develops strategy for Board approval and ensures that the agreed strategy is implemented successfully
- Presents the annual budget and five-year plan to the Board for approval and delivers agreed objectives
- Identifies new business opportunities, and potential acquisitions and disposals
- Manages the Group's risk profile, including the management of health and safety
- Ensures that the Board is fully informed of all key matters

Finance Director

- Supports the Chief Executive in developing and implementing the global finance function
- Oversees the finance functions across the Group
- Ensures effective financial controls and financial reporting processes are in place
- Ensures the Group has adequate bank facilities and financial resources

Senior Independent Director

- Provides support to the Chairman and acts as a trusted sounding board
- Reviews the Chairman's performance with the other non-executive directors
- Available to meet shareholders if they have concerns which cannot be resolved through the normal channels

Non-executive directors

- Participate in the development of strategic objectives, provide constructive challenge and monitor the performance of executive management in achieving the agreed objectives
- Monitor the Group's financial performance
- Consider the integrity of the Group's financial information, and whether the financial controls and risk management systems are robust and defensible
- Determine the appropriate remuneration policy for the executive directors
- Meet periodically with the Group's senior management and visit operations
- Meet regularly without the executive directors being present

Legal Director & Company Secretary

- Oversees legal matters and compliance across the Group
- Secretary to the Board and its committees
- Under the direction of the Chairman, responsible for maintaining good information flows within the Board and its committees
- Develops Board and committee agendas, and collates and distributes papers
- Assists with the induction of new directors
- Keeps directors informed about changes to their duties and responsibilities
- Provides advice on legal, regulatory and corporate governance matters

Corporate governance report continued

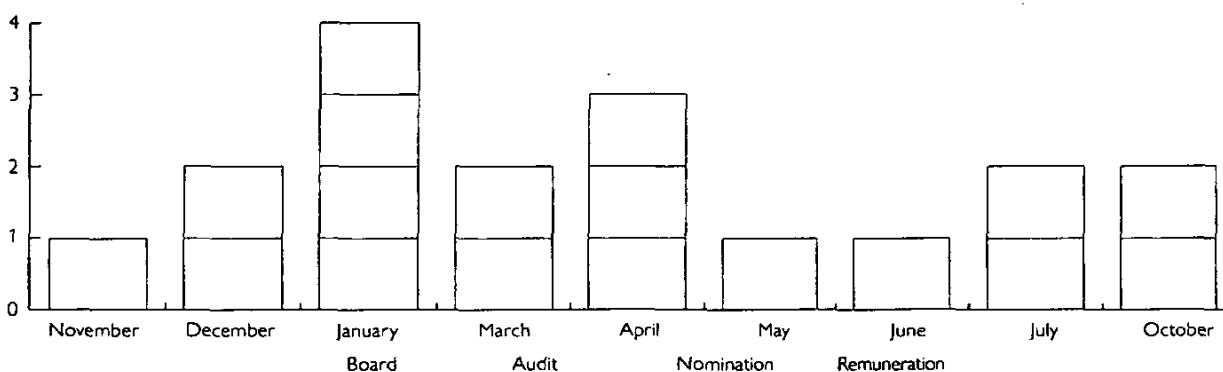
Effectiveness

Board meetings and attendance

The Board convenes for scheduled meetings at least seven times a year. The Board receives a report from the Executive Committee, covering health and safety performance, operational and financial performance, legal, people and investor relations related issues, as a standing agenda item at every scheduled meeting. Members of the senior leadership team, representatives of the US Board and external advisers attend Board meetings by invitation, as appropriate.

The Board aims to meet jointly with the Group's US Board, further details of which are set out on page 54, at least once a year.

Board and committee meetings held during the year



The following table shows the attendance of all directors who served during the year at the meetings of the Board and its committees:

Board member	Board (7 scheduled meetings and 7 ad hoc meetings)	Audit Committee (4 scheduled meetings)	Nomination Committee (4 scheduled meetings)	Remuneration Committee (3 scheduled meetings)
Carl-Peter Forster	14 (14)	—	4 (4)	3 (3)
Laurie Bowen	1 (1)	1 (1)	—	—
Andrew Davies	14 (14)	4 (4)	4 (4)	3 (3)
Daniel Dayan	2 (2)	—	—	—
Sarah Ellard	14 (14)	—	—	—
Stephen King	11 (12)	4 (4)	3 (3)	3 (3)
Andrew Lewis	14 (14)	—	—	—
Michael Ord	14 (14)	—	—	—
Nigel Young	14 (14)	4 (4)	4 (4)	3 (3)

The maximum number of meetings which each director could have attended is shown in brackets.

In addition to the scheduled meetings, seven ad hoc Board meetings were convened to deal with matters arising between scheduled meetings. During the year, the Chairman met regularly with the non-executive directors without the executives being present.

Board focus during the year

Leadership • Approved new appointments to the Board • Completed annual Board performance evaluation • Reviewed proposed changes to the senior leadership team across the Group • Met jointly with the US Board	Financial • Monitored performance of the businesses against the 2019 budget • Approved the 2020 budget • Approved additional bank facilities • Approved the half year results, and the annual report and accounts • Approved the interim dividend and made a recommendation for the final dividend • Reviewed the potential tax implications of the EU State Aid judgement on legacy financing arrangements
Strategy • Approved the updated five-year plan and strategy for the Group • Approved the disposal of Chemring Military Products, Inc., Chemring Defence UK Limited and Chemring Ordnance, Inc. • Developed a capital investment plan for the Group for the next three years and approved the investment in new facilities at the Kilgore site in Tennessee • Considered future capacity requirements for the Group's countermeasures businesses against market and customer projections • Reviewed progress on the US Programs of Record • Reviewed bid defence strategy for the Group	People and culture • Approved the appointment of Andrew Davies as the non-executive director designated to engage with employees on the Board's behalf • Reviewed the results of the Group-wide culture review • Reviewed future employee development plans
Safety and operations • Monitored the health and safety performance of the businesses on a monthly basis • Considered the findings of the Group-wide safety review carried out by ERM • Approved the new Group HSE Strategy and HSE Management System Framework Standard • Visited the UK countermeasures site to review the remedial actions taken following the August 2018 incident • Reviewed operational key performance indicators for the businesses throughout the year • Received briefings on plant shutdowns and associated restart plans • Approved the plan and associated investment for the implementation of new ERP systems across the Group	Governance, risk and regulatory • Approved the Operational Framework and the new Code of Conduct • Developed the action plan for achieving compliance with the 2018 Code • Reviewed the Group's risk register, and completed the annual assessment of the Group's internal control and risk management systems • Considered potential impacts on the Group of a no-deal Brexit • Received updates on key legal issues and regulatory matters impacting the Group • Approved the Group's Modern Slavery Act statement for 2019
Shareholders • Reviewed feedback from the results presentations and institutional investor meetings • Received updates from advisers and the Group Director of Corporate Affairs on current shareholder views on the Group	

Corporate governance report continued

Effectiveness continued

Board site visits

During the year, the Board as a collective visited Chemring Countermeasures UK and Chemring Sensors & Electronics Systems in the US. Site visits enable the Board to obtain a deeper understanding of the business operations, establish relationships with the wider management team and engage directly with employees. The Board generally receives a presentation from management on their business performance, future strategy, and key opportunities and challenges. During the Chemring Countermeasures UK visit, the Board reviewed the remedial action taken following the August 2018 incident and also visited the new thrusted flare facility. At Chemring Sensors & Electronics Systems, the Board reviewed progress on technology developments under the US Programs of Record.

Interaction with the US Board

Whilst in the US, the Board held a joint meeting with our US Board, which was also attended by the Presidents of our three US businesses. The US Board is established under our Special Security Agreement ("SSA") with the US Government and includes three independent US directors approved by the US Government. The SSA imposes certain restrictions on the degree of control and influence we can exert over our US businesses and it is imperative that we maintain a strong relationship with the US Board, in order to ensure that we are fulfilling our own governance obligations. The Group Chief Executive and Group Finance Director are both members of the US Board. Our broader interaction with the US Board has increased in the last few years, and the increased collaboration is proving very beneficial from both an operational and governance perspective.

Board appointments and re-election of directors

New appointments to the Board and its committees are made by the Board on the recommendation of the Nomination Committee. Further details of the appointment process are set out in the Nomination Committee report on pages 64 and 65.

In accordance with the Company's Articles of Association, all directors are required to submit themselves for re-election at each Annual General Meeting. The papers accompanying the Notice of Annual General Meeting include a statement from the Chairman confirming that the performance of each non-executive director seeking re-election at the meeting continues to be effective and that each director continues to demonstrate commitment to their role.

In order to ensure that all directors are able to devote sufficient time to fulfilment of their duties, Board approval was sought for new outside appointments during the year, in accordance with the 2018 Code.

Diversity

The Board recognises the importance of promoting diversity in its broadest sense, both at the Board level and across the entire business. The Board currently includes two female members and is cognisant of the voluntary targets set out in the Hampton-Alexander Review that by 2020 at least 33% of Board and Executive Committee members, and their direct reports, should be female. We remain committed to further improving the diversity of the Board when appropriate opportunities arise.

Further details on the Board's approach to diversity are set out in the Nomination Committee report on pages 64 and 65.

Induction

An internal induction programme on the Group's operations, and its strategic and business plans, is provided for newly-appointed directors. Directors are invited to meet key members of the senior management team at the earliest opportunity, and site visits are arranged to facilitate their understanding of the Group's operations.

The Company Secretary also provides detailed information on the operation of the Board and its committees, directors' legal duties, and responsibilities on appointment.

Case study on induction of Stephen King

On joining the Board as a non-executive director in December 2018, Stephen King was provided with a tailored induction programme designed to ensure that he gained a full understanding of the Group, including our business, strategy, culture and values, governance and financial position.

As part of this process, Stephen met with key members of the UK and US head office teams, who provided briefings on various aspects of the Group's business and operations, and he also met with the Group's principal advisers, including the external auditor.

Within a few months following his appointment, Stephen visited sites in both the UK and the US, which provided a deeper understanding of our manufacturing operations, particularly within Countermeasures & Energetics, and also enabled Stephen to meet members of the senior leadership team and various other employees within the business.

Performance evaluation

During the year, the Board conducted an evaluation of its performance led by the Chairman and the Company Secretary. A questionnaire was developed which was intended to evaluate how the Board was performing against the Financial Reporting Council's Guidance on Board Effectiveness published in July 2018, and to establish whether there were any other specific improvements to the composition and operation of the Board and its committees which individual directors considered would be beneficial.

The individual responses to the questionnaires were consolidated into a report which was considered by the Chairman prior to submission to the Board. The Board concluded that it had worked well together during the year and, with the most recent appointments, the balance of skills and experience on the Board had improved. The Board identified certain actions to further improve its effectiveness, based on the key conclusions of the evaluation process, and these will be addressed in the year ahead.

Priorities for the year ahead include:

- Increasing focus on future strategic growth.
- Strengthening the Board's interactions with key stakeholders.
- Board meeting structure and agendas to be reviewed to ensure that sufficient time is allocated to strategic matters, including market and technology developments, and to allow for deeper discussion.
- Ensuring a greater emphasis on culture and values.
- Developing the Board and Nomination Committee's focus on succession planning.

In addition to the formal performance evaluation, the Chairman and non-executive directors also reviewed the individual performance of the executive directors as part of the annual remuneration review.

Training and development

The Company meets the cost of appropriate external training for directors, the requirement for which is kept under review by the Chairman.

Directors are continually updated on the Group's businesses and the matters affecting the markets in which they operate. The Group Legal Director & Company Secretary updates the Board on a regular basis with regards to regulatory changes affecting the directors and the Group's operations generally, and briefings are provided by the Group's advisers on key developments in areas such as financial reporting and executive remuneration practice.

Independent advice

All directors are entitled to take independent professional advice in furtherance of their duties at the Company's expense, should the need arise. No director had reason to seek such advice during the year.

Conflicts of interest

All directors have a duty under the Companies Act 2006 (the "2006 Act") to avoid a situation in which he or she has or can have a direct or indirect interest that conflicts or may possibly conflict with the interests of the Company. The Company's Articles of Association include provisions for dealing with directors' conflicts of interest in accordance with the 2006 Act. The Company has procedures in place to deal with situations where directors may have any such conflicts, which require the Board to:

- consider each conflict situation separately on its particular facts;
- consider the conflict situation in conjunction with the rest of their duties under the 2006 Act;
- keep records and Board minutes as to authorisations granted by directors and the scope of any approvals given; and
- regularly review conflict authorisation.

Corporate governance report continued

Accountability

Operational Framework

Our Operational Framework, which was implemented on 1 January 2019, incorporates a broad range of policies and procedures which have now been adopted by all of our businesses, and provides an enhanced governance structure to enable us to operate in a safe, consistent and accountable way. As part of this enhanced governance structure, we have also introduced a requirement for all businesses to complete a detailed operational assurance statement on a half-yearly basis, providing an assessment of their compliance with the Operational Framework.

The output from the operational assurance process provides assurance to the Board that our internal systems and controls are operating effectively, and will become an important focus for our internal audit and risk management activities in future.

Risk management and internal control

The Board is responsible for determining the nature and extent of the risks that it is willing to take to achieve its strategic objectives. The Board is also responsible for ensuring that the Group's risk management and internal control systems are effective across the businesses, and that appropriate risk mitigation plans are in place.

The Board undertakes an annual review of the effectiveness of the Group's systems of internal control, including financial, operational and compliance controls, and risk management systems. Further details of the review undertaken during the financial year ended 31 October 2019 are set out on page 29.

Financial and business reporting

The statement of directors' responsibilities in respect of the financial statements and accounting records maintained by the Company is set out on pages 88 and 89.

Having taken all the matters considered by the Board and brought to the attention of the Board during the year into account, the Board is satisfied that the annual report and accounts for the year ended 31 October 2019, taken as a whole, is fair, balanced and understandable. Furthermore, the Board believes that the disclosures set out on pages 4 to 45 provide the information necessary to assess the Company's performance, business model and strategy.

Going concern

The Group's business activities, key performance indicators, and principal risks and uncertainties are set out within the strategic report on pages 4 to 45. As part of a regular assessment of the Group's working capital and financing position, the directors have prepared a detailed bottom-up two-year trading budget and cash flow forecast for the period through to October 2021, being at least twelve months after the date of approval of the financial statements. This is in addition to the Group's longer-term strategic planning process. In assessing the forecast, the directors have considered:

- trading risks presented by the current economic conditions in the defence market, particularly in relation to government budgets and expenditure;
- the timing of delivery of key contracts;
- the impact of macro-economic factors, particularly interest rates and foreign exchange rates;
- the status of the Group's existing financial arrangements and associated covenant requirements;
- progress made in developing and implementing cost reduction programmes and operational improvements;

- the availability of mitigating actions should business activities fall behind current expectations, including the deferral of discretionary overheads and restricting cash flows; and
- the long-term nature of the Group's business which, taken together with the Group's order book, provides a satisfactory level of confidence to the Board in respect of trading.

Additional detailed sensitivity analysis has been performed on the forecasts to consider the impact of severe, but plausible, reasonable worst case scenarios on the covenant requirements. These scenarios, which sensitised the forecasts for specific identified risks, modelled the reduction in anticipated levels of underlying EBITDA and the associated increase in net debt. These scenarios included significant delays to major contracts. These sensitised scenarios show headroom on all covenant test dates for the foreseeable future.

The directors have acknowledged the latest guidance on going concern. The directors have considered the latest forecasts available to them and additional sensitivity analysis has been prepared on the covenant forecasts to consider the impact on covenants of any reduction in anticipated levels of EBITDA. This sensitised scenario shows headroom on all covenant test dates. After consideration of the above, the directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. Thus, they continue to support the going concern basis in preparing the financial statements.

Long-term viability statement

The directors have assessed the Group's viability over a three-year period to October 2022 based on the above assessment, combined with the Group's strategic planning process, which gives greater certainty over the forecasting assumptions used. Based on this assessment, the directors have a reasonable expectation that the Group will be able to continue in operation and meet all its liabilities as they fall due up to October 2022.

The directors have chosen a three-year period to assess viability to reflect the characteristics of the Group's end markets. These range from multi-year contracts such as the US Programs of Record to shorter-term orders such as those awarded to Roke.

In considering our viability statements we have considered the principal risks and uncertainties discussed in the strategic report and assessed the impact.

Sensitivity analyses were run to model the financial and operational impact of plausible downside scenarios of these risk events occurring individually or in combination. These included the impacts of a further deterioration in the macroeconomic environment, underperformance in executing the Group's strategy, failure to improve operational performance, material movements in foreign exchange rates and a change in regulations impacting the Group's internal financing structure. Consideration was also given to the plausibility of the occurrence of other individual events that in their own right could have a material impact on the Group's viability.

Based on the consolidated financial impact of the sensitivity analyses and associated mitigating internal controls and risk management actions that are either now in place or could be implemented, the Board has been able to conclude that the Group will be able to maintain sufficient bank facilities to meet its funding needs over the three-year period.

Indemnities and insurance

The Company maintains directors' and officers' liability insurance in respect of legal action against its directors and officers. The Company has also granted indemnities to its directors to the extent provided by law (which are qualifying third party indemnities within the meaning of section 236 of the Companies Act 2006). Neither the insurance nor the indemnities provide cover in the event of proven fraudulent or dishonest activity.

Stakeholder engagement

The Board recognises that the long-term success of Chemring will be enhanced by a positive interaction with all of its stakeholders. Effective engagement allows the Board to understand relevant stakeholder views on material issues which may impact the business, and helps to inform the Board's decision making and the discharge of directors' duties under section 172 of the Companies Act 2006.

Stakeholder engagement takes place at all levels within the Chemring organisation. The table below identifies some of our key stakeholders, and explains how the Board and our businesses engage with them.

Shareholders

The continued support of shareholders is vital to the long-term success of the Group. We aim to ensure that shareholders, both institutional investors and individual shareholders, have a good understanding of the Group's strategy, performance and future prospects, and that shareholder views are taken into consideration in relation to major developments in the business.

How we engage

We maintain an active dialogue with institutional shareholders through regular briefing meetings and formal presentations following the release of interim and annual results. Meetings are usually attended by the Group Chief Executive and the Group Finance Director, although the Chairman and the Senior Independent Director also meet with shareholders to discuss specific matters. The other non-executive directors are also offered the opportunity to meet with major shareholders and attend meetings if so requested by shareholders.

Communication with private investors is achieved largely through the medium of the interim results statement and the annual report.

Our website (www.chemring.co.uk) provides financial, business and governance information on the Group.

The directors are provided with reports and other written briefings from the Company's brokers, and are regularly informed by the Group Legal Director & Company Secretary about changes to significant shareholdings.

All directors are required to attend and make themselves available to take questions from shareholders or address any concerns at the Annual General Meeting, and at other times of the year, the directors can be contacted at the UK head office.

Annual General Meeting

All substantial issues, including the adoption of the annual report and financial statements, are proposed on separate resolutions at the Annual General Meeting. In line with best practice guidelines, voting at the Annual General Meeting is conducted by way of a poll. This allows all votes to be counted, not just those of shareholders who attend the meeting. Poll results are published on the Company's website as soon as practicable following the conclusion of the meeting. The Notice of the Annual General Meeting is sent to shareholders at least twenty working days before the meeting.

Employees

People are at the heart of our business, and are critical to the delivery of our strategy and the future growth of the business. We wish to ensure that all employees feel valued, and can perform to their full potential in a safe and inclusive environment. This will enable us to maintain a competent and committed workforce, and to develop and retain talent.

How we engage

We engage with employees through a range of formal and informal channels, including all-hands meetings and team briefings, and through works councils, representative bodies and trade unions. "Chemring-i", our in-house magazine, is distributed to all employees twice a year, and provides an overview of key developments and activities across all of the businesses.

The Group Chief Executive produces a monthly vlog, which is accessible on our intranet and is also screened more broadly within our facilities. All employees are encouraged to submit questions to the Group Chief Executive and propose topics for discussion in the monthly vlog.

Following the Group-wide culture review which was carried out during the year, in which over 350 employees participated, we have launched a real-time employee engagement tool which will provide much greater visibility on business sentiment in future and will help to shape our future people focus.

We are encouraging increased networking across the Group, and the two events which were held during the year for graduates and other employees in the early part of their careers were very successful.

At the Board level and in accordance with the requirements of the 2018 Code, Andrew Davies has been designated as the non-executive director who will engage with employees on behalf of the Board. During the year, Andrew met with employees at businesses both in the UK and the US.

Corporate governance report continued

Stakeholder engagement continued

Employees continued

How we engage continued

Whilst each meeting was different due to the nature of the businesses, Andrew has sought to cover the following key topics at each meeting:

- An explanation of the role of the Board and each of the Board members, and, where appropriate, how the UK and US Boards work together.
- An explanation of how his discussions built on the discussions already held with groups of employees on safety, culture and operational excellence.
- A discussion on how employees are able to share their views within the organisation.

- Consideration of how employees are encouraged to live the Chemring values, and how they observe others around them doing the same.
- Arrangements by which employees can contact Andrew again should they wish to do so.

More broadly, the Board takes the opportunity to speak with a wide range of employees during collective and individual site visits. The Group Chief Executive and other executives regularly attend all-hands meetings when visiting the businesses. The Chairman meets regularly with members of the senior leadership team and also attended the Emerging Leaders Programme during the year. The Chief People Officer briefs the Board on people-related issues throughout the year.

Customers

Our business is focused on providing innovative solutions that meet our customer requirements efficiently and on time.

Understanding the needs of our customers is crucial to the delivery of reliable and effective products and services, which underpins the performance and success of our business.

How we engage

Our businesses develop and maintain close relationships with customers through regular meetings, teaming arrangements and engagement at all levels of the customer organisation. The Group Chief Executive and President of our US operations support the businesses through regular interactions with senior customer representatives, and feedback is provided to the Board on key customer engagement on a regular basis.

We also regularly partner with customers on technology development programmes, which ensures that future product and capability development aligns with customer requirements.

We participate in industry forums and events. We also exhibit at selected trade shows which facilitate a high-level of interaction with a wide range of customers and provide an opportunity for us to brief customers on our broad range of capabilities across the Group.

Suppliers

We rely on our suppliers to provide us with products and services which meet our stringent safety, quality and performance requirements, which in turn allows us to fulfil our commitments to our customers. Effective management of our supply chain is critical to ensuring the continuity of our business and reliable operational performance.

How we engage

Our businesses engage with a broad range of suppliers on a day-to-day basis, to ensure that our expectations are met from a quality and delivery perspective, and to ensure that our suppliers are conducting their business in line with our own standards.

Long-term agreements are entered into with key suppliers where appropriate, and performance targets are regularly agreed with suppliers to assist with our drive for continuous improvement.

Our Supplier Code of Conduct is issued to all suppliers and sets out the standards of business conduct we expect of them, including in relation to human rights.

Communities

We recognise that each of our businesses has an important role to play in its local community. We also acknowledge the impact of our business on wider society.

How we engage

Our businesses each engage with their local communities in a wide variety of ways, and support local community projects from sponsorship of local sports teams to providing assistance to neighbouring schools and other educational establishments.

Our community investment policy confirms our commitment to support selected charitable causes with a focus on the military and the armed forces, our local communities and STEM-related initiatives. In addition to making cash donations, we also encourage and support employees who undertake voluntary work in the local community.

During the year, our UK businesses participated in the Armed Forces Day event in Salisbury, with a significant presence in the STEM village.

We are cognisant that our manufacturing activities can on occasion impact on the local community, for example when we are proofing products, and we liaise with our neighbours to minimise the impact. We also seek to ensure that our operations do not cause harm to the local environment, in accordance with our environmental strategy.

Governing bodies and regulators

Our businesses operate in highly-regulated environments, and we need to ensure that we maintain our licences to operate and continue to run our business in full compliance with all laws and regulations.

How we engage

We maintain a regular dialogue with governments and regulators, and participate in various industry working groups and trade representative bodies. This enables us to engage in discussions regarding future policy development and planned regulatory changes, and to identify potential opportunities and risks for the business. Where significant investment is planned on one of our facilities, we engage with local governing bodies to ensure their support.

In the US, our Government Security Committee works closely with the US Defense Counterintelligence and Security Agency to ensure that we are operating in full compliance with our Special Security Agreement with the US Government.

Compliance with our Operating Framework, which includes a wide range of legal and compliance policies, is reviewed on a half-yearly basis in accordance with our operational assurance process and the output is reviewed by the Board. The Board receives a regular update on changes to laws and regulations which may impact the business.

Audit Committee report

Stephen King Chairman of the Audit Committee

Audit Committee members

Stephen King (Chairman) (appointed December 2018, appointed Chair August 2019)

Laurie Bowen (appointed August 2019)

Andrew Davies

Nigel Young

Introduction

I am pleased to present my first report as Chairman of the Audit Committee, having taken over the appointment from Nigel Young on 1 August 2019. Nigel served as Chairman of the Committee for more than six years and I would like to convey the Board's thanks for his significant contribution to the Committee during this period.

The Audit Committee continues to play a very important role in the governance of the Group's financial affairs, both through monitoring the integrity of the Group's financial reporting and reviewing material financial reporting judgements. The report provides an overview of the operation of the Committee and its activities during the year. During the early part of the year, the Committee was focused on matters relating to the 2018 financial statements, which were covered in detail in last year's report. The report this year therefore focuses on the Committee's activities in relation to the 2019 half year and full year results, and the external and internal audit activity during 2019.

This was the first full financial year for both our external and internal auditors, following their appointments in 2018. I am pleased to report that KPMG and PwC are fully engaged in their respective roles, and their fresh perspective has been very valuable to the Committee.

Membership of the Committee

The Audit Committee has been established by the Board and is responsible for monitoring the integrity of the Group's financial statements and the effectiveness of the internal and external audit process.

All members of the Committee are independent non-executive directors, and each brings a broad range of financial and business expertise. I have previously served as the finance director of substantial public companies, and therefore possess recent and relevant financial experience. The Board considers that the Committee members possess an appropriate level of independence and offer a depth of financial and commercial experience across various industries, in particular within the defence and technology sectors.

Key responsibilities of the Audit Committee

- Making recommendations on the appointment, reappointment and remuneration of the internal and external auditors.
- Ensuring that an appropriate relationship between the Group and the external auditor is maintained, and overseeing the provision of non-audit services.
- Reviewing and monitoring the external auditor's independence and objectivity.
- Reviewing the effectiveness of the Group's internal controls and risk management systems.
- Considering the effectiveness of the Group's internal audit function and monitoring internal audit activities.
- Reviewing arrangements by which the Group's employees may confidentially raise concerns about possible improprieties.
- Providing guidance to the Board in its consideration of whether the annual report and accounts are fair, balanced and understandable.

Operation of the Committee

The Committee's responsibilities are set out in its terms of reference, which are available on the Company's website. The Committee reviews its terms of reference and its effectiveness annually, and recommends to the Board any changes required as a result of the review.

Meetings of the Committee are attended, at the invitation of the Chairman, by the external auditor, the Chairman of the Board, the Group Chief Executive, the Group Finance Director, the internal auditors and representatives from the Group finance function. The Committee meets with the external and internal auditors on a regular basis without the executive directors being present. The Group Legal Director & Company Secretary acts as secretary to the Committee and minutes of meetings are circulated to all Board members. Details of attendance of members of the Committee at the four meetings held during the year are shown on page 52.

A verbal report on key issues discussed by the Committee is provided to the Board after every meeting.

The Chairman of the Committee meets regularly with the Group Finance Director, the external audit lead partner and the internal audit lead partner outside of scheduled meetings.

The Committee is authorised to seek any information it requires from any employee of the Group in order to perform its duties, and to obtain any outside legal or other professional advice it requires at the Company's expense.

The Committee's activities during the year

Areas of focus	Matters considered
Financial reporting	- Content of the Group's interim and preliminary results announcements and the annual report, and in particular, whether the annual report was fair, balanced and understandable - Appropriateness and disclosure of accounting policies, key judgements and key estimates, including a focus on: - accounting for discontinued operations and assets held for sale, including associated impairments; - use of Alternative Performance Measures; and - impact of IFRS 16, IFRS 9 and IFRIC 23
Risk and control environment	- Effectiveness of the Group's systems of internal control - The Group's going concern status and viability statements - Implementation of new ERP systems across the Group
External audit	- Interim review and full year audit plans - Effectiveness and independence of the external auditor - Non-audit services provided by the external auditor - External auditor's reports on the half year and full year results, and consideration of points raised by the auditor
Internal audit	- Internal audit plan - Effectiveness of the internal auditors and their key findings

Financial reporting

A summary of the significant issues considered in relation to the 2019 financial statements is set out below.

IFRS 16 *Leases* is effective for accounting periods beginning on or after 1 January 2019. The new standard requires lessees to recognise nearly all leases on the balance sheet to reflect their right to use an asset for a period of time and the associated liability for payments. The Committee reviewed the potential impact of the new standard on the Group during the year, and considered the judgements and key assumptions used in the assessment of the impact. The Committee agreed that the Group would account for leases with a minimum value of £50,000 under IFRS 16. The Group's 2020 financial statements will be prepared under the new standard but disclosure of the potential impact has also been included in the 2019 financial statements.

IFRS 9 *Financial Instruments* impacts the recognition and measurement of assets and liabilities in relation to accounting for hedging instruments and introduces the concept of expected credit losses on trading and other

receivables. The Group does not apply hedge accounting but a detailed assessment was carried out of expected credit losses on trade receivables not containing a significant financing component, using the simplified approach set out in IFRS 9. The Committee concluded that the impact of IFRS 9 was not material in this respect given the nature of the Group's customer base, and agreed that the Group would continue with its current policy on provisioning for specific or significantly aged trade receivables.

IFRIC 23 *Uncertainty over Income Tax Treatments* addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of IAS 12 *Income Taxes* and is effective for accounting periods beginning on or after 1 January 2019. The Committee reviewed the tax provisions held by the Group at 31 October 2018 and 30 April 2019, and concluded that IFRIC 23 will have no material impact on the Group's current tax provisions.

Significant issues considered by the Committee in relation to the financial statements

Revenue recognition policies and procedures
The Committee reviews the Group's revenue recognition policies and procedures on an ongoing basis, to ensure that they remain appropriate and that the Group's internal controls are operating effectively in this area. The Committee considered the key assumptions underlying the accounting treatment of any material contract with a customer where judgement on revenue recognition was required.
Recoverability of goodwill, other intangible assets, and the parent company's investments in, and intergroup receivable balances with, subsidiaries
The Committee considered the carrying value of goodwill, intangible assets and the parent company's investments in, and intergroup receivable balances with, subsidiaries held on the balance sheet as at 30 April 2019 and 31 October 2019, against the latest forecasts for the businesses concerned and the future strategic plan for the Group.
Held for sale/discontinued operations
The Committee agreed the presentation of the results of businesses held for sale/discontinued operations.
Capitalised development costs
The Committee continued to monitor the level of development costs capitalised during the year and the periods over which such costs are to be amortised. Detailed reviews of the Group's most significant research and development projects, and their associated capitalised development costs, were undertaken by the Committee in June 2019 and November 2019. It was concluded that no impairment charges were required in 2019.
Alternative Performance Measures
The Committee reviewed the use of Alternative Performance Measures in the interim report and the annual report. The Committee concluded that the use of Alternative Performance Measures did enhance a reader's understanding of the accounts and were presented in a fair, balanced and understandable manner.
Accounting for insurance claim recoveries
The Committee considered the appropriate accounting treatment of insurance claim recoveries received in respect of the 2018 incident at the UK countermeasures site, £15m of which was included in the results for the year.

Audit Committee report continued

The Committee is required to consider whether it is appropriate to adopt the going concern basis in preparing the interim and full year results. In order to satisfy itself that the Group has sufficient financial resources to enable it to continue trading for the foreseeable future, the Committee regularly reviews the adequacy of the Group's financing facilities against future funding requirements and working capital projections. Based on its review of the Group's forecasts during the year and discussions with the external auditor, the Committee recommended to the Board the adoption of the going concern basis for the preparation of the interim and full year results.

The Group is also required to make a statement on its long-term viability in the financial statements. The Committee considered the period over which the Group's viability would be assessed and having concluded that a three-year period was appropriate, the Committee undertook a review of the analysis and projections which supported the viability assessment prior to submission to the Board.

Since the year end, the Committee has reviewed the form and content of the 2019 annual report and accounts, and confirmed to the Board that, taken as a whole, the annual report and accounts is fair, balanced and understandable. The Committee also concluded that the annual report and accounts provides the information necessary to assess the Group's position and performance, business model and strategy.

In making this assessment, the Committee considered:

Is the report fair?
- Is the narrative in the strategic report consistent with the financial statements? - Have any significant matters been omitted?
Is the report balanced?
- Has appropriate prominence been given to both positive and negative aspects of performance during the year? - Is there an appropriate balance between the disclosure of statutory measures of performance and Alternative Performance Measures ("APMs")?
Is the report understandable?
- Is the presentation of performance clear, with consistent use of key performance indicators? - Is there clarity around the use of APMs?

External audit

The Audit Committee is responsible for making recommendations to the Board on the appointment, reappointment and removal of the Company's external auditor. The Committee also undertakes an annual assessment of the auditor's independence and objectivity, taking into account relevant professional and regulatory requirements and the relationship with the auditor as a whole, including the provision of any non-audit services.

Audit effectiveness

The Committee assesses the effectiveness of the external auditor on an ongoing basis, with particular reference to:

- the arrangements for ensuring the external auditor's independence and objectivity;
- the external auditor's fulfilment of the agreed audit plan and any variations from the plan;
- the robustness and perceptiveness of the auditor in their handling of the key accounting and audit judgements;
- the content of the external auditor's reports and internal control recommendations; and
- the feedback received on the conduct of the external audits from key people involved in the audit process.

There are no contractual or similar obligations to restrict the choice of external auditor.

KPMG was appointed as the Group's external auditor in March 2018, following a tender process, and Andrew Campbell-Orde has acted as audit partner since the appointment. The Committee reviewed KPMG's effectiveness in fulfilling the external audit during the year and concluded that KPMG had conducted a comprehensive, appropriate and effective audit. The Committee discussed with KPMG how their interaction with and reporting to the Committee could be improved, and this was addressed in the 2019 audit plan.

The Committee has recommended to the Board that KPMG be reappointed as the Group's auditor at the 2020 Annual General Meeting.

Auditor independence

The Committee keeps under review the level of any non-audit services which are provided by the external auditor, to ensure that this does not impair their independence and objectivity.

The Committee has adopted a policy which states that the external auditor should not be appointed to provide any non-audit services to the Group, unless the Committee agrees that their appointment would be in the best interests of the Company's shareholders in particular circumstances and would not create any direct conflict with their role as external auditor. In approving any such appointment, the Committee is also required to consider:

- whether the provision of the proposed services might compromise the auditor's independence or objectivity;
- whether the non-audit services will have a direct or material effect on the Group's audited financial statements;
- whether the skills and experience of the external auditor make it the most suitable supplier of the non-audit services; and
- the level of fees proposed for the non-audit services relative to the audit fees.

The external auditor is required to provide the Committee with a written confirmation of independence for all duly-approved engagements for non-audit services.

Focus on

Countermeasures & Energetics

Chemring is the world leader in the design, development and manufacture of advanced expendable countermeasures and countermeasures suites for protecting air, sea and land platforms against the growing threat of guided missiles.

Our niche, world-class energetic systems provide safety-critical components for missiles, aircraft and space launch systems. Our high-reliability, single-use devices perform key functions including satellite deployment, aircrew egress and safety systems.

Key facts

Revenue

£203.3m

(2018: £210.1m)

Underlying operating profit

£27.5m

(2018: £23.9m)

Order book

£369m

(2018: £318m)

Underlying operating margin

13.5%

(2018: 11.4%)

Statutory operating profit

£22.0m

(2018: £2.8m)

Countermeasures & Energetics in action

We are the #1 global supplier of countermeasures, including sole-source positions on the F-35.

We provide mission-critical devices for launch vehicles such as Atlas V and Delta IV, space exploration vehicles such as the Mars Rover, and satellites such as MUOS and Galileo.

Strategy

The Countermeasures & Energetics sector strategy continues to be one of strengthening our world-leading position through continuously improving our technological and operational base whilst working closely with our customers in the development of new solutions to meet emerging needs.

Investment in the sector will principally be directed towards safety, automation and the enhancement of current facilities including capacity and capabilities. We also see great opportunity through partnering with our customer base and other partners on future technological developments.

Having exited our commoditised energetics businesses in Florida and Derby, the Group is now able to place even greater focus on our niche specialist energetic devices and materials businesses. The Group will seek to secure the position of our energetic sub-systems components on next-generation platforms for missile and space programmes in the US and Europe, through excellent delivery performance on current programmes and strong customer and partner interaction.

Markets

The countermeasures market continues to show positive momentum with an increase in solicitation, bid activity and the receipt of orders throughout the year, particularly within the US. The broader global countermeasures market remains more robust with improving levels of activity in the UK and the rest of the world.

Within energetics, the Group is seeing a medium-term trend of increased demand for specialist products, particularly for applications in the space, missile, aerospace and high-explosive materials markets.

Performance – continuing operations

Order intake in the year of £276.5m (2018: £250.8m) has continued to be strong, particularly in the significant US market.

Revenue decreased 3% to £203.3m (2018: £210.1m) and the segment reported a 15.1% increase in underlying operating profit to £27.5m (2018: £23.9m). On a constant currency basis revenue would have decreased by 6% to £197.9m and underlying operating profit would have been £26.7m.

The statutory operating profit for the year was £22.0m (2018: £2.8m), the year being impacted by the phased restart of the Salisbury site and the completion of the Australia F-35 production refit.

The phased restart of our UK countermeasures site has progressed as planned with chaff and naval decoy lines operational in the first half of the year. Spectral and MTV lines began to operate in the third quarter as planned, with the overall site at steady state manufacturing at the end of the financial year. The site contributed £21m of revenue and approximately broke even after accounting for insurance recoveries of £15m and remediation costs in 2019, in line with our previous expectations.

Our Australian facility was closed for the majority of the year to be fitted and qualified for F-35 production. The facility upgrade was completed on schedule and to budget. We were pleased to announce that our Australian subsidiary had been awarded two significant contracts: an Unfinalised Contract Action with a Not To Exceed value of US\$60.4m and a further (Directed Sole Source) award for US\$6.5m. The contracts are from the US DoD to supply countermeasures to the Royal Australian Air Force, US Navy and Foreign Military Sales in support of the F-35 Joint Strike Fighter and other platforms. This award follows a multi-year effort to establish Chemring Australia as a qualified supplier for F-35 countermeasures. The first deliveries against these contracts occurred at the end of our 2019 financial year.

Our niche energetics devices businesses enjoyed a strong year driven by favourable market conditions and the consolidation of our California site into Chicago.

Significant investment is planned over the next two years in our Countermeasures & Energetics businesses to both recapitalise and modernise facilities and invest in capacity to address expected market demand, the most significant investment being the Tennessee capacity expansion programme. The cost of this is currently expected to be approximately £50m and is focused on delivering capacity to meet expected F-35 demand from the US Government.

Opportunities and outlook

After a number of years of weakness in the countermeasures markets that followed the end of the Iraq and Afghanistan conflicts, the outlook for the segment is positive. The segment focus remains on maintaining and growing the Group's market-leading position, in particular on key platforms such as the F-35 as it begins to enter service in increasing numbers, and in the important special material decoy market.

The Group's niche propellant and devices businesses in Scotland and Chicago are increasingly securing long-term contracts with customers supporting greater short and medium-term visibility and providing a framework for long-term planning and investment decisions. Similarly, demand for high-quality high explosives has enabled Chemring Nobel in Norway to work proactively with its customer base on long-term contracting models, providing much improved visibility.

The completed phased restart of our UK countermeasures site and completion of the Australia F-35 production refit is expected to increase revenue and operational performance of the segment in 2020.

Countermeasures & Energetics' order book at 31 October 2019 was £368.7m (2018: £318.3m). Of the 31 October 2019 order book, approximately £219m is currently expected to be delivered in 2020, providing 89% cover of expected 2020 revenue.

With a strong order book in place, 2020 trading performance for Countermeasures & Energetics is expected to be positive, albeit with a significant bias towards the second half consistent with historical revenue trends.



The outlook for the sector is increasingly positive.

Our focus has been on improving the quality of the business

Andrew Lewis Group Finance Director

“Strong working capital management throughout the year has reduced volatility and significantly decreased interest costs.”

Working capital

£90.5m

(2018: £83.7m)

Interest expense

£4.6m

(2018: £6.1m)

In 2019 we have maintained our focus on “building a stronger business” to ensure the Group has solid foundations from which to deliver the medium-term growth opportunities in both sectors.

In Countermeasures & Energetics, we have focused on the phased restart of our Salisbury site, following the incident in August 2018, the fit-out and qualification of our Australian site for F-35 and the capacity expansion project at our Tennessee facility, again in preparation for expected F-35 demand from the US DoD.

In Sensors & Information the execution of the first stage of the HMDS Program of Record commenced successfully and Roke continued to grow in a buoyant cyber-security market.

Our focus has been on improving the quality of the business. We have improved the quality of the balance sheet as expensive private placement loan note debt has been refinanced with a market rate revolving credit facility, the pension scheme no longer requires material cash contributions from the Group and working capital has become much less volatile. All this, together with increased market visibility and a better quality order book, has allowed us to commit to invest in the business. This investment

in capacity, infrastructure and systems will continue at an elevated level for three years and is a key enabler to delivering a stronger business capable of delivering on the opportunities.

Group financial performance

Order intake for continuing operations for 2019 was up 14.1% to £410.6m (2018: £360.0m), driven by the release of further delivery orders on the HMDS IDIQ contract, orders in Australia for F-35 countermeasures and growth in our niche energetics businesses.

Revenue from continuing operations for the year was up 12.7% to £335.2m (2018: £297.4m), driven by strong performance in the Sensors & Information segment, as deliveries commenced on the HMDS IDIQ contract and Roke enjoyed a strong year.

The underlying operating profit from continuing operations of £44.0m (2018: £31.0m) resulted in an underlying operating margin of 13.1% (2018: 10.4%). The increase in margin primarily reflects the positive impact of the phased restart of our Salisbury site and growth in our niche energetics businesses, combined with a stronger year in Sensors & Information due to increased revenues on the HMDS IDIQ contract and in Roke's information security business.

Insurance recoveries of £15m are included within the result for the year in relation to the incident in 2018 at the Salisbury site. This income offsets site operating costs and the costs of remediation, leaving the UK countermeasures business approximately break-even for the year. The site is expected to operate at a more normal level of activity in 2020.

Foreign exchange translation has provided a minor tailwind on revenue and profit. While exchange rates have been volatile in the year, there has been a strengthening of the US dollar against sterling compared to 2018 with the average rate moving from \$1.34 to \$1.26. On a continuing constant currency basis, restating the current year at the FY18 average exchange rate, revenue would have been £326.2m and underlying operating profit would have been £42.6m, being a tailwind of £1.4m on 2019's underlying operating profit.

Total finance expense fell significantly to £4.6m (2018: £6.1m). This was driven by the continued focus on reducing intra-period working capital volatility, thus maintaining net debt stability.

This left an underlying profit before tax from continuing operations of £39.4m (2018: £24.9m). The effective tax rate on the underlying profit before tax from continuing operations was 20.1% (2018: 22.9%). The underlying earnings from continuing operations per share was 11.2p (2018: 6.9p).

Statutory operating profit from continuing operations was £31.3m (2018: £15.9m loss) and after statutory finance expenses of £4.6m

(2018: £6.1m), statutory profit before tax from continuing operations was £26.7m (2018: £22.0m loss), giving statutory earnings per share from continuing operations of 8.2p (2018: 14.6p loss). The statutory loss from discontinued operations was £1.2m (2018: £65.0m loss), including a loss on disposal of £2.8m relating to the sale of Chemring Military Products, Inc. and Chemring Defence UK Limited, giving a statutory profit of £21.9m (2018: £105.8m loss) from continuing and discontinued operations.

A reconciliation of underlying to statutory profit measures is provided in note 3. The non-underlying costs relate to the amortisation of acquired intangibles and the tax credit associated with this.

Revenue from discontinued operations fell to £43.4m (2018: £138.6m) and underlying operating loss fell to £3.5m (2018: £8.0m profit) primarily as a result of the disposals made in the year.

Finance expenses

Total finance expenses of £4.6m were down 24.6% from £6.1m in 2018 driven by the increased focus on reducing intra-period net debt volatility. The total included interest costs on private placement loan notes and the revolving credit facility of £4.9m (2018: £4.7m), amortisation of debt finance costs of £0.2m (2018: £1.3m) and other non-cash finance credits associated with the defined benefit pension scheme of £0.2m (2018: £0.1m expense). £0.3m (2018: £nil) of interest was capitalised in relation to the Tennessee capacity expansion programme.

Tax

The continuing underlying tax charge totalled £7.9m (2018: £5.7m) on a continuing underlying profit before tax of £39.4m (2018: £24.9m). The effective tax rate on underlying profit before tax for the year was a charge of 20.1% (2018: 22.9%). We expect the effective tax rate to remain in the low twenties, notwithstanding any changes to the UK rate which the new government may make.

The continuing statutory tax charge totalled £3.6m (2018: £18.8m) on a continuing statutory profit before tax of £26.7m (2018: £22.0m loss). The decrease in the continuing effective rate of tax on the results of the Group is primarily due to utilisation of tax losses where a deferred tax asset had not been previously recognised.

The discontinued underlying tax credit was £6.2m (2018: £1.8m charge) on an underlying loss before tax of £3.5m (2018: £8.0m profit).

Earnings per share

Underlying earnings per share from continuing operations were 11.2p (2018: 6.9p) and diluted underlying earnings from continuing operations per share were 11.0p (2018: 6.7p).

Total underlying basic earnings per share was 12.2p (2018: 9.1p) and the statutory basic earnings per share was 7.8p (2018: 37.8p loss).

Group financial position

Net debt and cash flow

The Group's net debt at 31 October 2019 was £75.7m (2018: £81.8m), representing a net debt to underlying EBITDA (continuing) ratio of 1.24x (2018: 1.64x).

The financial health of the Group has improved in a number of aspects during the year. Working capital practices were improved to reduce intra-period volatility and following the defined benefit pension scheme valuation, it was agreed that no further contributions are required until April 2021 when the position will be reassessed. The Group is working to achieve further improvements over the medium term.

Underlying operating activities generated cash of £77.6m (2018: £56.9m), split between continuing £63.9m (2018: £44.7m) and discontinued £13.7m (2018: £12.2m). Continuing cash conversion was 104% (2018: 89%) of continuing underlying EBITDA.

Subsequent to the year end, the Group repaid the remaining \$83.6m of private placement loan notes via the use of the £136.7m revolving credit facility which runs to October 2022. This is expected to reduce interest costs in 2020 and beyond.

Working capital

Working capital relating to the continuing businesses was £90.5m (2018: £83.7m), an increase of £6.8m. The increase is mainly as a result of the timing of activity in the final quarter of the year, driving a £6.7m increase in inventory, as preparation was made for Q1 deliveries with all sites expected to be operational in H1 FY20.

Trade receivables decreased by £15.1m and trade payables decreased by £5.4m as a result of the timing of activity in the final quarter of the year. Advance receipts from customers increased by £9.6m reflecting improved commercial contracting focus.

Debt facilities

The Group's principal debt facilities comprised \$83.6m of private placement loan notes, a £136.7m revolving credit facility and a \$10.0m overdraft. In November 2019 the \$83.6m of private placement loan notes were repaid in line with the term of the loans. The revolving credit facility was established in October 2018, is with a syndicate of five banks and runs until October 2022. The Group had £130.2m (2018: £68.1m) of undrawn borrowing facilities at the year end.

The Group is subject to two key financial covenants, which are tested quarterly. These covenants relate to the leverage ratio between underlying EBITDA and net debt, and the interest cover ratio between underlying EBITDA and finance costs. The calculation of these ratios involves the translation of non-sterling denominated debt using average, rather than closing, rates of exchange. The Group was in compliance with the covenants throughout the year.

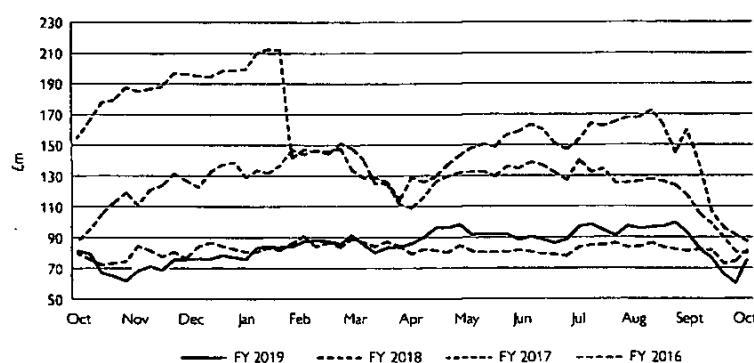
Retirement benefit obligations

The surplus on the Group's defined benefit pension schemes was £9.6m (2018: £7.5m), measured in accordance with IAS 19 (Revised) Employee Benefits.

The surplus relates to the Chemring Group Staff Pension Scheme (the "Scheme"), a UK defined benefit scheme whose assets are held in a separately administered fund. The Scheme was closed to future accrual in April 2012.

A full actuarial valuation for the Scheme as at 6 April 2018 has been prepared and updated to 31 October 2019, using the projected unit credit method. This valuation showed a surplus of £9.6m (2018: £7.5m). The improvement reflects the effect of changes in actuarial assumptions.

Weekly net debt



Financial review continued

Retirement benefit obligations continued

The 6 April 2018 triennial valuation shows a technical provisions deficit of £5.8m, which represents a funding level of 94% of liabilities. Deficit recovery payments totalling £6.25m, which were the contributions due to be made in the period to 30 June 2019 under the previous deficit recovery plan, were made prior to 31 December 2018. Of this, £0.4m was paid in 2019. After this, the Group agreed with the trustees that no further deficit recovery payments are required and the Group was released from the bank guarantee of £7.2m given to the scheme in respect of future contributions. The next actuarial valuation is due as at 6 April 2021 after which the future funding requirements will be reassessed.

Contingent liabilities

The Group is, from time to time, party to legal proceedings and claims, and is involved in correspondence relating to potential claims, which arise in the ordinary course of business. In addition, the following matters remain open at year end:

- A dispute between Alloy Surfaces Company, Inc. and the US Army, in relation to disputed pricing of a certain historic contract fulfilled by Alloy Surfaces Company, Inc., proceeded to a hearing in front of the US Armed Services Board of Contract Appeals ("ASBCA") in April 2017. ASBCA was expected to take approximately two years to issue its decision in relation to this matter, but at this time we have not yet been informed of its decision and therefore it is too early to predict the outcome of the hearing. The range of possible outcomes is between £nil and £12.0m. A provision of £1.0m (2018: £1.0m) exists to cover estimated legal costs for the Group with regard to this issue.
- Since 2013, the Group has benefited from the UK's Controlled Foreign Company ("CFC") Finance Company exemption. On 2 April 2019 the European Commission delivered a judgement which concluded in some circumstances the UK's CFC exemption may breach state aid rules. The UK Government disagrees with the conclusion that the UK's CFC rules were partially in breach of EU law, and has therefore applied to the EU courts for annulment of the Commission's decision. Given the early stage of this process, it is too early to determine whether a tax liability is probable. The range of possible outcomes is between £nil and £15m, plus interest.
- In accordance with the Serious Fraud Office ("SFO") News Release dated 18 January 2018, an investigation was opened by the SFO into Chemring Group PLC ("CHG") and its subsidiary, Chemring Technology Solutions Limited ("CTSL"), following a self-report made by CTSL. The investigation relates

to bribery, corruption and money laundering arising from the conduct of business by CHG and CTSL including any officers, employees, agents and persons associated with them. It is too early to predict the outcome of the SFO's investigation, in which the Group continues to co-operate fully.

- On 10 August 2018 an incident occurred at the Group's countermeasures facility in Salisbury. The Group responded immediately to support those who were injured, and maintains appropriate employee liability insurance that we expect will provide full compensation in due course. We continue to fully support the Health and Safety Executive ("HSE") as it undertakes its investigation. Whilst provisions have been recorded for costs that have been identified, it is possible that additional uninsured costs and, depending on the outcome of the HSE investigation, financial penalties may be incurred. At this stage, these costs are not anticipated to be material in the context of the Group's financial statements.

Capital expenditure

The Group continues to invest in the infrastructure of its facilities, with particular focus on enhancing safety and operational performance. In the year £40.7m (2018: £21.1m) was spent on property, plant and equipment.

Significant investment is planned over the next two years in our Countermeasures & Energetics

businesses to both recapitalise and modernise facilities and invest in capacity to address expected market demand, the most significant investment being the Tennessee capacity expansion programme. The cost of this is expected to be approximately £50m and is focused on delivering capacity to meet expected F-35 demand from the US Government.

Research and development

R&D expenditure was £56.2m (2018: £43.8m). Continued investment in R&D is a key aspect of the Group's strategy, and levels of internally funded R&D are expected to be maintained as investment in product development continues, particularly within Sensors & Information. An analysis of R&D expenditure is set out below:

	2019 £m	2018 £m
Customer-funded R&D	47.2	36.2
Internally funded R&D		
– expensed to the income statement	5.0	4.6
– capitalised	4.0	3.0

Amortisation of development and patent costs was £1.4m (2018: £3.7m), with the decrease reflecting projects that were fully amortised at the end of 2018 and that a number of Sensors & Information projects have not yet entered production.

Alternative Performance Measures ("APMs")

In the analysis of the Group's financial performance and position, operating results and cash flows, APMs are presented to provide readers with additional information. The principal APMs presented are underlying measures of earnings including underlying operating profit, underlying profit before tax, underlying profit after tax, underlying EBITDA, underlying earnings per share, and underlying operating cash flow. In addition, EBITDA, net debt, underlying operating profit and revenue on a constant currency basis are presented which are also considered to be non-IFRS measures. These measures are consistent with information regularly reviewed by management to run the business, including for planning, budgeting and reporting purposes and for its internal assessment of the operational performance of individual businesses.

The focus of the annual report and accounts is on the results of the continuing operations as the Board believes the shareholders are most interested in the performance and the potential of this part of the Group. An analysis of the results of the discontinued operations is provided in note 5 with commentary on performance on pages 99 and 100.

We present a measure of constant currency revenue and operating profit. This is calculated by translating our results for the year ended 31 October 2019 at the average exchange rates for the comparative year ended 31 October 2018.

	2019 £m	2018 £m	Growth %
Revenue	335.2	297.4	13%
Effect of using prior period FX translation rates	(9.0)		
Revenue at constant currency	326.2	297.4	10%
Underlying operating profit	44.0	31.0	42%
Effect of using prior period FX translation rates	(1.4)		
Underlying operating profit at constant currency	42.6	31.0	37%

A reconciliation of underlying measures to statutory measures is provided below:

	2019			2018		
	Underlying	Non-underlying	Statutory	Underlying	Non-underlying	Statutory
Group – continuing operations:						
EBITDA (£m)	61.2	(0.6)	60.6	50.0	(27.2)	22.8
Operating profit/(loss) (£m)	44.0	(12.7)	31.3	31.0	(46.9)	(15.9)
Profit/(loss) before tax (£m)	39.4	(12.7)	26.7	24.9	(46.9)	(22.0)
Tax (charge)/credit (£m)	(7.9)	4.3	(3.6)	(5.7)	(13.1)	(18.8)
Profit/(loss) after tax (£m)	31.5	(8.4)	23.1	19.2	(60.0)	(40.8)
Basic earnings/(loss) per share (pence)	11.2	(3.0)	8.2	6.9	(21.5)	(14.6)
Diluted earnings/(loss) per share (pence)	11.0	(2.9)	8.1	6.7	(21.3)	(14.6)
Group – discontinued operations:						
Profit/(loss) after tax (£m)	2.7	(3.9)	(1.2)	6.2	(71.2)	(65.0)
Sectors – continuing operations:						
Sensors & Information EBITDA (£m)	29.3	—	29.3	18.5	(0.7)	17.8
Sensors & Information operating profit (£m)	26.3	(6.6)	19.7	15.3	(10.1)	5.2
Countermeasures & Energetics EBITDA (£m)	41.7	—	41.7	39.6	(10.8)	28.8
Countermeasures & Energetics operating profit (£m)	27.5	(5.5)	22.0	23.9	(21.1)	2.8

The Group manages its finance costs and tax on a central or regional basis and therefore the Board believes the use of underlying operating profit or EBITDA is the best way of monitoring the performance of operating businesses.

The strategic report includes both statutory and adjusted measures, the latter of which, in management's view, reflects the underlying performance of the business and provides a more meaningful comparison of how the business is managed and measured on a day-to-day basis.

Our APMs and KPIs are aligned to our strategy and together are used to measure the performance of our business and form the basis of the performance measures for remuneration.

Adjusted results exclude certain items because, if included, these items could distort the understanding of our performance for the year and the comparability between the periods.

Management considers non-underlying items to be:

- amortisation of acquired intangibles;
- discontinued operations;
- exceptional items, for example relating to acquisitions and disposals, restructuring costs, impairment charges and legal costs;
- gains or losses on the movement in the fair value of derivative financial instruments; and
- the tax impact of all of the above.

Our use of APMs is consistent with the prior year and we provide comparatives alongside all current year figures.

The directors believe that these APMs improve the comparability of information between reporting periods as well as reflect the key

performance indicators used within the business to measure performance. The term underlying is not defined under IFRS and may not be comparable with similarly titled measures used by other companies. All profit and earnings per share figures in this strategic report relate to underlying business performance (as defined above) unless otherwise stated.

Further details are provided in note 3.

The adjustments to continuing operations comprise:

- amortisation of acquired intangibles of £12.1m (2018: £11.6m); and
- loss on the movement in the fair value of derivative financial instruments of £0.6m (2018: £0.4m).

The following exceptional items were considered material and one-off in nature in 2018 but have not recurred in 2019:

- exceptional items of £nil (2018: £4.1m) relating to acquisition and disposal-related costs;
- exceptional items of £nil (2018: £8.1m) relating to business restructuring costs, the majority of which relates to the Tennessee site transformation;
- exceptional items of £nil (2018: £12.8m) relating to legal costs in relation to ongoing investigations;
- exceptional items of £nil (2018: £7.4m) relating to the impairment of product development costs;
- exceptional items of £nil (2018: £1.7m) relating to the costs associated with the change of Chief Executive;
- exceptional items of £nil (2018: £0.8m) associated with the GMP pension equalisation court ruling; and

- impact of US Tax Cuts and Jobs Act and tax credit on adjustments £nil (2018: £13.1m).

The discontinued operations loss after tax primarily relates to the four businesses which were "held for sale" at 31 October 2018, two of which have subsequently been divested from the Group and one closed during the year, while the sale of the remaining business was announced post year end:

- operating loss of £3.5m (2018: £8.0m profit);
- exceptional items of £3.8m (2018: £69.3m). In FY19 the exceptional items relate to the increase of provisions in respect of previously disposed businesses and a loss on disposal relating to the sale of Chemring Military Products, Inc. and Chemring Defence UK Limited. In FY18 the exceptional items relate to the impairment of the carrying value of discontinued businesses now held for sale to their expected realisable values less costs to sell;
- amortisation of acquired intangibles of £nil (2018: £2.7m); and
- tax credit on the above of £6.1m (2018: £1.0m charge).

Andrew Lewis

Group Finance Director
16 December 2019

Risk management

Key roles and responsibilities for the Group's risk management strategy

The Board

- Overall responsibility for risk management
- Defines the Group's risk appetite

Audit Committee

- Reviews the effectiveness of the Group's risk management framework and systems of internal control
- Oversees the effectiveness of the Group's internal audit arrangements

Risk Management Committee

- Oversees the implementation of the Group's risk management framework
- Monitors compliance with the Group's internal control systems
- Maintains the Group risk register

Business Management

- Responsible for the implementation of the Group's risk management framework at the operational level
- Maintains business unit risk registers and provides input to the Risk Management Committee
- Responsible for compliance with internal controls

Risk management organisation

The Board is responsible for determining the nature and extent of risks it is willing to accept in delivering the Group's strategy and running the Group's operations, and ensuring that risks are effectively managed across the Group.

The Board reviews the Group risk register on a regular basis, and considers whether the Risk Management Committee has appropriately identified the principal risks to which the Group is exposed.

The Audit Committee is responsible for reviewing in detail the effectiveness of the Group's systems of internal control, including financial, operational and compliance controls, and its risk management systems. The Audit Committee also reviews the effectiveness of the Group's internal audit arrangements.

The Risk Management Committee is responsible for overseeing the implementation of the Group's risk management framework, and is also responsible for identifying the principal risks to which the Group is exposed, monitoring key mitigation plans and maintaining the Group risk register. The Risk Management Committee also reviews the business unit risk registers on a regular basis and considers input from the US Risk Management Committee which has been constituted to oversee risk within the US operations.

The current members of the Risk Management Committee are:

- Michael Ord (Group Chief Executive)
- Bill Currer (President, US)
- Sarah Ellard (Group Legal Director & Company Secretary)
- Andrew Lewis (Group Finance Director)
- Clancy Murphy (Chief People Officer)
- Mark Taylor (Group Health & Safety Director)



We have adopted a new HSE Management System Framework Standard during the year. //

Risk management policy and framework

The Group's Risk Management Policy sets out the Group's approach to risk management, including its risk appetite; the framework for assessing, managing and monitoring risk within the business; and the key roles and responsibilities for the oversight and implementation of the Group's risk management systems and controls.

The Group's risk management framework draws fundamentally from the "Three Lines of Defence Methodology", with the "First Line" being day-to-day management of risk and maintenance of effective control procedures at individual businesses. The "Second Line" comprises various risk management and control functions established at the corporate management level, which are designed to enhance and monitor the First Line. The "Third Line" comprises the Group's internal audit function, utilising an external firm of auditors, which reports directly to the Audit Committee.

Approach to risk management

The management of each business is responsible for the identification, management and reporting of local risks, in accordance with the Group's risk management framework. The management of each business is also responsible for the maintenance of business risk registers and the implementation of mitigation plans.

Each business is required to maintain a risk register identifying their key risks. The risk registers include an analysis of the likelihood and impact of each risk – before and after mitigation actions are taken to manage the risk, together with details of the mitigation plans and progress against them. Each risk is allocated an owner, who has responsibility for managing the risk.

The business risk registers are updated locally on a quarterly basis, and are reviewed in detail by the Group Chief Executive, the Group Finance Director and other members of the Executive Committee at quarterly business review meetings with each of the businesses. The US Risk Management Committee also reviews the risk registers for the US businesses, considers US corporate-level risks and maintains a consolidated US risk register.

The Risk Management Committee meets quarterly and, utilising the input from the business risk registers and the US risk register, identifies those principal risks which are material to the Group as a whole.

The Risk Management Committee also considers corporate-level risks. These risks are collated on the Group risk register, together with details of the applicable mitigation plans and risk owners.

In January 2019, the Group adopted a new Operational Framework, incorporating a broad range of policies and procedures which are required to be adopted by all businesses.

A half-yearly operational assurance process was also introduced as part of the Operational Framework, which provides an assessment of compliance with the Operational Framework policies across the Group. The output of the operational assurance process provides additional visibility on risks across the Group and is utilised by the Risk Management Committee as a further input to the Group risk register.

The operational assurance process also provides assurance to the Board that the Group's internal systems and controls are operating effectively.

The full Group risk register is reviewed by the Board on a half-yearly basis and key individual risks are reviewed at every Board meeting.

Key areas of focus during the year

During the past year, we have continued to improve our risk management systems, with specific focus in the following areas:

- we have adopted a new HSE Management System Framework Standard, which sets out new high-level standards for HSE management systems across the Group and includes an HSE "Second Line of Defence" assurance process;
- as referred to above, a new Operational Framework and operational assurance process was introduced in January 2019;
- we have enhanced our anti-bribery and corruption procedures, in order to further mitigate the potential risk associated with the engagement of third party sales partners and service providers;
- we have undertaken a review of the potential impact of Brexit on the Group and developed mitigation plans;
- a new crisis management and incident management plan has been adopted; and
- we have taken steps to ensure that our internal audit programme is more aligned to the key risks on the Group risk register going forward.

In addition, we have continued to reinforce the accountability and responsibility for risk management in a number of key areas such as safety at all levels of the organisation.

Risk review

As required by the UK Corporate Governance Code, the Board has carried out a review of the effectiveness of the Group's systems of internal control and risk management systems which operated during the year. The Board confirms that there is an ongoing process for identifying, evaluating and managing the principal risks faced by the business, and robust systems of internal control and risk management were in place throughout the year and have remained in place up to the date of approval of these financial statements.

The Board acknowledges, however, that the internal control systems can only provide reasonable, not absolute, assurance against mismanagement or loss of the Group's assets. The Board therefore continues to take steps to embed internal control and risk management further into the operations of the Group, and to address any areas for potential improvement which come to the attention of management and the Board.

Principal risks

The current Group risk register comprises risks in seven key risk areas, covering health, safety, security and environment risks, strategic risks, financial risks, operational risks, people risks, legal and compliance risks, and reputational risks. Details of the principal risks are set out on pages 30 to 36.

Principal risks and uncertainties

Risk management in action

Details of the principal risks and uncertainties which could have a material impact on the Group's business model, future performance or reputation are set out below. The principal risks are identified by the Risk Management Committee based on the likelihood of occurrence and the potential impact on the Group as a whole.

In addition to the risks disclosed below, the Risk Management Committee monitors and manages a wide range of other risks to which the Group may be exposed. All the principal risks to which the Group is exposed are linked to the Group's strategy. Details on the Group's strategy are set out on pages 14 and 15.

Impact	Increase	No change	Decrease
Probability	Increase	No change	Decrease

Health, safety, security and environment risks		
Occupational and process safety		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group's operations involve energetic materials that by their nature have inherent safety risks. - Incidents may occur which could result in harm to employees, the temporary shutdown of facilities or other disruption to manufacturing processes. - The Group may be exposed to financial loss, regulatory action and potential liabilities for workplace injuries and fatalities.	- Safety reinforced as a core value. - Continued emphasis on the promotion of a culture which puts safety first and encourages employees to take personal responsibility for their actions. - HSE Strategy and HSE Management System Framework Standard adopted in 2018, which is now being fully implemented within the businesses. - Introduction of a more robust major accident hazards analysis process across the Group. - New HSE "Second Line of Defence" assurance process established, supplemented by an audit by external consultants of higher risk sites. - Fundamental Safety Rules issued to all employees Group-wide. - New incident investigation and crisis management standards adopted. - Increased capital investment in legacy facilities to improve safety and reliability.	Our lost time incident rate reduced to 0.35 during the year and our total recordable injury frequency rate reduced from 2.77 to 0.79, demonstrating a marked improvement in the management of occupational safety. There was also a reduction in the number of incidents resulting from energetic ignitions during the year, with one recordable injury requiring medical treatment and one non-recordable incident requiring first aid, compared to six incidents in the prior year. We hope to see further improvements in process safety in FY20, as we implement the second year of our three-year HSE Strategy and continue with our capital investment programme.

Health and security		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group's employees are required to travel to overseas locations. - Employees may become involved in security incidents or may be targets of crime, as a result of political and security instability in a host country. - Employees may be exposed to health risks, such as airborne diseases.	- Group-wide security policy and standard established. - Guidance on health and safety associated with overseas travel issued to all employees. - Third party engaged to provide employees with access to advice and assistance in emergency situations.	There were no reported security or health events associated with overseas travel during the year.

Environmental laws and regulations		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group's operations and ownership or use of real property are subject to a number of federal, state and local environmental laws and regulations. At certain sites currently or formerly owned or operated by the Group, there is known or potential contamination for which there is, or may be, a requirement to remediate or provide resource restoration. The Group could incur substantial costs, including remediation costs, resource restoration costs, fines and penalties, or be exposed to third party property damage or personal injury claims, as a result of liabilities associated with past practices or violations of environmental laws or non-compliance with environmental permits	- All businesses certified to the environmental management system ISO 14001. - Monitoring programmes established at certain sites and appropriate financial provisions held. - Environmental liability insurance procured for certain risks.	The sale or closure of several sites during the year has reduced the Group's exposure to environmental risks. A new wastewater treatment facility became operational at the Chemring Nobel site during the year, which will significantly reduce its future environmental impact. See also: Sustainability Page 40

Strategic risks		
Market-related		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
Defence spending depends on a complex mix of political considerations, budgetary constraints and the requirements of the armed forces to address specific threats and perform certain missions. Overall defence spending may therefore be subject to significant yearly fluctuations and there may also be downward pressure on defence budgets in certain key programme areas. The Group's profits and cash flows are dependent, to a significant extent, on the timing of award of defence contracts. In general, the majority of the Group's contracts are of a relatively short duration and, with the exception of framework contracts with key customers, do not cover multi-year requirements. - The Group's financial performance may be adversely impacted by lower defence spending by its major customers, either generally or in relation to certain programmes. - Short-term trading and cash constraints may impact on the Group's ability to invest in longer-term technologies and capabilities. - Unmitigated delays in the receipt of orders or cancellation of existing contracts could affect the Group's financial performance. If the Group's businesses are unable to continue trading profitably during periods of lower order intake, financial performance will deteriorate and assets may be impaired.	- Continual assessment of alignment of planned organic growth strategies and technology roadmaps against government priorities for future funding. - Increased focus on the development of commercial products and services. - Ongoing restructuring to "right-size" the businesses and reduce overheads, to increase resilience in difficult market conditions. - Continued focus on order intake as a key performance indicator. - Pursuit of long-term, multi-year contracts with major customers wherever possible. - Global business development capabilities established in the Countermeasures and Sensors & Information businesses. - Increased collaboration between businesses across the Group on establishing shared routes to market.	We have benefitted from the recovery in defence budgets in our core markets, particularly in the US. Exiting the commoditised energetics businesses has reduced the Group's exposure to volatile Middle East markets and highly-competitive contracts, the timing of which is often difficult to predict. Closer collaboration between our Countermeasures businesses is creating a joined-up customer approach which will enable to us better promote our global capabilities in future.

Principal risks and uncertainties continued

Strategic risks continued		
Political		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group is active in several countries that are suffering from political, social and economic instability. In addition, there is a significant risk of political unrest and changes in the political structure in certain non-NATO countries to which the Group currently sells. - The Group's business in certain countries may be adversely affected in a way that is material to the Group's financial position and the results of its operations. - Political changes could impact future defence expenditure strategy and the Group's ability to export products to certain countries.	- Relationships maintained at political level in key countries and with senior customer representatives. - Financing arrangements implemented, including letters of credit and advance payments, for contracts with high-risk customers. - Political risks insurance procured in certain circumstances. - Continued focus on the development of commercial business across the Group, particularly in key home territories.	We have refocused our business development and marketing activities in our key home markets in the niche segments in which we operate. The sale of the commoditised energetics businesses has also reduced our exposure to more challenging territories.
Contract-related		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group's government contracts may be terminated at any time and may contain other unfavourable provisions. The Group may need to commit resources in advance of contracts becoming fully-effective, to ensure prompt fulfilment of orders or to enable conditions precedent to be met. - The Group may suffer financial loss if its contracts are terminated by customers, or a termination arising out of the Group's default may have an adverse effect on its ability to re-compete for future contracts and orders. - Unfavourable commercial contract terms may adversely impact the Group's working capital position, particularly if the receipt of payments by the Group is delayed.	- New Commercial Policy introduced within the Operational Framework, requiring central approval for certain contractual risk exposures. - Commercial and contract risk management training programme introduced. - Stage payments negotiated with customers wherever possible, in order to improve working capital management.	The implementation of the Operational Framework has increased our visibility on commercial and contracting practices across the Group, and is enabling us to manage contractual risk exposures more effectively.
Technology		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group may fail to maintain its position on key future programmes due to issues with capability development, technology transfer or cost-effective manufacture. The Group needs to continually add new products to its current range, through innovation and continuing emphasis on research and development. New product development may be subject to delays, or may fail to achieve the requisite standards to satisfy volume manufacturing requirements and the production of products against high reliability and safety criteria to meet customer specifications. - Failure to obtain production contracts on major development programmes may significantly impact the future performance and value of individual businesses. - Failure to complete planned product development and upgrades successfully may have financial and reputational impacts, and may result in obsolescence or loss of future business.	- Close relationships maintained with customers on all key future programmes. - New Product Development Policy and procedures adopted, to align the approach to future technology investment across the Group. - Technology investments aligned with the five-year plan. - Working groups established to drive and co-ordinate technology growth in certain key areas within Countermeasures & Energetics and Sensors & Information.	Innovation is now one of our core values. Good progress was made on the US Programs of Record during the year and this will continue to be a major area of focus in the year ahead. Roke is experiencing strength growth in its R&D service activities and is positioning itself to exploit growing opportunities in the commercial sector.

Brexit		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group could be adversely impacted by the UK's exit from the EU, particularly in the event that the UK Government fails to negotiate an acceptable exit arrangement. - An adverse Brexit outcome could impact the Group's relationships with its customers and suppliers in the EU, as a result of potential changes to sales tariffs and restrictions on the movement of goods. - Our UK businesses may also be impacted by restrictions on the movement of people and the potential loss of EU national workers, and may face regulatory uncertainties with regards to certain EU legislation.	- Assessment carried out in relation to the potential impact of a "no-deal" Brexit on supply chain arrangements, people, financing, licensing, and legal and compliance arrangements, and mitigation actions identified where appropriate. - Business continuity plans updated to mitigate the impact of Brexit as far as possible.	Action has been taken to mitigate the potential impact of a "no-deal" Brexit where possible, based on the information we have available to us. However, the full impact of Brexit remains subject to a high level of uncertainty. See also: Target markets and sector reviews Pages 12, 20 and 22

Financial risks		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group is exposed to a range of financial risks, both externally driven, such as an unexpected movement in foreign exchange rates, and specific to the Group. Specific financial risks could arise out of a disruption to operations; failure to deliver strategic objectives, including planned investment; or customer-related events, including defaults on payments of debts. The Group may also face an increased funding requirement for its legacy UK defined benefit pension scheme. (Further details of the financial risks to which the Group is potentially exposed and details of mitigating factors are set out in the financial review and note 20 of the Group financial statements.) - The Group may fail to comply with financing covenants and be unable to meet debt repayments, leading to withdrawal of funding or additional costs of maintaining funding. - Operational results may be impacted by unexpected financial losses or increased costs.	- Committed banking facilities in place to October 2022 and increased facilities secured in April 2019. - Regular monitoring of actual and forecast financing covenants. - Capital approval processes in place, requiring Board approval for significant projects. - Hedging policy applied for significant foreign transactions. - Advance payments and letters of credit required from customers with a heightened payment risk. - Close dialogue maintained with the trustees of the pension scheme on investment and funding matters.	Our revolving credit facility was extended to £136.7m during the year, to ensure sufficient liquidity to meet the private placement loan note repayment of \$83.6m made in November 2019. The year end bank covenant of net debt: EBITDA was 1.24x, well within the covenant limit of 3. At the year end, the legacy UK defined benefit pension scheme was 111% funded (on an IAS 19 basis) and in accordance with the agreed funding plan, no contributions are required in 2020. See also: Financial review Page 24

Principal risks and uncertainties continued

Operational risks		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group's manufacturing activities may be exposed to business continuity risks, arising from plant failures, supplier interruptions or quality issues. Planned new facility developments may be delayed as a result of operational issues. • Interruptions to production and sales could result in financial loss, reputational damage and loss of future business. • A delay in completing new manufacturing facilities, such as those being built at Kilgore, could constrain capacity and limit future business growth.	• Major accident hazards analysis process implemented across the Group. • Upset condition management standard introduced. • Key performance indicators adopted, to provide better visibility on operational performance and to facilitate early identification of potential production and quality issues. • Review instigated of business continuity plans across the Group. • Business interruption risks insured where appropriate. • Increased capital investment in legacy facilities to improve safety and reliability. • Detailed plans developed for all significant capital investment projects and additional dedicated resource employed to oversee key projects.	A three-year capital investment programme was initiated in 2019. This is designed to mitigate a number of operational risks through a plant automation and modernisation programme across the Group. Following the establishment of improved project management capabilities, good progress was made on the new automated manufacturing facilities at Kilgore during the year and the project is now proceeding broadly in line with plan. See also: Group Chief Executive's review and Sustainability Pages 7 and 38
People risks		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
There is a risk that the market for talent in key areas of expertise becomes more challenging. Allied to this there is a risk of loss of key personnel. As the shape of the Group's business changes and with an increased focus in high technology areas, the Group may fail to build and retain an appropriate skill base to facilitate successful competition in new markets and product areas. Employees may not be fully-engaged with the Chemring journey, purpose, products, customers and values. • Failure to recruit sufficient suitably-qualified personnel in key areas of the business may result in the Group failing to achieve its future growth aspirations. • Failure to build and retain key skills will lead to a reduction in the ability to innovate or to win and deliver new contracts. • If key personnel are not fully engaged with the business purpose, values and products, and are not appropriately incentivised, the ability of the Group to retain them will be compromised. This could result in loss of management expertise and knowledge, and the Group's operations may suffer as a consequence.	• Chemring values of Safety, Excellence and Innovation established. • Leadership team strengthened across the Group. • Development framework implemented across the Group, focusing on developing management and leadership skills. • Ongoing review of capability requirements against the business strategy. • Culture review completed, facilitating the development of a framework to support the evolution of a new Chemring culture. • Improved employee engagement initiatives instigated. • Incentive arrangements refreshed to encourage collaboration and to create a Group focus at senior level.	During the year we strengthened the leadership at a significant number of our businesses, as well as formalising the leadership approach for the US operations with the appointment of a new President for the region. The review of culture and the subsequent hosting of employee forums in every part of the business has significantly changed the level of communication in each business with increased opportunity to discuss issues and share ideas. This was designed to improve engagement and the introduction in November 2019 of a new online tool which will gather regular data on sentiment across the Group is further evidence of how important this is to the business. See also: Sustainability Page 42

Legal and compliance risks		
Compliance and corruption risks		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group operates in over fifty countries worldwide, in a highly-regulated environment, and is subject to the applicable laws and regulations of each of these jurisdictions. The Group must ensure that all of its businesses, its employees and third parties providing services on its behalf comply with all relevant legal and regulatory obligations. The nature of the Group's operations could also expose it to government and regulatory investigations relating to safety and the environment, import-export controls, money laundering, false accounting, and corruption or bribery. The Group requires a significant number of permits, licences and approvals to operate its business, which may be subject to non-renewal or revocation. • Non-compliance could result in administrative, civil or criminal liabilities, and could expose the Group to fines, penalties, suspension or debarment, and reputational damage. • Loss of key operating permits and approvals could result in temporary or permanent site closures, and loss of business.	• New Operational Framework introduced, mandating compliance with a number of new policies and enhanced procedures covering a wide range of legal and regulatory requirements. • Half-yearly operational assurance process established as part of the Operational Framework. • Central legal and compliance function assists and monitors all Group businesses, supported by dedicated internal legal resource in the US. • New Code of Conduct introduced, stipulating the standards of acceptable business conduct required from all employees and third parties acting on the Group's behalf. • Updated Bribery Act Compliance Manual issued, incorporating enhanced anti-bribery policies and procedures.	The introduction of the Operational Framework and the associated operational assurance process has fundamentally changed the management of legal and compliance risks across the Group. We are working with the Group's internal auditors to further develop the assurance process and to ensure that it becomes a key aspect of the internal audit programme going forward. The assurance process has already identified a number of areas in which we could improve our training and this will be addressed in the current financial year. See also: Sustainability Page 44
Product liability and other customer claims		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
The Group may be subject to product liability and other claims from customers or third parties, in connection with: (i) the non-compliance of products or services with the customer's requirements, due to faults in design or production; (ii) the delay or failed supply of the products or the services indicated in the contract; or (iii) possible malfunction or misuse of products. The Group may also be required to undertake a product recall in certain circumstances. As many of the Group's products are single-use devices, it is often impossible to conduct functional testing without destroying the product, and this increases the risk of possible product failure, either in use or during customers' own sample-based functional tests. • Substantial claims could harm the Group's business and its financial position. In addition, any accident, product failure, incident or liability, even if fully insured, could negatively affect the Group's reputation among customers and the public, thereby making it more difficult for the Group to compete effectively. • Material breaches in the performance of contractual obligations may also lead to contract termination and the calling of performance bonds.	• Rigorous production processes adopted, monitoring critical parameters on a batch or unit basis. • Quality control techniques, including statistical process control and Six Sigma, applied and, where appropriate, automated processes introduced. • Detailed assessments of incoming components and materials conducted to ensure compliance with specifications. • Product liability claims from third parties for damage to property or persons generally covered by insurance.	We have taken steps to establish a continuous improvement culture across the Group and to promote customer focus and contract delivery as required behaviours at all levels of the organisation. This approach, together with our investment in updated manufacturing facilities and increased focus on contractual risk management, will help to further mitigate risks in this area in future.

Principal risks and uncertainties continued

Reputational risks		
Cyber-related risks		
Risk and potential impacts	Mitigation actions/factors	Change during the year and outlook
Cyber-security and related risks are key emergent areas of critical importance for all businesses, particularly for those involved in the defence and security sector. Threats can emanate from a wide variety of sources and could target various systems for a wide range of purposes, making response particularly difficult. The data and systems which need to be protected include customer-classified or sensitive information, commercially-sensitive information, employee-related data and safety-critical manufacturing systems. • The Group may suffer from critical systems failures, or its intellectual property, or that of its customers, may fall into the hands of third parties. • In addition to business interruption and financial loss, the Group may suffer reputational damage, and its business of providing cyber-security services to customers may be irreparably damaged.	• Threat assessment completed and an action plan to counter the Group's identified major threats implemented. • A number of cyber-security defence measures adopted, encompassing, as appropriate to the nature of the threat and sensitivity of data or systems being protected, hardware, software, system, process or people-based solutions. • Where appropriate, government or commercial accreditation of networks and systems obtained in support of the overall cyber-security programme. • All UK businesses achieved "Cyber Essentials" accreditation as a minimum standard, and US businesses either achieved, or are working towards, compliance with the US DFARS standard. • IT and security systems review included within the internal audit programme.	We have an ongoing programme to address IT and cyber security but the threats in this area continue to evolve and we therefore need to ensure that our security arrangements evolve appropriately in response. This will be a specific area of focus for our internal audit programme in 2020.

Introduction to sustainability

Contributing to a sustainable future

As a Group, we have a strong and recognised obligation to ensure the responsible operation of our business. We are fully committed to safe, sound and ethical business conduct at all times at all of our locations.

Our approach

The long-term success of the Chemring business can only be enhanced by a positive interaction with all of our stakeholders and therefore a positive and engaged approach to corporate responsibility and sustainability is important to us.

Our approach is focused around the following key areas:

- **health & safety;**
- **environment;**
- **people; and**
- **ethics and business conduct.**

Our approach to corporate responsibility and sustainability is embedded within the business units and all senior leaders have specific objectives around these areas identified and are linked to their incentive plans.

Chemring's Science, Technology, Engineering and Maths ("STEM") village at the National Armed Forces Day.

Key facts

Health & safety

TRIF rate down to 0.79 from 2.77 in 2018

Environment

14% reduction in waste

People

76 new graduates and apprentices hired in 2019

Ethics and business conduct

Implementation of Operational Framework on 1 January 2019



The Group acknowledges its responsibilities to contribute to a sustainable future. 

The policy adopted by the Committee expressly prohibits the provision of certain non-audit services by the external auditor, in line with regulatory requirements and UK ethical guidance.

Details of the amounts paid to the external auditor during the year for audit and non-audit services are set out in note 4 to the Group financial statements. Total fees of £39,000 were paid to KPMG during the year in respect of non-audit services, which related to the review of the interim results, a government grant audit for Chemring Australia and an audit report for Chemring Nobel's tax return as is required from the auditor under Norwegian law. The Committee concluded that neither the nature or scope of these services gave rise to any concerns regarding the objectivity or independence of KPMG.

The Committee, in conjunction with the Group Finance Director, ensures that the Group maintains relationships with a sufficient choice of appropriately-qualified alternative audit firms for the provision of non-audit services.

Internal audit

The Audit Committee is responsible for reviewing the work undertaken by the Group's internal auditors, assessing the adequacy of the internal audit resource, and recommending changes for increasing the scope of the internal audit activities.

The Group's internal audit programme incorporates a review of all sites on a two or three-year rotational basis, and focuses on both financial and non-financial controls and procedures. The Committee approves the annual internal audit plan and receives regular reports from the internal auditors.

The internal audit programme is managed by PwC, who were appointed by the Committee in 2018. The programme covers financial and commercial processes, governance issues, and key corporate risks. Where appropriate, suitably-qualified employees of the Group participate in internal audits on other Group businesses in which they have no direct involvement, with oversight from PwC. This facilitates sharing of best practice across the Group and contributes to the development of employees involved in the audits.

The internal audit plan for 2019 included specific focus on:

- the key financial and operating controls within the business;
- IT controls; and
- adherence to the Group's Bribery Act Compliance Manual.

PwC presents its internal audit reports to the Committee on a quarterly basis. The management of each business is responsible for implementing the recommendations made by the internal auditors, and the Committee reviews progress on a regular basis.

Having undertaken a review of the effectiveness of PwC in fulfilling the internal audit function, the Committee is satisfied that the quality, experience and expertise of PwC meet the Company's requirements, and PwC has therefore been reappointed to provide internal audit services for the Group in 2020. The Committee also reviewed the level of utilisation of Group employees on individual audits with PwC to ensure that the overall degree of independence on the internal audit programme remained appropriate. In 2020 the work programme for internal audit will continue on a site rotation basis and PwC will create bespoke risk-based testing plans for each site.

Stephen King

Chairman of the Audit Committee
16 December 2019

would be stepping down as a non-executive director. Russell Reynolds was appointed by the Committee to assist with the search and the appointment process proceeded in line with the process adopted for the subsequent appointment of Laurie Bowen detailed below. Russell Reynolds, which has no other connection with the Group, is a signatory to the Voluntary Code of Conduct for Executive Search Firms and has made a commitment to promoting diversity.

During the appointment process for Stephen, the Committee recommended to the Board that it would be beneficial to appoint a second new non-executive director. A candidate brief was drawn-up, with emphasis on the requirement for increased diversity of gender and/or nationality on the Board. Russell Reynolds was again selected by the Committee to facilitate the search, given their recent knowledge of the Group and understanding of the Board's requirements.

Russell Reynolds provided an initial long-list of potential candidates, following which members of the Committee met with four short-listed candidates and reviewed their respective skills and experience against the initial brief. The Committee also considered how each of the candidates would complement the Board. The Committee then selected two preferred candidates to meet the rest of the Board and having considered feedback from all of the directors, the Committee made a recommendation to the Board to appoint Laurie Bowen.

Succession planning

The Committee is responsible for promoting effective succession planning for the Board and the Executive Committee, to ensure that the leadership of the business remains aligned to the Group's strategy.

Following the appointment of a Chief People Officer in 2018, we have increased our focus on leadership and future talent development and succession planning across the entire business. Developing and retaining employees at all levels of the organisation is vital to delivery of our strategy, and this will be an increased area of focus for the Committee in the year ahead.

Diversity

The Committee recognises the importance of diversity and inclusion to the effective performance of the Board, and to our wider business operations. We are committed to promoting diversity across the Group in all forms, including diversity of gender, race, age, disability, sexual orientation, cultural background and belief.

The Committee is cognisant of the voluntary targets set out in the Hampton-Alexander Review that by 2020 at least 33% of Board and Executive Committee members, and their direct reports, should be female. We have made progress towards this target with the appointment of Laurie Bowen to the Board during the year, and we will aspire to further improving female representation on the Board and across the broader senior leadership team over the next few years. The Committee will also have regard to the recommendations set out in the Parker Review on ethnic diversity when recommending future appointments to the Board.

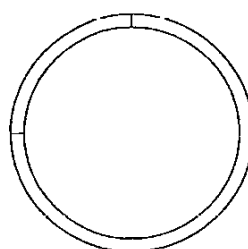
The charts opposite illustrate the current gender diversity of the Board, the Executive Committee and our senior managers, and the gender and ethnic diversity of all employees across the Group. Senior managers are generally directors and functional heads within head office and the business units.

Carl-Peter Forster

Chairman of the Nomination Committee
16 December 2019

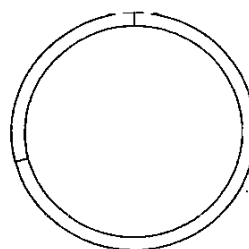
Diversity

Board



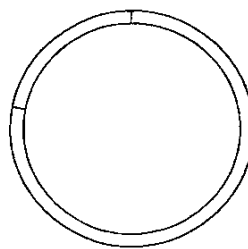
Male 6
Female 2

Executive Committee



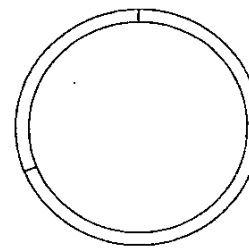
Male 5
Female 2

Senior managers



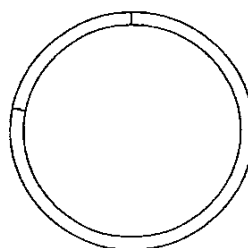
Male 66
Female 19

All employees



Male 1,797
Female 819

Ethnic diversity



White 2,017
Non-white 599

Nomination Committee report

Carl-Peter Forster Chairman of the Nomination Committee

Nomination Committee members

Carl-Peter Forster (Chairman)
Laurie Bowen (appointed August 2019)
Andrew Davies
Stephen King (appointed December 2018)
Nigel Young

Introduction

I am pleased to present the Nomination Committee's report for the year ended 31 October 2019.

The main focus of the Committee during the year was on the appointment of another independent non-executive director, to further strengthen the Board following the appointment of Stephen King as a non-executive director in December 2018. As the result of this process, Laurie Bowen joined the Board on 1 August 2019. Further details of the appointment process are set out below.

During the year the Committee also reviewed its operation against the new UK Corporate Governance Code published in July 2018 and we have identified the actions required to ensure we are fully compliant in the current financial year.

Membership of the Committee

The Nomination Committee's key role is to ensure that the Board has the appropriate skills, knowledge and experience to operate effectively and deliver the Group's strategy.

All members of the Committee are independent non-executive directors. I chair the Committee but will not do so where the Committee is dealing with my own reappointment or replacement as Chairman of the Board.

Key responsibilities of the Nomination Committee

- Reviewing the structure, size and composition of the Board, and making recommendations on appointments to the Board and to Board committees
- Reviewing the overall leadership needs of the organisation
- Succession planning for the Board and the Executive Committee

Operation of the Committee

The Committee's responsibilities are set out in its terms of reference, which are available on the Company's website. The Committee reviews its terms of reference and its effectiveness annually, and recommends to the Board any changes required as a result of the review.

Meetings of the Committee are attended, at the invitation of the Chairman, by the Group Chief Executive when considered appropriate. Members of the Committee do not participate in any discussions relating to their own reappointment or replacement. The Group Legal Director & Company Secretary acts as secretary to the Committee and minutes of meetings are circulated to all Board members. Details of attendance of members of the Committee at the four meetings held during the year are shown on page 52.

Board composition

The Committee regularly reviews the composition and balance of the Board and its committees, and considers non-executive directors' independence, whether the balance between non-executive and executive directors remains appropriate, and whether the Board has the requisite skills and experience to oversee delivery of the agreed strategy for the Group.

As referred to above, Stephen King and Laurie Bowen were appointed to the Board as independent non-executive directors during the year on the recommendation of the Committee.

The Committee also recommended my reappointment and the reappointment of Andrew Davies as a non-executive director for our second three-year terms, and the reappointment of Nigel Young, who had served two three-year terms, for an additional one-year term. Nigel, who has now served as a non-executive director for nearly seven years, has indicated his intention to retire on 30 April 2020, when his current appointment comes to an end. The Committee has prepared a brief for Nigel's replacement and has engaged Russell Reynolds to assist with the search for a new non-executive director.

Appointments to the Board

The Committee is responsible for reviewing and recommending new appointments to the Board, and oversaw the processes which resulted in the appointment of Stephen King and Laurie Bowen during the year.

Stephen King joined the Board as a non-executive director on 1 December 2018 as the result of a search process which was initiated following the announcement by Daniel Dayan in August 2018 that he

Directors' remuneration report

Remuneration overview

Andrew Davies Chairman of the Remuneration Committee

Remuneration Committee members

Andrew Davies (Chairman)
Laurie Bowen (appointed August 2019)
Carl-Peter Forster
Stephen King (appointed December 2018)
Nigel Young

Introduction

I am pleased to present the directors' remuneration report for the year ended 31 October 2019.

The report comprises:

- my annual report on the activities of the Remuneration Committee during the year;
- the annual report on remuneration, which explains how the directors' remuneration policy was implemented in 2019;
- additional statutory information on remuneration arrangements;
- a summary of the directors' remuneration policy; and
- an overview of how the policy will be implemented in 2020.

Our current directors' remuneration policy was approved by shareholders at the 2019 Annual General Meeting, with 90.7% of shareholders having voted in favour. A summary of the approved policy which applied during the year is set out on pages 81 to 83. The full policy can be found in the 2018 directors' remuneration report in the 2018 annual report and accounts, which is published on the Company's website.

Membership and operation of the Remuneration Committee

The Remuneration Committee has been established by the Board and is responsible for the remuneration of the executive directors, the Chairman and the leadership team at the next level. All members of the Committee are independent non-executive directors, save for Mr Forster who was independent on appointment to the Board.

The Committee's responsibilities are set out in its terms of reference, which are available on the Company's website. The terms of reference were updated in the year to reflect the requirements of the new UK Corporate Governance Code published by the Financial Reporting Council in July 2018 (the "2018 Code").

Details of the attendance of members of the Committee at meetings held during the year are shown on page 52. The Group Legal Director & Company Secretary acts as secretary to the Committee, and the Group Chief Executive, the Group Finance Director and the Chief People Officer attend meetings by invitation, but no executive director or other employee is present during discussions relating directly to their own remuneration.

I will be stepping down as Chairman of the Committee following the Annual General Meeting in March 2020 but will remain on the Committee to give my full support to Laurie Bowen when she assumes the Chair.

The Remuneration Committee's activities during the year

The table opposite sets out a summary of the Committee's key remuneration considerations during the year and the decisions it has made.

The Committee focused much of its attention during the year on the application of the 2018 Code and this is explained in detail in the section below.

A more specific consideration for the Committee in the year was the 2019 Performance Share Plan ("PSP") award. When approving the award levels, the Committee was mindful of the lower share price at the grant date and took the decision to reduce the award value from the normal level of 150% of salary to 140% of salary for the executive directors. As noted in last year's report this award was subject to two equally-weighted metrics, namely adjusted earnings per share ("EPS") growth and relative total shareholder return ("TSR"). The target range for the adjusted EPS measure was set in accordance with our long-term views of performance but the baseline position was adjusted upwards to take account of the fact that the reported EPS for 2018 was at a depressed level. This adjustment ensures the EPS target growth range is challenging, yet realistic.

Summary of major activities and decisions of the Committee in 2019

Salary	• 2019 salary reviews for the executive directors and members of the senior leadership team
Annual bonus	• Consideration of the 2018 annual bonus plan outcome • Approval of the 2019 annual bonus plan financial targets and personal objectives for the executive directors • Approval of changes to the structure of the 2019 annual bonus plan for the business unit management teams • Approval of the 2019 annual bonus plan payments
Performance Share Plan ("PSP")	• Consideration of vesting outcomes for PSP awards made in 2016 and 2017 • Approval of 2019 PSP awards and performance conditions, including changes to the TSR comparator group • Consideration of "good leaver" status for certain participants on cessation of employment • Consideration of adjustments to performance targets following disposal of the commoditised energetics businesses
Governance	• Consultation on the remuneration policy submitted for approval to the 2019 Annual General Meeting and consideration of feedback received from shareholders and shareholder representative bodies • Review of new governance and reporting requirements in relation to directors' remuneration
Other	• Review of annual directors' remuneration report

Performance outcomes

As set out in the strategic review, this has been a year of strong performance for the Group, with a number of positive achievements against our short and longer-term objectives.

Performance against the 2019 annual bonus and PSP targets is explained in more detail on pages 72 to 75 but in summary:

- **Annual bonus:** The EPS and operating cash flow targets within the annual bonus plan were fully achieved and hence 80% of bonus entitlement is payable to the executive directors in respect of financial performance. Personal objectives were deemed 90% satisfied and the total bonus payable is therefore 98% of maximum.
- **PSP awards (subject to performance in the year ended 31 October 2019):** The EPS performance condition was fully satisfied and the TSR performance condition was partially satisfied, and awards granted in March 2017 will therefore vest at 69.95% of total award value on 24 March 2020 subject to continued employment.

The Committee considered the outcomes in the context of broader performance indicators and was satisfied that no discretion was required.

Implementation for 2020

Base salaries were reviewed in December 2019 and the Committee approved an increase of 2.5% for all executive directors to take effect from 1 January 2020. The increase is below the average budgeted salary increase for UK employees.

No changes will be made to the structure of the annual bonus plan for the executive directors for 2020.

With regards to the PSP, a change will be made to the comparator group for the relative TSR performance condition for future awards. The comparator group previously comprised a small group of peer companies operating in the defence and technology sectors but with increasing consolidation in these sectors, we have seen a number of companies delist in the last few years, which has reduced the size of the meaningful comparator group. Against this background, relative TSR will be measured against the FTSE All-Share (excluding investment trusts) for future PSP awards.

No other changes are proposed to the implementation of the directors' remuneration policy for 2020.

Directors' remuneration report continued

Remuneration overview continued

Compliance with the 2018 UK Corporate Governance Code

We have reviewed the operation of the Remuneration Committee against the 2018 Code, and the compliance of our current directors' remuneration policy and its application with the 2018 Code. Whilst the Company was not required to comply with the 2018 Code during the year under review, the following table demonstrates where we are currently compliant and the actions which we are taking to ensure full compliance in the current financial year.

Code provision	Current position
Chair of Remuneration Committee to have twelve months' service on a remuneration committee	The terms of reference for the Remuneration Committee have been updated to reflect this requirement. The current Chairman had served on the Remuneration Committee for more than twelve months when he took up his appointment and Laurie Bowen will also have served on another Remuneration Committee for more than twelve months when she takes up the Chair.
Remuneration Committee to set remuneration for senior management	The Remuneration Committee has set remuneration arrangements for the senior management of the Group's businesses outside the US for a number of years. In the US, the US Board has established a Compensation Committee to set the remuneration arrangements for the senior management of the US businesses, in accordance with the requirements of our Special Security Agreement with the US Government. The US Compensation Committee consults with the Remuneration Committee where appropriate.
Remuneration Committee to review workforce remuneration and related policies	The Remuneration Committee reviewed incentive arrangements for the business unit leaders and their direct reports during the year, and agreed changes to align the arrangements with those of the executive directors. The Committee will review workforce remuneration arrangements more widely in 2020.
Total vesting and holding period of five years or more for share awards	The current remuneration policy includes a provision that all shares vesting under PSP awards granted from March 2019 onwards will be subject to an additional two-year holding period. This condition was applied to all awards made under the PSP in 2019.
Formal policy for post-employment shareholding requirements	The introduction of a further two-year holding period for PSP awards and the treatment of deferred shares for leavers, which will normally only vest on their normal vesting date, is considered to be a sufficient formal policy to address this requirement. The Committee will consider whether there is a need to introduce any further provisions during the course of 2020, as market practice evolves in this area.
Discretion to override formulaic outcomes	The annual bonus plan and PSP documentation was updated during the year to reflect this provision.
Alignment of pension contributions	The current remuneration policy provides for a maximum pension contribution of 10% of base salary for new executive director appointments, which more closely aligns with the current average contribution rate for UK employees. This provision was enacted on the appointment of Michael Ord in June 2018. The pension level for Andrew Lewis and Sarah Ellard remains unchanged, reflecting these were legacy arrangements agreed at their appointment. For information, pension arrangements across the UK workforce range from 4% to 20% of salary.
Extended malus and clawback provisions	The annual bonus plan and PSP rules were updated during the year to include wider malus and clawback provisions.

When developing the current directors' remuneration policy for the executive directors, the Remuneration Committee also addressed the following factors outlined in the 2018 Code:

Factor	How this has been addressed
Clarity Remuneration arrangements should be transparent and promote effective engagement with shareholders and the workforce	- The Chairman of the Remuneration Committee consults with major shareholders on the directors' remuneration policy, which is subject to shareholder approval every three years, and on any significant proposed changes to the policy. - The employee engagement initiatives introduced by the Board will provide an opportunity for employees to express their views on a wide range of topics, including directors' remuneration arrangements, in future.
Simplicity Remuneration structures should avoid complexity and their rationale and operation should be easy to understand	The Company operates only two incentive plans for the executive directors – an annual bonus plan to incentivise and reward short-term performance and the PSP, which incentivises long-term performance and aligns management's interests with shareholder interests. The annual bonus plan structure for the executive directors is broadly replicated in the bonus arrangements for the business unit leaders and their direct reports.
Risk Remuneration arrangements should ensure reputational and other risks from excessive rewards, and behavioural risks that can arise from target-based incentive plans, are identified and mitigated	- The annual bonus plan includes non-financial personal objectives covering the management of risks in areas such as safety and compliance, as well as requiring bonus deferral. - The inclusion of broad malus and clawback provisions in the incentive arrangements and the discretion reserved by the Committee to override formulaic outcomes also mitigate the risk of inappropriate rewards.
Predictability The range of possible values of rewards to individual directors and any other limits of discretions should be identified and explained at the time of approving the policy	The directors' remuneration policy imposes maximum levels for annual bonus payments and PSP awards, and sets out the potential remuneration scenarios for executive directors at differing levels of performance. The Remuneration Committee's discretions are also detailed in the policy.
Proportionality The link between individual awards, the delivery of strategy and the long-term performance of the company should be clear Outcomes should not reward poor performance	- The annual bonus plan targets and performance conditions associated with PSP awards provide a direct link between individuals' incentive rewards and delivery of strategic objectives which underpin the long-term performance of the Company. - The annual bonus plan and the PSP require threshold levels of performance before any payments are made or awards vest, and the Remuneration Committee retains discretion to override formulaic outcomes if deemed appropriate.
Alignment to culture Incentive schemes should drive behaviours consistent with company purpose, values and strategy	The annual bonus plan includes non-financial personal objectives which embrace the Company's values of Safety, Excellence and Innovation, and which are also aligned to the delivery of agreed strategic objectives. The performance conditions under the PSP also incentivise long-term performance through the delivery of strategy and shareholder value.

Conclusion

I hope you will find this report helpful and informative and look forward to receiving your support for the resolution on the annual report at our forthcoming Annual General Meeting. Please do not hesitate to contact me on executive directors' remuneration matters via Sarah Ellard, Group Legal Director & Company Secretary, at sarahe@chemring.co.uk.

Andrew Davies

Chairman of the Remuneration Committee
16 December 2019

Directors' remuneration report continued

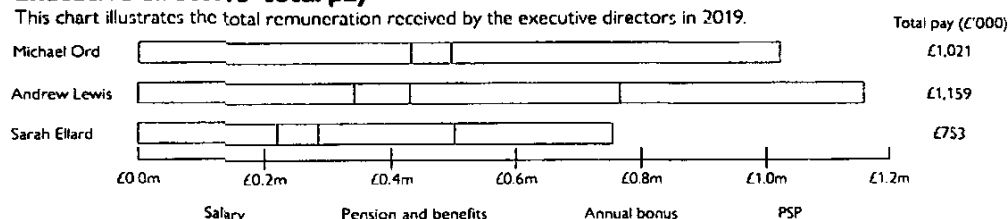
2019 remuneration at a glance

2019 remuneration year in summary

Salary	Salary increases for Andrew Lewis and Sarah Ellard of 3%, in line with the average budgeted salary increase for UK employees. No increase for Michael Ord in view of his recent appointment.
Annual bonus	Bonuses payable for 2019 performance as follows: Michael Ord – 122.5% of salary (£526,750) Andrew Lewis – 98% of salary (£336,257) Sarah Ellard – 98% of salary (£216,275)
Performance Share Plan	Awards granted Awards made in March 2019, valued at 140% of salary, with earnings per share and total shareholder return performance conditions measured over a three-year period, and a two-year holding period post vesting. Awards vesting Awards made in March 2017, which were subject to performance conditions measured over the three years ended 31 October 2019, will vest at 69.95% of award value on 24 March 2020.
Shareholding	Shareholding guideline of 200% of base salary.
Chairman and non-executive director fees	No change to the fees for the Chairman and non-executive directors.

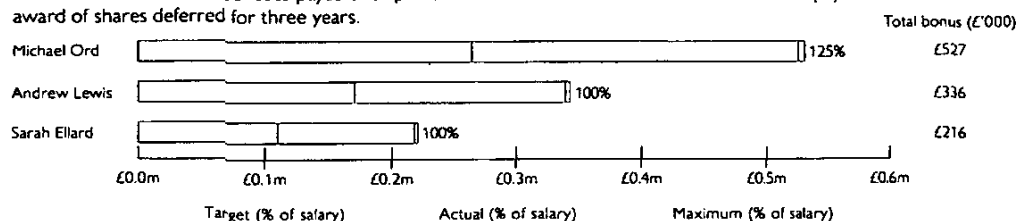
Executive directors' total pay

This chart illustrates the total remuneration received by the executive directors in 2019.



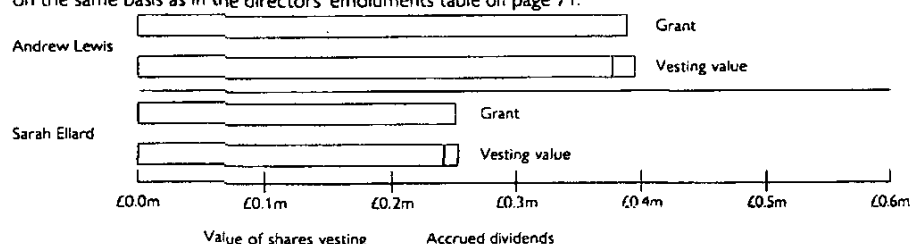
Annual bonus plan outcome

This chart illustrates the bonuses payable for performance in 2019. 60% of the bonus amount is payable in cash and 40% will be satisfied by way of an award of shares deferred for three years.



Performance share plan outcome

This chart illustrates the total value of the performance share plan awards granted to the executive directors on 24 March 2017 that will vest on 24 March 2020, based on 69.95% vesting of awards. The grant value is based on the share price on the grant date and the vesting value is calculated on the same basis as in the directors' emoluments table on page 71.



Annual report on remuneration

This part of the report explains how the directors' remuneration policy was implemented in 2019. The auditor has reported on certain sections of this report and stated whether, in its opinion, those sections have been properly prepared in accordance with the Companies Act 2006. Those sections subject to audit are clearly indicated.

Directors' emoluments (audited)

The emoluments of all the directors who served during the year are shown below:

	Year	Salaries/ fees £'000	Taxable benefits ¹ £'000	Bonus (cash and deferred shares) ² £'000	PSP ³ £'000	Deferred share awards ⁴ £'000	Pension benefits ⁵ £'000	Total £'000
Executives								
Michael Ord ⁶	2019	430	21	527	—	—	43	1,021
	2018	179	9	—	—	—	18	206
Andrew Lewis	2019	341	20	336	394	—	68	1,159
	2018	332	21	—	—	—	66	419
Sarah Ellard	2019	220	20	216	253	—	44	753
	2018	213	20	—	115	43	43	434
Non-executives								
Carl-Peter Forster	2019	200	—	—	—	—	—	200
	2018	200	—	—	—	—	—	200
Laurie Bowen ⁷	2019	14	—	—	—	—	—	14
	2018	—	—	—	—	—	—	—
Andrew Davies ⁸	2019	65	—	—	—	—	—	65
	2018	57	—	—	—	—	—	57
Daniel Dayan ⁹	2019	5	—	—	—	—	—	5
	2018	63	—	—	—	—	—	63
Stephen King ¹⁰	2019	53	—	—	—	—	—	53
	2018	—	—	—	—	—	—	—
Nigel Young ¹¹	2019	63	—	—	—	—	—	63
	2018	65	—	—	—	—	—	65
Total remuneration	2019	1,391	61	1,079	647	—	155	3,333
	2018	1,109	50	—	115	43	127	1,444

Notes:

1. Comprises an annual car allowance of £20,000 for Michael Ord and £19,350 for each of Andrew Lewis and Sarah Ellard, plus private medical insurance for each of the executive directors.
2. 40% of any bonus is delivered as an award of deferred shares.
3. PSP awards granted in March 2017, which were based on performance over the three years ended 31 October 2019, will vest in March 2020 and the estimated values, based on the average share price over the three-month period ended 31 October 2019, equating to 189.77p per share, plus the value of accrued dividends on vesting shares, have been included in the 2019 emoluments. PSP awards granted in January 2015 vested on 26 January 2018 and have been included in the 2018 emoluments, as they were not reflected in the 2017 emoluments.
4. Deferred share awards granted in part satisfaction of bonuses paid in respect of the 2014 financial year vested on 27 January 2018 and have been included in the 2018 emoluments.
5. Michael Ord receives a cash supplement of 10% of salary in lieu of occupational pension scheme membership and the other executive directors receive a cash supplement of 20% of salary.
6. Michael Ord joined the Board on 1 June 2018 and was appointed as Group Chief Executive on 1 July 2018. The single total figure shown for 2018 is in respect of the part year he served.
7. Laurie Bowen was appointed as a non-executive director on 1 August 2019.
8. Andrew Davies was appointed as Chairman of the Remuneration Committee on 8 August 2018 and received an additional fee of £10,000 per annum, included in the above figures on a pro-rated basis, with effect from that date.
9. Daniel Dayan, who resigned as a non-executive director on 30 November 2018, received an additional fee of £10,000 per annum, included in the above figures on a pro-rated basis, in respect of his Chairmanship of the Remuneration Committee up until 7 August 2018.
10. Stephen King was appointed as a non-executive director on 1 December 2018 and was appointed as Chairman of the Audit Committee on 1 August 2019, for which he received an additional fee of £10,000 per annum with effect from that date, included in the above figures on a pro-rated basis.
11. Nigel Young received an additional fee of £10,000 per annum, included in the figures above, in respect of his Chairmanship of the Audit Committee up until 31 July 2019.

Amounts shown above in the salaries and fees column relate to base salary in the case of executive directors and fees in the case of non-executive directors.

Directors' remuneration report continued

Annual report on remuneration continued

Base salary and benefits paid during the year (audited)

Salaries for Andrew Lewis and Sarah Ellard were reviewed in November 2018 and a 3% increase, with effect from 1 January 2019, was approved by the Committee. The salaries of the executive directors during the year were therefore as follows:

Executive	Annual salary from 1 November 2018 to 31 December 2018	Annual salary from 1 January 2019 to 1 October 2019
Michael Ord ¹	£430,000	£430,000
Andrew Lewis	£333,125	£343,119
Sarah Ellard	£214,261	£220,689

Note:

1. Michael Ord joined the Board on 1 June 2018 and was appointed as Group Chief Executive on 1 July 2018.

Michael Ord receives a cash allowance of £20,000 per annum in lieu of a company car and the other executive directors receive a cash allowance of £19,350 per annum. The cash allowances, which are reviewed every three years, were reviewed in December 2019 and have been frozen at current levels for the next three years.

Details of variable pay opportunity in the year

Annual bonus (audited)

80% of the annual bonus opportunity for 2019 was based on financial targets (namely earnings per share and operating cash flow), with 20% based on personal objectives. No bonus is payable in respect of the personal objectives unless the Committee is satisfied that this is justified by the Group's underlying performance, including *inter alia* levels of profitability and cash flow, as well as health and safety performance.

The Committee has consistently set challenging targets for the achievement of maximum bonuses. The financial targets for the 2019 bonus plan, compared with actual performance, were as follows:

	Weighting (80% of overall bonus)	Performance	Target	Actual
Underlying diluted earnings per share (continuing operations ¹)	50%	Target Stretch	9.8p 10.78p	11.0p
Underlying operating cash flow (continuing and discontinued operations)	50%	Target Stretch	£55.27m £60.80m	£77.6m

Note:

1. Excluding the commodotised energetics businesses

The personal objectives set in respect of the 2019 bonus plan were structured around a common set of strategic objectives which were shared amongst the executive directors, members of the Executive Committee and each of the business unit leaders, focused as appropriate on their respective businesses. Details of the key achievements of the executive directors against the common objectives are set out below:

Strategic objective	Key achievements
Safety	
- Implementation of new Group HSE Management System Framework Standard - Achievement of 50% reduction in recordable injuries	- Framework Standard implemented Group-wide and first year of three-year HSE Strategy delivered 2019 total recordable injury frequency rate reduced to 0.79, compared to a prior year rate of 2.77, which is a 71% reduction
Excellence	
Delivery of operational excellence and continuous improvement programme	- Group-wide stocktake of operational excellence workstreams carried out, with best practice captured and others retired - Significant progress made across the Group on refocusing management and resource into continuous improvement activities to improve competitiveness
Innovation	
Implementation of innovation framework encompassing people, technology, business systems, business processes and infrastructure, and alignment of the framework with strategy	Innovation framework in development Group-wide, with projects linked to continuous improvement activities
Governance and assurance	
- Implementation of the Operational Framework and establishment of the operational assurance process - Development of the internal audit programme	- Operational Framework and operational assurance process implemented across the Group - Executive directors are working with the Audit Committee to build an enhanced internal audit plan aligned with the current business risk profile
People	
- Strengthening of senior leadership team - Establishment of talent management and succession planning activities - Implementation of leadership and management development programmes	- Significant changes made in all leadership teams across the UK and the US - Chemring Development Framework established and talent management activities now being progressed across the Group - Emerging Leaders Programme, Early Careers Conferences and Line Manager Training Programme delivered

Strategic objective	Key achievements
US operations - Strengthening of US management organisation - Complete disposal of the US commoditised energetics businesses	- Significant changes made in all leadership teams across the US - Chemring Military Products divested and conditional agreement signed for the sale of Chemring Ordnance
Sensors & Information - Mobilisation of the US Programs of Record and secure next phase of AVCAD - Development of Sensors & Information sector growth strategy	- HMDS, JBTDS and EMBD programs mobilised - All AVCAD milestones delivered, including significant product redesign to improve performance and reduce cost - Successful AVCAD customer design review completed with US DoD customers and progressing to next phase of testing with seventy five additional prototypes now ordered - Growth strategy developed and approved by the Board
Countermeasures & Energetics - Complete disposal of UK commoditised energetics businesses - Deliver UK countermeasures site restart plan - Commission new production facilities at Kilgore - Implementation of revised operating model for Chemring Energetics UK - Implementation of production capacity increase plan at Chemring Nobel - Development of Countermeasures & Energetics sector growth strategy	- Chemring Defence UK divested and Chemring Prime Contracts traded out - All product lines restarted and automated MTV flare facility now operating 24/5 - Construction of new facilities is progressing well with new programme leadership team in place, along with a fit-for-purpose governance framework - New Managing Director appointed at Chemring Energetics UK, and enhanced leadership team and business organisation established - Capacity expansion plan developed for Chemring Nobel, with first steps focusing on improving "right first time" production and programme of replacement of legacy plant and systems - Countermeasures & Energetics sector growth strategy developed and approved by the Board

In addition to the common strategic objectives, Andrew Lewis and Sarah Ellard were also set additional personal objectives in their respective areas of functional responsibility as follows:

Andrew Lewis - Strengthening of central and business unit finance team - Secure increased banking facilities - Complete dissolution of legacy intra-group financing arrangements - Develop investor relations strategy	Key achievements - New appointments made at head office and in a number of business unit finance teams - Additional financial support provided by head office to various businesses - Increased bank facilities secured to cover repayment of loan notes in November 2019 - Overseas financing arrangements dissolved and EU State Aid claim being managed - Implemented investor relations strategy and maintained coverage by at least six analysts
Sarah Ellard - Strengthening of UK and US internal legal resource - Develop training programme to support the Operational Framework - Implement enhancements to the Group's anti-bribery policies and procedures, and issue an updated Code of Conduct - Initiate a liability management programme for the legacy UK defined benefit pension scheme	Key achievements - UK and US legal teams strengthened with appointment of additional lawyers - Various new training modules developed to support the Operational Framework and further initiatives planned for 2020 - Completed termination of appointment of over one hundred third party sales partners - New Code of Conduct and updated Bribery Act Compliance Manual issued - Trivial pension commutation exercise and GMP reconciliation completed; implemented new investment strategy to reduce risk

The Committee assesses performance against the objectives using both qualitative and quantitative evidence. There are no specific weightings given to each objective and the overall assessed percentage is based on the Committee's judgement of performance in aggregate, and may reflect other achievements and factors during the year.

Directors' remuneration report continued

Annual report on remuneration continued

Details of variable pay opportunity in the year continued

Annual bonus (audited) continued

Based on the above performance, bonuses are payable to the executive directors under the 2019 bonus plan as follows (audited):

Executive	Maximum bonus (% of salary)	Bonus paid in respect of financial targets (% of salary)	Bonus paid in respect of personal objectives (% of salary)	Total bonus payment(£) ¹
Michael Ord	125%	100%	22.5%	£526,750
Andrew Lewis	100%	80%	18%	£336,257
Sarah Ellard	100%	80%	18%	£216,275

Note:

1. 40% of bonuses payable are satisfied by way of an award of deferred shares, vesting of which is subject only to continued service.

The Committee reviewed the outcomes in light of broader company and individual performance and is satisfied that no discretion was necessary.

Performance Share Plan (audited)

Vesting of 2017 PSP awards

The PSP awards granted on 24 March 2017 were made subject to the following performance conditions:

Measure	Threshold vesting	Full vesting
Total compound earnings per share growth per annum over three financial years (50% of award)	5% p.a. (25% vests)	10% p.a. (100% vests)
Rank of the Company's total shareholder return against the total shareholder return of the members of the comparator group (50% of award)	Median ranking (25% vests)	Upper quartile ranking (100% vests)

The Group's compound earnings per share growth on continuing operations over the three financial years ended 31 October 2019 was 14% p.a. and 100% of the part of the awards subject to the earnings per share measure will therefore vest. The Committee applied discretion to make appropriate adjustments to the underlying earnings per share to reflect the disposal or closure of three of the commoditised energetics businesses completed during the year, to ensure that performance was measured on a like-for-like basis.

The Company's total shareholder return over the performance period ranked 4.6 against a median of 5.0 for the comparator group. 39.9% of the part of the awards subject to the total shareholder return measure will therefore vest.

In total, 69.95% of the awards granted on 24 March 2017 will vest on 24 March 2020 subject to continued employment.

Details of the awards granted to the executive directors on 24 March 2017 are provided below (audited):

Executive	Vesting date	Number of shares at grant	Number of shares to vest	Number of shares to lapse
Andrew Lewis	24 March 2020	283,430	198,259	85,171
Sarah Ellard	24 March 2020	182,297	127,516	54,781

Executive	Value of shares to vest ¹	Value of accrued dividends	Total value of awards to vest
Andrew Lewis	£376,236	£17,446	£393,682
Sarah Ellard	£241,987	£11,221	£253,208

Note:

1. Value based on the average closing share price of 189.77p over the three-month period ended 31 October 2019.

PSP awards granted in the year

The following conditional awards of shares were granted to the executive directors under the PSP during the year:

Executive	Date of grant	Value of award	Closing share price on date of grant	Number of conditional shares awarded	Face value	% that vests at threshold	Vesting determined by
Michael Ord	22 March 2019	140% of salary	139.6p	421,568	£588,509	25%	50% EPS growth and 50% relative TSR performance as detailed below
Andrew Lewis	22 March 2019	140% of salary	139.6p	336,391	£469,602	25%	
Sarah Ellard	22 March 2019	140% of salary	139.6p	216,361	£302,040	25%	

Awards under the PSP are normally granted in January of each year, immediately following the release of the results for the preceding financial year, and award levels are calculated based on the closing share price on the trading day immediately preceding the date of grant. The grant date for awards made in 2019 was deferred to after the Annual General Meeting in March 2019, when the new directors' remuneration policy was approved by shareholders. The Company's share price fell over the period from January to March. If the awards had been made in January 2019, the award values would have been calculated based on a higher closing share price on 17 January 2019 of 155p and a lower number of conditional shares would therefore have been awarded. In order to address this, the Committee decided to make a one-off reduction in the values of the awards made to the executive directors and the awards were therefore valued at 140% of salary, rather than 150% of salary. The Committee also agreed that, against this background, the TSR performance condition associated with the awards would be measured over a three-year period commencing on the date of grant, i.e. 22 March 2019, rather than from the beginning of the financial year.

Accordingly, the performance conditions applying to the awards made in March 2019 are based as to one half of each award on the Company's compound earnings per share growth over three financial years commencing 1 November 2018, and as to the other half of each award on the Company's total shareholder return performance over a three-year performance period commencing on date of grant i.e. 22 March 2019.

The earnings per share performance condition will be measured as follows:

Total compound earnings per share growth over the three-year performance period	% of earnings per share part that may vest
Less than 5% p.a.	0%
5% p.a.	25%
Between 5% p.a. and 10% p.a.	On a straight-line basis between 25% and 100%
10% p.a. or more	100%

Note:

1. Earnings per share is calculated on an underlying, fully diluted and normalised basis, as specified by the Committee prior to grant.

The Group's results for the year ended 31 October 2018 were below expectations as a consequence of the incident at the UK countermeasures site in August 2018. In order to ensure that the baseline performance against which earnings per share growth would be measured was not inappropriately low, the Committee decided to set an adjusted baseline earnings per share of 11.3p for the year ended 31 October 2018, to reflect the results which would have been achieved by the Group had the incident not occurred.

The total shareholder return performance condition will be measured as follows:

Rank of the Company's total shareholder return against the total shareholder return of the members of the comparator group	% of total shareholder return part that may vest
Below median	0%
Median	25%
Between median and upper quartile	On a straight-line basis between 25% and 100%
Upper quartile or above	100%

The comparator group for the PSP awards made in prior years has reduced in size over time, as the result of the acquisition of a number of the constituents. The Committee therefore decided to review and update the comparator group for the 2019 awards to include a wider, more closely aligned group of peers. The comparator group for the 2019 awards comprises AB Dynamics, Avon Rubber, Babcock, BAE Systems, Bodycote, Cobham, Cohort, Gooch & Housego, Hill & Smith, Leonardo, Meggitt, Morgan Advanced Materials, Oxford Instruments, QinetiQ, Rheinmetall, Ricardo, Senior, TT Electronics, Ultra Electronics and XP Power.

Any shares that vest in respect of the 2019 awards will be subject to a two-year holding period (after allowing for the sale of sufficient shares to meet the tax and national insurance liability arising on vesting).

Deferred share awards (audited)

Vesting of deferred share awards

The deferred award over 32,944 shares granted to Sarah Ellard in part satisfaction of her annual bonus for the year ended 31 October 2016 is expected to vest in full on 19 January 2020. Mrs Ellard will also receive £2,899 in respect of the dividends paid on these shares during the deferral period.

Directors' remuneration report continued

Annual report on remuneration continued

Pension (audited)

The following table sets out the pension benefits earned by the executive directors during the year. Only Sarah Ellard previously accrued benefits during her former membership of the Chemring Group Staff Pension Scheme.

Executive	Cash in lieu of pension contributions £'000	Total benefit accrued at 31 October 2018		Transfer value of accrued benefit at 31 October 2018 £'000	Total benefit accrued at 31 October 2019		Transfer value of accrued benefit at 31 October 2019 £'000	Increase in transfer value during year (less members' contributions) £'000	Value of benefit for single figure £'000
		Pension £'000 p.a.	Cash £'000		Pension £'000 p.a.	Cash £'000			
Michael Ord	43	—	—	—	—	—	—	—	43
Andrew Lewis	68	—	—	—	—	—	—	—	68
Sarah Ellard	44	24	72	461	24	72	461	—	44

Notes:

1. Michael Ord receives a 10% cash supplement in lieu of pension and the other executive directors receive a 20% cash supplement.
2. Transfer values represent liabilities of the applicable scheme, and do not represent sums paid to individuals.
3. Transfer values have been calculated in accordance with the Occupational Pension Scheme (Transfer Value) Regulations 1996.
4. Sarah Ellard left pensionable service on 6 April 2010 and therefore has not accrued additional pension over the year. The accrued benefits shown are the benefits at the date of exit.
5. The scheme provided pension at a rate of 1/80th of final pensionable salary plus a cash lump sum of 3/80ths for each year of membership. Final pensionable salary was capped at the HMRC notional earnings cap, and the scheme assumed a normal retirement age of 65. Early retirement is permissible from age 55 but accrued benefits are reduced accordingly using the early retirement factors in force at the date of early retirement.

Payments to past directors

Michael Flowers stepped down as Group Chief Executive and as a director on 30 June 2018, although remained an employee until 31 October 2018 to provide transition support to Mr Ord as the incoming Group Chief Executive.

Mr Flowers' notice period started on 1 May 2018. Following cessation of his employment with the Company as of 31 October 2018, he was paid a lump sum of £267,648, which was equivalent to his salary-in-lieu and the fair value for contractual benefits for the balance of his remaining six months' notice period. Mr Flowers was also reimbursed £10,000 for relocation expenses on his relocation from the UK.

In accordance with the agreement reached with Mr Flowers on cessation of his employment, the deferred award over 80,633 shares granted to Mr Flowers in part satisfaction of his annual bonus for the year ended 31 October 2016 is expected to vest in full on 19 January 2020. Mr Flowers will also receive £7,095 in respect of the dividends paid on these shares during the deferral period.

The PSP award over 363,629 shares granted to Mr Flowers on 24 March 2017 is also expected to vest at 69.95% on 24 March 2020, following satisfaction of the performance conditions as detailed on page 74.

Full details of the termination arrangements agreed with Mr Flowers are set out in the directors' remuneration report included in the 2018 annual report and accounts.

Additional statutory information on remuneration arrangements

Directors' shareholdings (audited)

Shareholding guidelines apply to executive directors and other participants in the PSP. Executive directors are expected to build-up and maintain a shareholding in the Company equivalent to 200% of basic salary, by retaining at least 50% of the after-tax gain on vested PSP awards until such time as the guidelines have been met. Other participants in the PSP are expected to retain a shareholding equivalent to 25% to 50% of their basic salary.

The interests of the directors in the ordinary shares of the Company at 31 October 2019 are shown below. All are beneficial holdings.

Executive	Legally owned (number of shares)	Value of legally owned shares as % of salary ¹	Guideline met	Unvested and subject to performance conditions under the PSP			Total at 31 October 2019	Deferred bonus share awards	Sharesave options
				2017 award	2018 award	2019 award			
Michael Ord	50,000	23%	No	—	394,495	421,568	816,063	—	16,853
Andrew Lewis	8,720	5%	No	283,430	265,791	336,391	885,612	41,143	12,162
Sarah Ellard	65,058	59%	No	182,297	170,952	216,361	569,610	58,739	7,297
Carl-Peter Forster	30,000	—	—	—	—	—	—	—	—
Laurie Bowen	15,000	—	—	—	—	—	—	—	—
Andrew Davies	—	—	—	—	—	—	—	—	—
Stephen King	60,500	—	—	—	—	—	—	—	—
Nigel Young	—	—	—	—	—	—	—	—	—

Note:

1. Based on the number of shares legally owned, prevailing basic salary and share price of 201p at 31 October 2019.

The directors' share interests at 31 October 2019 include shares held by the directors' connected persons, if any, as required by the Regulations. There have been no changes to the directors' interests in shares since 31 October 2019.

Outstanding PSP awards (audited)

Executive	At 1 November 2018	Number of shares under award				At 31 October 2019	Date of vesting	Closing share price on date of grant (p)
		Awarded during the year	Lapsed during the year	Vested during the year ¹				
Michael Ord	394,495	—	—	—		394,495	26 June 2021	218.0
	—	421,568	—	—		421,568	22 March 2022	139.6
	394,495	421,568	—	—		816,063		
Andrew Lewis	283,430	—	—	—		283,430 ¹	24 March 2020	195.7
	265,791	—	—	—		265,791	19 January 2021	190.8
	—	336,391	—	—		336,391	22 March 2022	139.6
	549,221	336,391	—	—		885,612		
Sarah Ellard	222,358	—	(222,358)	—		—	25 January 2019	138.4
	182,297	—	—	—		182,297 ¹	24 March 2020	195.7
	170,952	—	—	—		170,952	19 January 2021	190.8
	—	216,361	—	—		216,361	22 March 2022	139.6
	575,607	216,361	(222,358)	—		569,610		

Note:

1. As explained above, these awards will vest at 69.95% on 24 March 2020 subject to continued employment.

Directors' remuneration report continued

Additional statutory information on remuneration arrangements continued

Outstanding PSP awards (audited) continued Performance conditions for outstanding awards

	Measure	Director	Awards to executive directors	Threshold vesting	Full vesting
Awards made on 19 January 2018	Total compound earnings per share growth per annum over the three financial years ended 31 October, 2020 (50% of award)	Andrew Lewis Sarah Ellard	150% of salary	5% p.a. (25% vests)	10% p.a. (100% vests)
	Rank of the Company's total shareholder return of the members of the comparator group over the three financial years ended 31 October 2020 (50% of award)			Median ranking (25% vests)	Upper quartile ranking (100% vests)
Awards made on 26 June 2018	Total compound earnings per share growth per annum over the three-year period from 1 May 2018 to 30 April 2021 (50% of award)	Michael Ord ¹	200% of salary	5% p.a. (25% vests)	10% p.a. (100% vests)
	Rank of the Company's total shareholder return of the members of the comparator group over the three-year period from 1 May 2018 to 30 April 2021 (50% of award)			Median ranking (25% vests)	Upper quartile ranking (100% vests)

Note:

1. Michael Ord was granted a one-off award on appointment of 200% of salary. This represents a "normal" award of 150% of salary and an additional 50% of salary which takes into account the value of remuneration he forfeited from his previous employer. Any shares which vest under this award will be subject to a two-year holding period.

Outstanding deferred bonus share awards (audited)

Executive	At 1 November 2018	Number of shares under award				At 31 October 2019	Date of vesting	Closing share price on date of grant (p)
		Awarded during the year	Lapsed during the year	Vested during the year				
Andrew Lewis	41,143	—	—	—		41,143	18 January 2021	188.0
	41,143	—	—	—		41,143		
Sarah Ellard	32,944	—	—	—		32,944	19 January 2020	172.0
	25,795	—	—	—		25,795	18 January 2021	188.0
	58,739	—	—	—		58,739		

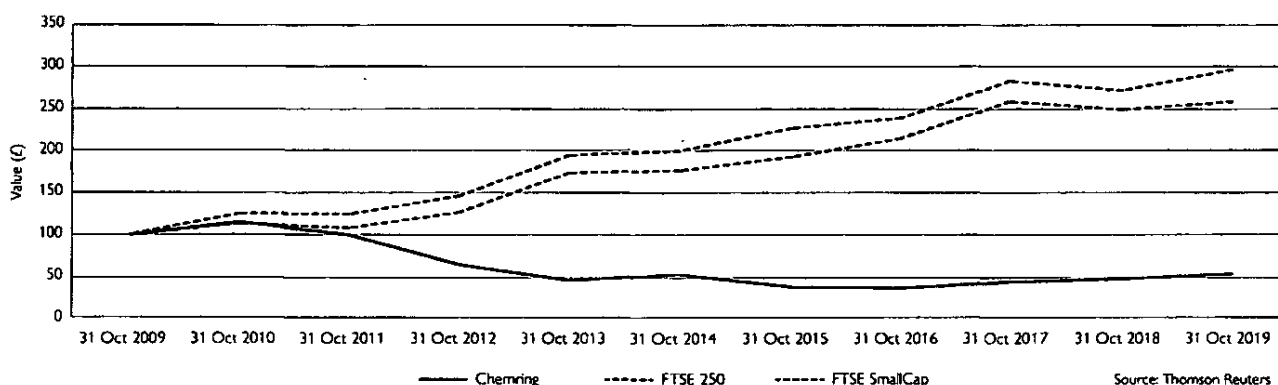
Outstanding Sharesave options (audited)

Executive	At 1 November 2018	Number of shares under award				At 31 October 2019	Exercise price	Exercise date
		Awarded during the year	Lapsed during the year	Vested during the year				
Michael Ord	16,853	—	—	—		16,853	178p	1 October 2023– 31 March 2024
	16,853	—	—	—		16,853		
Andrew Lewis	12,162	—	—	—		12,162	148p	1 October 2020– 31 March 2021
	12,162	—	—	—		12,162		
Sarah Ellard	7,297	—	—	—		7,297	148p	1 October 2020– 31 March 2021
	7,297	—	—	—		7,297		

Total shareholder return performance graph

The following graph shows the Company's cumulative total shareholder return over the last ten financial years relative to the FTSE 250 and FTSE SmallCap Indexes. The FTSE Small Cap has been selected by the Committee for this comparison because it provides the most appropriate measure of performance of listed companies of a similar size to the Company. The FTSE 250 has been shown in previous years and has been included this year for the purpose of continuity.

The graph shows the value, by 31 October 2019, of £100 invested in Chemring Group PLC on 31 October 2009 compared with the value of £100 invested in the FTSE 250 and FTSE SmallCap. The other points are the values at intervening financial year ends.



Chief Executive's remuneration table

The total remuneration figures for the Group Chief Executive during each of the last ten financial years are shown in the table below. Mark Papworth replaced David Price as Group Chief Executive on 5 November 2012. Michael Flowers replaced Mark Papworth on 24 June 2014 and Michael Ord replaced Michael Flowers on 1 July 2018.

The total remuneration figures for 2012 and 2014 include the payments for loss of office made to David Price and Mark Papworth respectively. The figures for 2018 include a full year's salary and benefits for Michael Flowers.

The total remuneration figure for each year includes the annual bonus based on that year's performance and, where applicable, vested PSP awards based on the three-year performance period ending in the relevant year. The annual bonus payout and PSP award vesting level as a percentage of the maximum opportunity are also shown for each of these years.

	David Price			Mark Papworth	Mark Papworth/ Michael Flowers	Michael Flowers			Michael Flowers/ Michael Ord	Michael Ord
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total remuneration £'000	1,391	1,239	1,325	785	841	507	855	831	969	1,021
Annual bonus (% of maximum)	62%	0%	0%	40%	50%	0%	68.3%	59.5%	0%	98%
PSP awards vesting (% of maximum)	100%	100%	54.375%	0%	0%	0%	0%	0%	35%	0%

Percentage change in the Group Chief Executive's remuneration

The table below shows the percentage change in the Group Chief Executive's total remuneration (excluding the value of any PSP awards and pension benefits receivable in the year) between the 2018 and 2019 financial years, compared to that of the average for all eligible employees of the Group.

	Salary	Benefits	Annual bonus
Group Chief Executive	0.7%	(4.5%)	100.0%
Average of other employees	4.1%	14.6%	107.3%

The Committee is cognisant of the new reporting regulations, which do not come into effect for the Group until the financial year commencing 1 November 2019, which will require companies to publish ratios comparing Chief Executive pay to employee pay. The reporting structure of our UK entities has meant that collecting robust data on a Group-wide basis, which is in line with the statutory methodology, has been a challenging endeavour. However, we have put in place processes which will provide the Committee with timely and accurate data from which we can publish our ratio as required in next year's report (i.e. for the financial year ending 31 October 2020). In the meantime, the Committee has considered pay ratios on a simplified basis, using the Chief Executive's single total figure for 31 October 2019 and the average staff cost at continuing operations as calculated from note 6 to the Group financial statements (see page 100). This produces a ratio of 19:1.

Directors' remuneration report continued

Additional statutory information on remuneration arrangements continued

Percentage change in the Group Chief Executive's remuneration continued

	£'000
Group Chief Executive	1,021
Average of staff cost ¹	55

Note:

1. Total staff costs at continuing operations of £127m divided by average number of employees of 2,312.

The Committee is mindful that pay ratios, however calculated, are a useful reference point but cannot be considered in isolation. Any movement in ratios will be reviewed by the Committee to understand the causes and longer-term trends will be monitored.

Relative importance of spend on pay

The following table shows the Company's actual spend on pay (for all employees) relative to dividends and retained profits:

	2019 £m	2018 £m	% change
Staff costs	138.1	129.2	6.9%
Dividends	9.5	8.7	9.2%
Retained profits	8.5	7.1	19.7%

The dividends figures relate to amounts payable in respect of the relevant financial year.

Advisers to the Remuneration Committee

During the year, FIT Remuneration Consultants LLP ("FIT") were retained by the Remuneration Committee to advise on remuneration and incentive plan related matters. FIT is a signatory to the Remuneration Consultants' Group Code of Conduct. The Committee has reviewed the nature of the services provided by FIT and is satisfied that no conflict of interest exists in the provision of these services. The Company received no other services from FIT during the year. The total fees paid to FIT in respect of services to the Committee during the year were £38,400 (2018: £36,903). Fees were determined based on the scope and nature of the projects undertaken for the Committee.

The Committee reviews the performance and independence of its advisers on an annual basis.

The Committee consults internally with the Group Chief Executive (Michael Ord), the Group Legal Director & Company Secretary (Sarah Ellard) and the Chief People Officer (Clancy Murphy). No executive is involved in discussions on their own pay.

Shareholder voting on the directors' remuneration policy at the 2019 Annual General Meeting

At the Annual General Meeting held on 21 March 2019, the resolution relating to the directors' remuneration policy received the following votes from shareholders:

For	229,177,007	90.70%
Against	23,500,902	9.30%
Total votes cast (for and against excluding withheld votes)	252,677,909	100.0%
Votes withheld ¹	33,392	0.01%
Total votes cast (including withheld votes)	252,711,301	

Note:

1. A vote withheld is not a vote in law and is not counted in the calculation of the proportion of votes cast "for" and "against" a resolution.

Shareholder voting on the directors' remuneration report at the 2019 Annual General Meeting

At the Annual General Meeting held on 21 March 2019, the resolution relating to the directors' remuneration report received the following votes from shareholders:

For	227,060,621	89.86%
Against	25,617,288	10.14%
Total votes cast (for and against excluding withheld votes)	252,677,909	100.0%
Votes withheld ¹	33,392	0.01%
Total votes cast (including withheld votes)	252,711,301	

Note:

1. A vote withheld is not a vote in law and is not counted in the calculation of the proportion of votes cast "for" and "against" a resolution.

Directors' remuneration policy

Key objectives

In developing a policy for the executive directors' remuneration, the Remuneration Committee seeks to:

- maintain a competitive package of rewards required to promote the long-term success of the Company, without being excessive by reference to market rates across comparator companies, and either encouraging or rewarding inappropriate risk taking;
- ensure performance-related elements:
 - are transparent, stretching and rigorously applied;
 - form a significant proportion of the total remuneration package of each executive director; and
 - align the interests of executives with those of shareholders, by ensuring that a significant proportion of remuneration is performance related and delivered in shares; and
- set remuneration in the context of the core values of the business and with the aim of alignment with culture.

The remuneration policy for the executive directors and other senior executives is also designed with regard to the policy for employees across the Group as a whole. However, there are some differences in the structure of the remuneration policy for executive directors and other senior executives. In general, these differences arise from the development of remuneration arrangements that are market-competitive for the various categories of individuals. They also reflect the fact that, in the case of the executive directors and other senior executives, a greater emphasis tends to be placed on performance-related pay in the market.

Policy summary

The table overleaf provides a summary of the current directors' remuneration policy. The full policy was approved by shareholders at the Annual General Meeting held on 21 March 2019 and can be found in the 2018 directors' remuneration report included in the 2018 report and accounts on our website (<https://www.chemring.co.uk/investors/annual-reports/2018>). The policy remains valid until the 2022 Annual General Meeting.

Further details of the policy are set out on pages 82 and 83, and an explanation of how the policy will be applied in 2020 is set out on pages 84 and 85.

Directors' remuneration report continued

Directors' remuneration policy continued

Executive directors

Element	Operation	Maximum
Salary	• Normally reviewed annually with effect from 1 January • Benchmarked periodically against companies with similar characteristics within the same sector • Salaries take account of complexity of the role, market competitiveness, Group performance and the increases awarded to the wider workforce	• Salary increases will normally be in line with those received by the wider workforce • More significant increases may be awarded at the discretion of the Committee, for example where there is a change in responsibilities, to reflect individual development and performance in the role
Bonus	• Paid in cash, with up to 40% deferred as a conditional award of deferred shares • Vesting of deferred shares is subject to continued employment (save in "good leaver" scenarios) at the end of three years from the award of the bonus • The payment of any earned bonus remains ultimately at the discretion of the Committee • Non-pensionable • Executives are entitled to receive, on vesting of deferred share awards, the value of dividend payments that would otherwise have been paid on the deferred shares during the deferral period	• Chief Executive – 125% of salary • Other executive directors – 100% of salary
Long-term incentive plan (performance share plan – "PSP")	• Annual grants of shares, which vest subject to the Group's performance measured over at least three years • Any shares vesting must be held by the executives for a further period of two years • Executives are entitled to receive the value of dividend payments that would otherwise have been paid on vested awards • All awards are subject to the discretions given to the Committee in the plan rules during the vesting period	• Normally 150% of base salary (although grants of up to 200% of base salary may be made in exceptional circumstances such as on recruitment)
All employee share scheme	• The UK Sharesave Plan has standard terms	• Participation limits are those set out by HM Revenue & Customs from time to time
Pension	• Ongoing pension provision is in the form of a cash supplement, subject to auto-enrolment in the Group's defined contribution scheme • Longer-serving employees have accrued benefits under the Group's defined benefit scheme, which was closed to future accrual for the executive directors on 6 April 2010	• Legacy arrangements: 20% of base salary cash supplement contribution paid in lieu of occupational pension scheme membership • New appointments: 10% of base salary cash supplement contribution paid in lieu of occupational pension scheme membership • All UK employees, including the executive directors, are subject to auto-enrolment into the Group's defined contribution scheme, with an employer contribution of 4% of base salary. If executives do not opt out of this scheme, their cash supplement will be reduced by 4%. For information, pension arrangements across the UK workforce range from 4% to 20% of salary
Other benefits	• Main benefits currently provided to UK executives are a car allowance, life assurance and private medical insurance • Executive directors are eligible for other benefits which may also be introduced	• Cash allowance in lieu of company car of up to £25,000 per annum • Other benefits will be in line with market. The value of each benefit is based on the cost to the Company and is not pre-determined • Any reasonable business-related expenses (including tax thereon) can be reimbursed if determined to be a taxable benefit

Chairman and non-executive directors

Element	Operation
Fees	- The Chairman is paid a single fee for all his responsibilities. The non-executives directors are paid a basic fee. The Chairs of the Remuneration Committee and the Audit Committee each receive additional fees to reflect their extra responsibilities - When reviewing fee levels, account is taken of market movements in non-executive director fees, Board Committee responsibilities, ongoing time commitments, the general economic environment and the level of increases awarded to the wider workforce - Fee increases, if applicable, are normally effective from April of each year - In exceptional circumstances, additional fees may be paid where there is a substantial increase in the temporary time commitment required of non-executive directors
Benefits and incentives	Non-executive directors do not participate in any pension, bonus or share incentive plans
Expenses	Non-executive directors may be compensated for travel, accommodation or hospitality-related expenses in connection with their roles and any tax thereon

Committee discretions

The Committee operates the Group's variable incentive plans according to their respective rules and in accordance with governing legislation and HM Revenue & Customs rules where relevant. To ensure the efficient administration of these plans, the Committee will apply certain operational discretions. These include the following:

- selecting the participants in the plans on an annual basis;
- determining the timing of grants of awards and/or payment;
- determining the quantum of awards and/or payments (within the limits set out in the remuneration policy);
- determining the extent of vesting based on the assessment of performance;
- making the appropriate adjustments required in certain circumstances (e.g. change of control, rights issues, corporate restructuring events and special dividends);
- determining "good leaver" status for incentive plan purposes and applying the appropriate treatment; and
- undertaking the annual review of weighting of performance measures, and setting targets for the annual bonus plan and the PSP from year to year.

If an event occurs which results in the annual bonus plan or PSP performance conditions and/or targets being deemed no longer appropriate by the Committee (e.g. a material acquisition or divestment), the Committee will have the ability to adjust appropriately the measures and/or targets and alter weightings, provided that the revised conditions or targets are not materially less difficult to satisfy (taking account of the relevant circumstances).

Executive directors' service contracts

The current executive directors have rolling service contracts, with effective dates as follows:

Executive	Date of contract
Michael Ord	30 April 2018 (effective 1 June 2018)
Andrew Lewis	12 December 2016 (effective 9 January 2017)
Sarah Ellard	2 November 2011 (effective 7 October 2011)

Further details on the executive directors' service contracts and the Company's policy on service contracts are set out within the full directors' remuneration policy included in the 2018 annual report and accounts.

The executive directors' service contracts are available for inspection at the Company's registered office.

The Chairman's and non-executive directors' letters of appointment

The following table provides details of the terms of appointment for the Chairman and the current non-executive directors:

Name	Date original term commenced	Date current term commenced	Expected expiry date of current term
Carl-Peter Forster	1 May 2016	1 May 2019	30 April 2022
Laurie Bowen	1 August 2019	1 August 2019	31 July 2022
Andrew Davies	17 May 2016	17 May 2019	16 May 2022
Stephen King	1 December 2018	1 December 2018	30 November 2021
Nigel Young	1 May 2013	1 May 2019	30 April 2020

Directors' remuneration report continued

Directors' remuneration policy continued

Application of the remuneration policy in 2020

This part of the report sets out how the approved directors' remuneration policy will be implemented in 2020.

Executive directors

Element	Purpose and link to strategy	Implementation
Salary	- Reflects the performance of the individual, their skills and experience over time, and the responsibilities of their role - Provides an appropriate level of basic fixed income, avoiding excessive risk arising from over-reliance on variable income	- The executive directors' salaries were reviewed in December 2019, and the following salary increases were agreed, effective 1 January 2020: - Michael Ord – £440,750 - Andrew Lewis – £351,696 - Sarah Ellard – £226,206 - The percentage increase of 2.5% applied to the executive directors' salaries is below the average budgeted salary increase for UK employees
Benefits	Provides a competitive package of benefits that assists with recruitment and retention	No changes are proposed to the structure of pension and benefits provision for 2020
Bonus	- Incentivises annual delivery of financial, strategic and personal goals - Maximum bonus only payable for achieving demanding targets - Delivery of a proportion of bonus in deferred shares plus the ability to receive dividend equivalents provides alignment with shareholders' interests and assists with retention	- The annual bonus plan for 2020 will operate on a similar basis to 2019. The performance measures and weightings for the annual bonus plan will therefore be as follows: - Earnings per share 40% - Operating cash flow 40% - Personal objectives 20% - Personal objectives have been set to reflect performance in the following key areas: - Safety, including continuing implementation of the Group HSE Management System Framework Standard and delivery of further reductions in the Group's total recordable injury frequency ("TRIF") rate and frequency of process safety events - Implementation of a continuous improvement plan to improve competitiveness - Establishment of a framework for encouraging, capturing and rewarding innovation to improve competitiveness - Ongoing implementation of the Operational Framework and associated assurance processes - People management, including talent management, succession planning and leadership development, and promotion of "Employee Voice" - Development of integrated global countermeasures organisation - Progress new production facilities at Kilgore - Deliver growth strategy for Roke - Maximise value of the US Programs of Record and secure next phase of the AVCAD program - Development of a growth strategy for the US market - The Committee does not believe that it would be in shareholders' interests to prospectively disclose the financial targets under the annual bonus plan due to issues of commercial sensitivity. However, detailed retrospective disclosure of both the financial targets and the personal objectives, and performance against them, will be included in next year's annual report on remuneration - No bonus will be payable in respect of the personal objectives unless the Committee is satisfied that this is justified by the Group's underlying performance, including inter alia levels of profitability and cash flow - The 2020 bonus plan is consistent with the directors' remuneration policy detailed on pages 82 and 83, in terms of maximum bonus opportunity, deferred share arrangements and clawback

Element	Purpose and link to strategy	Implementation																				
Performance Share Plan ("PSP")	• Incentivises executives to achieve targets aligned to the Group's main strategic objectives of delivering sustainable growth and shareholder returns • Delivery of awards in shares plus the ability to receive dividend equivalents helps align executives' rewards with shareholders' interests	• It is intended that the performance condition for the annual awards granted to the executive directors under the PSP in 2020 will incorporate two equally-weighted metrics, namely growth in adjusted EPS and relative TSR measured against the FTSE All-Share (excluding investment trusts) • 25% of each part of the award will vest for threshold or median performance, with full vesting of each part of the award for stretch or upper quartile performance • The EPS performance condition for the 2020 awards will be measured as follows:<table><tr><th>Total compound earnings per share growth over the three-year performance period</th><th>% of earnings per share part that may vest</th></tr><tr><td>Less than 5% p.a.</td><td>0%</td></tr><tr><td>5% p.a.</td><td>25%</td></tr><tr><td>Between 5% p.a. and 10% p.a.</td><td>On a straight line basis between 25% and 100%</td></tr><tr><td>10% p.a. or more</td><td>100%</td></tr></table> • The TSR performance condition for the 2020 awards will be measured as follows:<table><tr><th>Rank of the Company's total shareholder return against the total shareholder return of the FTSE All-Share (excluding investment trusts)</th><th>% of earnings per share part that may vest</th></tr><tr><td>Below median</td><td>0%</td></tr><tr><td>Median</td><td>25%</td></tr><tr><td>Between median and upper quartile</td><td>On a straight line basis between 25% and 100%</td></tr><tr><td>Upper quartile or above</td><td>100%</td></tr></table>	Total compound earnings per share growth over the three-year performance period	% of earnings per share part that may vest	Less than 5% p.a.	0%	5% p.a.	25%	Between 5% p.a. and 10% p.a.	On a straight line basis between 25% and 100%	10% p.a. or more	100%	Rank of the Company's total shareholder return against the total shareholder return of the FTSE All-Share (excluding investment trusts)	% of earnings per share part that may vest	Below median	0%	Median	25%	Between median and upper quartile	On a straight line basis between 25% and 100%	Upper quartile or above	100%
Total compound earnings per share growth over the three-year performance period	% of earnings per share part that may vest																					
Less than 5% p.a.	0%																					
5% p.a.	25%																					
Between 5% p.a. and 10% p.a.	On a straight line basis between 25% and 100%																					
10% p.a. or more	100%																					
Rank of the Company's total shareholder return against the total shareholder return of the FTSE All-Share (excluding investment trusts)	% of earnings per share part that may vest																					
Below median	0%																					
Median	25%																					
Between median and upper quartile	On a straight line basis between 25% and 100%																					
Upper quartile or above	100%																					

Notes:

- The comparator group used for the PSP awards previously comprised a small group of peer companies operating in the defence and technology sectors but with increasing consolidation in these sectors, we have seen a number of companies delist in the last few years, which has reduced the size of the meaningful comparator group. Against this background, relative TSR will be measured against the FTSE All-Share (excluding investment trusts) for future PSP awards.
- The EPS target range is considered stretching when viewed against internal forecasts and a broader reflection of prevailing macroeconomic factors.

Fees for the Chairman and non-executive directors

As detailed in the directors' remuneration policy, the Company's approach to setting the non-executive directors' remuneration takes account of recognised practice, and is set at a level that is sufficient to attract and retain high-calibre non-executives. Details of the fees that will apply for 2020 are set out below:

	Fee as at 1 January 2020	Percentage increase
Chairman's fee	£200,000	0%
Other non-executive directors' base fee	£55,000	0%
Audit Committee Chair fee	£10,000	0%
Remuneration Committee Chair fee	£10,000	0%

Approval of the directors' remuneration report

The directors' remuneration report was approved by the Board on 16 December 2019.

Signed on behalf of the Board

Andrew Davies

Chairman of the Remuneration Committee
16 December 2019

Directors' report

The directors present their annual report, together with the audited financial statements of the Group and the Company, for the year ended 31 October 2019.

The following sections of the annual report are incorporated into the directors' report by reference:

- strategic report on pages 7 to 45;
- corporate governance report on pages 48 to 59;
- Audit Committee report on pages 60 to 63;
- directors' remuneration report on pages 66 to 85;
- directors' responsibilities statement on page 89; and
- notes to the Group financial statements as detailed in this section.

Business review

The strategic report on pages 7 to 45 provides a review of the Group's business development, performance and position during and at the end of the financial year, its strategy and likely future developments, key performance indicators, and a description of the principal risks and uncertainties facing the business. Further information regarding financial risk management policies and financial instruments is given in note 20 to the Group financial statements.

There have been no significant events since the balance sheet date.

Results and dividends

The profit attributable to the Group's shareholders for the year was £21.9m (2018: £105.8m loss).

The directors are recommending the payment of a final dividend of 2.4p per ordinary share which, together with the interim dividend of 1.2p per share paid in September 2019, gives a total for the year of 3.6p (2018: 3.3p). The final dividend is subject to approval by shareholders at the Annual General Meeting on 4 March 2020 and has not therefore been included as a liability in these financial statements.

Directors and their interests

The current directors are shown on pages 46 and 47.

Daniel Dayan stepped down as a non-executive director on 30 November 2018. Stephen King was appointed as a non-executive director on 1 December 2018 and Laurie Bowen was appointed as a non-executive director on 1 August 2019.

In accordance with the Company's Articles of Association, all directors are required to submit themselves for re-election at every Annual General Meeting. All directors will therefore be seeking re-election at the Annual General Meeting on 4 March 2020.

Details of the service contracts entered into between the Company and the executive directors are set out in the directors' remuneration report on page 83. The non-executive directors do not have service contracts with the Company.

The Company has made qualifying third party indemnity provisions for the benefit of its directors, which were in effect throughout the year and remain in force at the date of this report. The directors have the benefit of a directors' and officers' liability insurance policy.

Other than in relation to their service contracts, none of the directors is or was beneficially interested in any significant contract to which the Group was a party during the year ended 31 October 2019.

Information required in relation to directors' shareholdings is set out in the directors' remuneration report on page 77.

Employees and employee consultation

Details of the Group's employment policies and employee consultation practices are set out on pages 42 and 43.

Political donations

No political donations were made during the year (2018: £nil).

Contractual arrangements

The Group contracts with a wide range of customers, comprising governments, armed forces, prime contractors and OEMs across the globe. The US Department of Defense is the largest single customer, and procures the Group's products under a significant number of separate contracts placed with individual Group businesses.

The Group's businesses utilise many suppliers across the world, and arrangements are in place to ensure that businesses are not totally reliant on single suppliers for key raw materials or components.

Research and development

The Group's research and development expenditure for the year is detailed in the financial review on page 26.

Change of control

Individual Group businesses have contractual arrangements with third parties, entered into in the normal course of business, which may be amended or may terminate on a change of control of the relevant business, or in certain circumstances, following a takeover of the Group.

The most significant agreements entered into by the Group which contain provisions granting the counterparties certain rights in the event of a change of control of the Company are the revolving credit facility agreements entered into with the Group's banks, and the loan note agreements, pursuant to which the Company issued notes under a series of private placements. These agreements provide that, in the event of a change of a control, the Company must repay all outstanding borrowings, together with accrued interest and other sums owing under each agreement.

Share capital and shareholder rights

General

The Company's share capital consists of ordinary shares of 1p each and preference shares of £1 each, which are fully paid up and quoted on the main market of the London Stock Exchange. Full details of the movements in the issued share capital of the Company during the financial year are provided in note 24 to the Group financial statements.

Details of the rights attaching to shares are set out in the Articles of Association (the "Articles"). All holders of ordinary shares are entitled to attend, speak and vote at any general meeting of the Company, and to appoint a proxy or proxies to exercise these rights. At a general meeting, every shareholder present in person, by proxy or (in the case of a corporate member) by corporate representative has one vote on a show of hands, and on a poll has one vote for every share held. The Notice of Annual General Meeting specifies deadlines for exercising voting rights and appointing a proxy or proxies to vote in respect of the resolutions to be passed at the Annual General Meeting.

There are no restrictions on the transfer of ordinary shares in the capital of the Company, other than certain restrictions which may from time to time be imposed by law. In accordance with the Market Abuse Regulation, certain employees are required to seek the approval of the Company to deal in its shares.

The cumulative preference shares carry an entitlement to a dividend at the rate of 7p per share per annum, payable in equal instalments on 30 April and 31 October each year. Holders of the preference shares have the right on a winding-up to receive, in priority to any other classes of shares, the sum of £1 per share together with any arrears of dividends.

The Company is not aware of any agreements between shareholders that may result in restrictions on the transfer of securities and/or voting rights.

The Company's Articles may only be amended by special resolution at a general meeting of shareholders.

Issue of shares

Under the provisions of section 551 of the Companies Act 2006 (the "Act"), the Board is prevented from exercising its powers under the Articles to allot shares without an authority contained either in the Articles or in a resolution of the shareholders passed in general meeting. The authority, when given, can last for a maximum period of five years, but the Board proposes that renewal should be sought at each Annual General Meeting. An ordinary resolution, seeking such authority, will be proposed at the forthcoming Annual General Meeting.

Section 561 of the Act requires that an allotment of shares for cash may not be made unless the shares are first offered to existing shareholders on a pre-emptive basis in accordance with the terms of the Act.

In accordance with general practice, to ensure that small issues of shares can be made without the necessity of convening a general meeting, the Board proposes that advantage be taken of the provisions of section 571 of the Act not to apply the Act's pre-emptive requirements. Accordingly, a special resolution will be proposed at the forthcoming Annual General Meeting which, if passed, will have the effect of granting the directors the power to allot not more than 5% of the issued ordinary share capital at the date of the Annual General Meeting free of the requirements of section 561 of the Act. No issue of these shares will be made which would effectively alter the control of the Company without the prior approval of the shareholders in general meeting.

Purchase of own shares

The Company did not purchase any of its ordinary shares (2018: nil) during the year. At 31 October 2019, the Company held a total of 1,788,710 1p ordinary shares in treasury (representing 0.6% of the ordinary shares in issue on 31 October 2019).

A special resolution will be proposed at the forthcoming Annual General Meeting to renew the Company's authority to purchase its own shares in the market up to a limit of 10% of its issued ordinary share capital. The maximum and minimum prices will be stated in the resolution at the date of the Annual General Meeting. The directors believe that it is advantageous for the Company to have this flexibility to make market purchases of its own shares. The directors of the Company may consider holding repurchased shares pursuant to the authority conferred by this resolution as treasury shares. This will give the Company the ability to reissue treasury shares quickly and cost effectively, and will provide the Company with additional flexibility in the management of its capital base. Any issues of treasury shares for the purposes of the Company's employee share schemes will be made within the 10% anti-dilution limit set by The Investment Association. The directors will only exercise this authority if they are satisfied that a purchase would result in an increase in expected earnings per share and would be in the interests of shareholders generally.

Substantial shareholdings

At 13 December 2019, the following substantial holdings in the ordinary share capital of the Company had been notified to the Company in accordance with Chapter 5 of the Disclosure and Transparency Rules of the Financial Conduct Authority. It should be noted that these holdings may have changed since the Company was notified; however, notification of any change is not required until the next notifiable threshold is crossed.

Name	% interest
Invesco Limited	8.1
Schroders Plc	7.2
Old Mutual Asset Managers	5.1
FIL Limited	5.1
J O Hambro Capital Management Limited	5.0
Jupiter Asset Management Limited	Below 5.0
BlackRock, Inc.	Below 5.0
Majedie Asset Management Limited	4.9
J P Morgan Chase & Co	4.9
Neptune Investment Management Limited	4.8
Prudential Plc	4.8
Investec Asset Management Limited	4.8
Ameriprise Financial, Inc.	4.8
AXA S.A. and its group of companies	4.8
Standard Life Investments Limited	4.6
Sterling Strategic Value Fund S.A., Sicav-Raif	4.0
BT Pension Scheme Trustees Limited as Trustee of the BT Pension Scheme	3.8
Norges Bank	3.3

Employee share schemes and plans

Approach to share ownership

The Group actively encourages its employees to share in the future success of the Group, and therefore operates share-based arrangements to provide incentives and rewards to employees.

The Group operated four share-based incentive plans during the year, as set out below. Further details of awards and vesting are provided in note 28 to the Group financial statements.

The Chemring Group 2008 and 2018 UK Sharesave Plans (collectively the "UK Sharesave Plan")

The UK Sharesave Plan is open to all eligible UK employees. Employees may choose between three and five-year savings periods, at the end of which the employee can choose to exercise the option or seek the return of their savings. A grant of options was made on 29 July 2019.

The Chemring Group Performance Share Plan (the "PSP")

The PSP expired on 22 March 2016 but was previously the primary long-term incentive plan for executive directors and senior employees. Discretionary awards were granted under the PSP over a fixed number of shares by reference to salary, with awards ordinarily vesting, subject to meeting performance criteria, on the third anniversary of the grant date. All outstanding awards under the PSP lapsed during the year.

Directors' report continued

Employee share schemes and plans continued The Chemring Group Performance Share Plan 2016 (the "2016 PSP")

The 2016 PSP is the primary long-term incentive plan for executive directors and senior employees. Discretionary awards are granted under the PSP over a fixed number of shares by reference to salary, with awards ordinarily vesting, subject to meeting performance criteria, on the third anniversary of the grant date. Awards were granted under the plan on 22 March 2019.

The Chemring Group Restricted Share Plan (the "RSP")

The RSP provides for the discretionary grant of deferred share awards to selected key employees. Executive directors are not eligible to participate. Awards typically vest on the second or third anniversary of the grant date, subject to meeting continuous service criteria. Awards under the RSP may only be satisfied with market-purchased shares.

Going concern

Details of the conclusions arrived at by the directors in preparing the financial statements on a going concern basis are set out in the corporate governance report on page 56.

Additional information, as required by Listing Rules Requirement 9.8.4

The annual report is required to contain certain information under Listing Rules Requirement 9.8.4. Where this information has not been cross-referenced within the Group financial statements, it can be found in the following sections:

- capitalised interest (see note 7);
- long-term incentive schemes (see directors' remuneration report);
- allocation of equity securities for cash (see note 24);
- contracts of significance (see note 34);
- election of independent directors (see corporate governance report);
- contractual arrangements (see directors' report);
- details of independent directors (see corporate governance report); and
- substantial shareholders (see directors' report).

No profit forecasts are issued by the Group and no directors have waived any current or future emoluments. Other than in relation to ordinary shares held in treasury, no shareholders have waived or agreed to waive dividends.

None of the shareholders is considered to be a Controlling Shareholder (as defined in Listing Rule 6.1.2.A) and the Group complies with the independence provisions of the Listing Rules.

Provision of information to the auditor

Each director at the date of this report confirms that, so far as they are each aware, there is no relevant audit information of which the Company's auditor is unaware, and each director has taken all the steps that he or she ought to have taken as a director to make himself or herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of section 418 of the Companies Act 2006.

Auditor

Resolutions will be proposed at the forthcoming Annual General Meeting to reappoint KPMG and to authorise the directors to determine the external auditor's remuneration.

Annual General Meeting

The resolutions to be proposed at the Annual General Meeting to be held on 4 March 2020, together with explanatory notes, appear in the separate Notice of Annual General Meeting sent to all shareholders.

Statement of directors' responsibilities in respect of the annual report and accounts

The directors are responsible for preparing the annual report and the Group and parent company financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare Group and parent company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the European Union ("IFRSs as adopted by the EU") and applicable law, and have elected to prepare the parent company financial statements in accordance with UK accounting standards including FRS 101 *Reduced Disclosure Framework*.

Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent company and of their profit or loss for that period. In preparing each of the Group and parent company financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable, relevant and reliable;
- for the Group financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU;
- for the parent company financial statements, state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the parent company financial statements;
- assess the Group and parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Group or the parent company or to cease operations, or have no realistic alternative but to do so.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent company's transactions and disclose with reasonable accuracy at any time the financial position of the parent company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the directors are also responsible for preparing a strategic report, directors' report, directors' remuneration report and corporate governance report that comply with that law and those regulations.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement of the directors in respect of the annual financial report

We confirm that to the best of our knowledge:

- the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- the strategic report and directors' report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

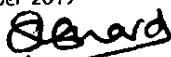
We consider the annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

The directors' report and responsibility statement was approved by the Board of directors on 16 December 2019 and is signed on its behalf by:



Michael Ord

Group Chief Executive
16 December 2019



Sarah Ellard

Group Legal Director
16 December 2019

Consolidated income statement

For the year ended 31 October 2019

		2019			2018		
	Note	Underlying performance £m	Non-underlying items ¹ £m	Total £m	Underlying performance £m	Non-underlying items ¹ £m	Total £m
Continuing operations							
Revenue	1,2	335.2	—	335.2	297.4	—	297.4
Operating profit/(loss)	2,4	44.0	(12.7)	31.3	31.0	(46.9)	(15.9)
Finance expense	7	(4.6)	—	(4.6)	(6.1)	—	(6.1)
Profit/(loss) before tax		39.4	(12.7)	26.7	24.9	(46.9)	(22.0)
Taxation	8	(7.9)	4.3	(3.6)	(5.7)	(13.1)	(18.8)
Profit/(loss) after tax		31.5	(8.4)	23.1	19.2	(60.0)	(40.8)
Discontinued operations							
Profit/(loss) after tax from discontinued operations	5	2.7	(3.9)	(1.2)	6.2	(71.2)	(65.0)
Profit/(loss) after tax		34.2	(12.3)	21.9	25.4	(131.2)	(105.8)

		2019		2018	
	Note	Underlying performance	Total	Underlying performance	Total
Earnings/(loss) per ordinary share					
Continuing operations					
Basic	10	11.2p	8.2p	6.9p	(14.6)p
Diluted	10	11.0p	8.1p	6.7p	(14.6)p
Continuing and discontinued operations					
Basic	10	12.2p	7.8p	9.1p	(37.8)p
Diluted	10	12.0p	7.7p	8.9p	(37.8)p

1. Further information about non-underlying items is set out in note 3.

Consolidated statement of comprehensive income

For the year ended 31 October 2019

	Note	2019 £m	2018 £m
Profit/(loss) after tax attributable to equity holders of the parent as reported		21.9	(105.8)
Items that will not be reclassified subsequently to profit and loss			
Actuarial gains on defined benefit pension schemes	30	1.6	0.9
Movement on deferred tax relating to pension schemes	23	(0.7)	(0.1)
		0.9	0.8
Items that may be reclassified subsequently to profit and loss			
Exchange differences on translation of foreign operations		(5.2)	5.2
Tax on exchange differences on translation of foreign operations	23	0.2	(0.5)
		(5.0)	4.7
Total comprehensive income/(loss) attributable to equity holders of the parent		17.8	(100.3)

Consolidated statement of changes in equity

For the year ended 31 October 2019

	Share capital £m	Share premium account £m	Special capital reserve £m	Revaluation reserve £m	Translation reserve £m	Retained earnings £m	Own shares £m	Total £m
At 1 November 2018	2.8	305.4	12.9	1.0	(27.2)	7.1	(7.8)	294.2
Profit after tax	—	—	—	—	—	21.9	—	21.9
Other comprehensive income/(loss)	—	—	—	—	1.4	(5.0)	—	(3.6)
Tax relating to components of other comprehensive income	—	—	—	—	—	(0.5)	—	(0.5)
Total comprehensive income	—	—	—	—	1.4	16.4	—	17.8
Ordinary shares issued	—	0.8	—	—	—	—	—	0.8
Share-based payments (net of settlement)	—	—	—	—	—	2.5	—	2.5
Dividends paid	—	—	—	—	—	(9.5)	—	(9.5)
Transfers between reserves ¹	—	—	—	—	8.0	(8.0)	—	—
At 31 October 2019	2.8	306.2	12.9	1.0	(17.8)	8.5	(7.8)	305.8

1. Transfer to reclassify exchange differences on translation of foreign subsidiaries included in retained earnings to the translation reserve.

	Share capital £m	Share premium account £m	Special capital reserve £m	Revaluation reserve £m	Translation reserve £m	Retained earnings £m	Own shares £m	Total £m
At 1 November 2017	2.8	305.3	12.9	1.1	(24.8)	113.5	(9.6)	401.2
Loss after tax	—	—	—	—	—	(105.8)	—	(105.8)
Other comprehensive (loss)/income	—	—	—	—	(2.4)	8.5	—	6.1
Tax relating to components of other comprehensive income	—	—	—	—	—	(0.6)	—	(0.6)
Total comprehensive loss	—	—	—	—	(2.4)	(97.9)	—	(100.3)
Ordinary shares issued	—	0.1	—	—	—	—	—	0.1
Share-based payments (net of settlement)	—	—	—	—	—	0.1	—	0.1
Dividends paid	—	—	—	—	—	(8.7)	—	(8.7)
Transactions in own shares	—	—	—	—	—	—	1.8	1.8
Transfers between reserves	—	—	—	(0.1)	—	0.1	—	—
At 31 October 2018	2.8	305.4	12.9	1.0	(27.2)	7.1	(7.8)	294.2

Consolidated balance sheet

As at 31 October 2019

	Note	2019		2018	
		£m	£m	£m	£m
Non-current assets					
Goodwill	11	108.5		109.2	
Development costs	12	26.1		21.0	
Other intangible assets	12	25.3		37.6	
Property, plant and equipment	13	170.0		148.1	
Retirement benefit surplus	30	9.6		7.5	
Deferred tax	23	18.5		36.8	
			358.0		363.2
Current assets					
Inventories	15	78.1		71.4	
Trade and other receivables	16	53.7		62.2	
Cash and cash equivalents	17	1.3		9.6	
Derivative financial instruments	21	0.2		0.1	
			133.3		143.3
Assets classified as held for sale	29		7.0		43.7
Total assets			498.3		550.2
Current liabilities					
Borrowings	18	(69.2)		—	
Trade and other payables	19	(68.3)		(68.6)	
Provisions	22	(4.8)		(6.7)	
Current tax		(4.0)		(0.8)	
Derivative financial instruments	21	(0.9)		(0.3)	
			(147.2)		(76.4)
Liabilities directly associated with assets classified as held for sale	29		(1.8)		(26.9)
Non-current liabilities					
Borrowings	18,33	(7.7)		(91.3)	
Provisions	22	(12.4)		(14.0)	
Deferred tax	23	(23.0)		(47.1)	
Preference shares	18,24	(0.1)		(0.1)	
Derivative financial instruments	21	(0.3)		(0.2)	
			(43.5)		(152.7)
Total liabilities			(192.5)		(256.0)
Net assets			305.8		294.2
Equity					
Share capital	24		2.8		2.8
Share premium account	25		306.2		305.4
Special capital reserve	25		12.9		12.9
Revaluation reserve	25		1.0		1.0
Translation reserve			(17.8)		(27.2)
Retained earnings			8.5		7.1
			313.6		302.0
Own shares	26		(7.8)		(7.8)
Total equity			305.8		294.2

These financial statements of Chemring Group PLC (registered number 86662) were approved and authorised for issue by the Board of directors on 16 December 2019.

Signed on behalf of the Board



Michael Ord
Director

Andrew Lewis
Director

Consolidated cash flow statement

For the year ended 31 October 2019

	Note	2019 £m	2018 £m
Cash flows from operating activities			
Cash generated from continuing underlying operations	31	63.9	44.7
Cash impact of continuing non-underlying items		(5.3)	(7.5)
Cash generated from discontinued underlying operations		13.7	12.2
Cash impact of discontinued non-underlying items		(7.1)	(0.1)
Cash flows from operating activities		65.2	49.3
Retirement benefit deficit recovery contributions		(0.4)	(7.9)
Tax paid		(2.9)	(5.5)
Net cash inflow from operating activities		61.9	35.9
Cash flows from investing activities			
Purchases of intangible assets		(3.8)	(3.2)
Purchases of property, plant and equipment		(41.0)	(18.8)
Acquisition – deferred consideration		—	(0.7)
Customer funding for capital programmes		2.4	2.6
Proceeds on disposal of property, plant and equipment		—	0.4
Proceeds on disposal of subsidiary		0.7	—
Net cash outflow from investing activities		(41.7)	(19.7)
Cash flows from financing activities			
Dividends paid	9	(9.5)	(8.7)
Finance expense paid		(4.9)	(6.0)
Capitalised facility fees paid		(0.3)	(0.6)
Drawdown of borrowings		—	26.5
Repayments of borrowings		(18.1)	(51.9)
Net cash outflow from financing activities		(32.8)	(40.7)
Decrease in cash and cash equivalents	32	(12.6)	(24.5)
Cash and cash equivalents at beginning of year		9.6	33.6
Effect of foreign exchange rate changes		(0.3)	0.5
Cash and cash equivalents at end of year (including bank overdraft)	17,33	(3.3)	9.6

Notes to the Group financial statements

1. Revenue

All of the Group's revenue is derived from the sale of goods and the provision of services. The following table provides an analysis of the Group's revenue by destination:

	Sensors & Information £m	Countermeasures & Energetics £m	2019 £m
UK	60.8	30.2	91.0
US	57.5	125.5	183.0
Europe	4.0	26.6	30.6
Asia Pacific	5.0	19.7	24.7
Rest of the world	4.6	1.3	5.9
	131.9	203.3	335.2
	Sensors & Information Restated £m	Countermeasures & Energetics Restated £m	2018 £m
UK	46.7	35.5	82.2
US	25.6	112.0	137.6
Europe	3.8	31.3	35.1
Asia Pacific	7.3	30.7	38.0
Rest of the world	3.9	0.6	4.5
	87.3	210.1	297.4

The directors consider that the only countries that are significant in accordance with IFRS 8 *Operating Segments* are the US and the UK.

The following table discloses the split of the Group's revenue between goods and services:

	Sensors & Information £m	Countermeasures & Energetics £m	2019 £m
Goods	49.0	202.2	251.2
Services	82.9	1.1	84.0
	131.9	203.3	335.2
	Sensors & Information Restated £m	Countermeasures & Energetics Restated £m	2018 £m
Goods	22.6	205.4	228.0
Services	64.7	4.7	69.4
	87.3	210.1	297.4

All revenues recognised arose from contracts with customers.

As at 31 October 2019 £448.7m (2018: £393.7m) of revenue was outstanding in respect of obligations that were unfulfilled or only partially fulfilled as at the year end. £287.0m (2018: £241.9m) of this revenue is expected to be recognised in the next financial year and £161.7m (2018: £151.8m) in future periods.

2. Business segments

IFRS 8 *Operating Segments* requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the Group Chief Executive and the Board to allocate resources to the segments and to assess their performance. For management purposes, the Group's operating and reporting structure clusters similar businesses together, based on the products and services they offer. These segments are the basis on which the Group reports its segmental information.

With effect from 1 November 2018, the Group revised its reporting segments to reflect the organisational changes announced in 2018. The Group was previously organised under three operating segments – Countermeasures, Sensors and Energetics – whereas is now organised under two operating segments – Sensors & Information and Countermeasures & Energetics. Financial information for 2018 has been represented to reflect these new reporting segments. The results of the previously reported Countermeasures and Energetics segments have been combined in their management and internal reporting to the Group Chief Executive and Board, therefore are reported here as a single operating segment.

The principal activities of each segment are as follows:

Sensors & Information	Development and manufacture of Explosive Hazard Detection (EHD) equipment, chemical and biological threat detection equipment, electronic countermeasures and network protection technologies.
Countermeasures & Energetics	Development and manufacture of expendable countermeasures for air, sea and land platforms, cartridge/propellant actuated devices, pyrotechnic devices for satellite launch and deployment, missile components, propellants, separation sub-systems, actuators and energetic materials.

Notes to the Group financial statements continued

2. Business segments continued

A segmental analysis of revenue and operating profit/(loss) is set out below:

Year ended 31 October 2019	Sensors & Information £m	Countermeasures & Energetics £m	Unallocated £m	Total £m
Revenue	131.9	203.3	—	335.2
Segment result before depreciation, amortisation, non-underlying items and discontinued operations	29.3	41.7	(9.8)	61.2
Depreciation	(2.3)	(13.5)	—	(15.8)
Amortisation	(0.7)	(0.7)	—	(1.4)
Segmental underlying operating profit	26.3	27.5	(9.8)	44.0
Amortisation of acquired intangibles (note 3)	(6.6)	(5.5)	—	(12.1)
Non-underlying items (note 3)	—	—	(0.6)	(0.6)
Impact of non-underlying items on profit before tax (note 3)	(6.6)	(5.5)	(0.6)	(12.7)
Segmental operating profit	19.7	22.0	(10.4)	31.3
Finance expense	—	—	(4.6)	(4.6)
Profit before tax	—	—	(15.0)	26.7
Tax	—	—	(3.6)	(3.6)
Profit for the year from continuing operations	—	—	(18.6)	23.1
Discontinued operations	—	—	(1.2)	(1.2)
Profit for the year	—	—	(19.8)	21.9

Year ended 31 October 2018	Sensors & Information Restated £m	Countermeasures & Energetics Restated £m	Unallocated £m	Total £m
Revenue	87.3	210.1	—	297.4
Segment result before depreciation, amortisation, non-underlying items and discontinued operations	18.5	39.6	(8.1)	50.0
Depreciation	(1.7)	(13.5)	(0.1)	(15.3)
Amortisation	(1.5)	(2.2)	—	(3.7)
Segmental underlying operating profit	15.3	23.9	(8.2)	31.0
Amortisation of acquired intangibles (note 3)	(6.4)	(5.2)	—	(11.6)
Non-underlying items (note 3)	(3.7)	(15.9)	(15.7)	(35.3)
Impact of non-underlying items on profit before tax (note 3)	(10.1)	(21.1)	(15.7)	(46.9)
Segmental operating profit/(loss)	5.2	2.8	(23.9)	(15.9)
Finance expense	—	—	(6.1)	(6.1)
Loss before tax	—	—	(30.0)	(22.0)
Tax	—	—	(18.8)	(18.8)
Loss for the year from continuing operations	—	—	(48.8)	(40.8)
Discontinued operations	—	—	(65.0)	(65.0)
Loss for the year	—	—	(113.8)	(105.8)

Assets and liabilities by segment are not reported to the Group Chief Executive on a monthly basis, therefore are not used as a key decision making tool and are not disclosed here. A disclosure of non-current assets by location is shown below:

Non-current assets by location	2019 £m	2018 £m
UK	158.0	175.8
US	169.3	160.8
Norway	9.1	7.7
Australia	21.6	18.9
	358.0	363.2

Information on major customers

Included in segmental revenues for continuing operations are revenues of £137.9m (2018: £92.4m), which arose from sales to the Group's largest customer. The largest customer had sales reported in all of the Group's business segments. This was the only individual customer where direct sales accounted for more than 10% of Group revenue from continuing and discontinued operations for the year.

3. Alternative performance measures

In accordance with our accounting policy we have presented the following reconciliation of Alternative Performance Measures used throughout this report to their IFRS equivalent measures as follows:

	2019 £m	2018 £m
Non-underlying items and non-underlying measures		
Acquisition and disposal-related costs	—	(4.1)
Business restructuring costs	—	(8.1)
Less non-underlying depreciation in business restructuring costs	—	0.7
Legal costs	—	(12.8)
Change of Chief Executive	—	(1.7)
Pension scheme charge in respect of GMP equalisation court ruling	—	(0.8)
Loss on the movement in the fair value of derivative financial instruments (note 21)	(0.6)	(0.4)
Impact of non-underlying items on EBITDA	(0.6)	(27.2)
Non-underlying depreciation in business restructuring costs	—	(0.7)
Impairment of capitalised development costs	—	(7.4)
Amortisation of acquired intangibles arising from business combinations (note 12)	(12.1)	(11.6)
Impact of non-underlying items on profit before tax	(12.7)	(46.9)
Tax impact of non-underlying items	4.3	(13.1)
Impact of non-underlying items on continuing profit after tax	(8.4)	(60.0)
Non-underlying discontinued operations after tax	(3.9)	(71.2)
Impact of non-underlying items on profit after tax	(12.3)	(131.2)
Underlying profit after tax	34.2	25.4
Statutory profit/(loss) after tax	21.9	(105.8)

The impact of non-underlying items on statutory basic and diluted EPS, as well as a reconciliation to the IFRS equivalent, is presented in note 10. The impact of non-underlying items on cash generated from operating activities, as well as a reconciliation to the IFRS equivalent, is presented in note 31.

Amortisation of acquired intangibles

Included in non-underlying items is the amortisation charge arising from business combinations of £12.1m (2018: £11.6m). Amortisation of acquired intangibles arising from business combinations is associated with acquisition costs under IFRS 3 *Business Combinations*. IFRS requires intangibles to be recognised on acquisition that would not have been capitalised had the business grown organically under Chemring's ownership. As such, these costs are not reflective of the underlying costs of the Group and therefore, in order to provide an explanation of results that is not distorted by the history of business units being acquired rather than organically developed, have been excluded from the underlying measures.

Derivative financial instruments

Included in non-underlying items is a £0.6m loss (2018: £0.4m loss) on the movement in fair value of derivative financial instruments. This is excluded from underlying earnings to ensure the recognition of the gain or loss on the derivative matches the timing of the underlying transaction.

Acquisition and disposal-related costs

In 2018, acquisition and disposal-related costs of £4.1m related to transaction costs and an earnout payment on the acquisition of Wallop Defence Systems' assets for which no provision was made at the time of acquisition.

Business restructuring costs

In 2018, business restructuring costs of £8.1m related to the non-capital costs/asset write offs and demolition element of the Tennessee capacity expansion programme.

Legal costs

In 2018, legal costs of £12.8m were in relation to ongoing investigations.

Change of Chief Executive

In the year ended 31 October 2018, the costs associated with the change of Chief Executive were £1.7m. As disclosed in the directors' report contained in the 2018 annual report and accounts, Michael Flowers stepped down as Group Chief Executive on 30 June 2018 and Michael Ord was appointed as Group Chief Executive on 1 July 2018.

Pension scheme charge in respect of GMP equalisation court ruling

On 26 October 2018, the High Court handed down a judgement involving the Lloyds Banking Group's defined benefit pension schemes. The judgement concluded that pension schemes should be amended to equalise pension benefits for men and women in relation to guaranteed minimum pension benefits. An additional liability of £0.8m was recognised in our 2018 results.

Impairment of capitalised development costs

In 2018, an impairment of capitalised product development costs of £7.4m was recognised following the appointment of the new Chief Executive who conducted a strategic review of the Group's product portfolio to rationalise future resources on areas where the Group had a niche position and competitive advantage. The carrying value of the products for which an impairment charge was recognised exceeded the expected future value, hence an impairment charge was recognised in the year.

Notes to the Group financial statements continued

3. Alternative performance measures continued

Tax

The tax impact of non-underlying items in the year ended 31 October 2018 comprised a £17.4m charge in respect of the enactment of the US Tax Cuts and Jobs Act on 22 December 2017, and a £4.3m tax credit on the above non-underlying items.

These significant one-off tax charges/credits have arisen from a change in legislation, and as such have been removed from underlying results to aid comparability and understanding of the Group's performance.

The items above are all removed from underlying measures in line with our accounting policy. The removal of these items allows for improved comparability between reporting periods.

Discontinued operations

Further details on the results of discontinued operations is presented in note 5.

Net debt

An analysis and reconciliation of net debt is presented in notes 32 and 33.

EBITDA

In our financial review we present measures of continuing EBITDA which is calculated as follows:

	2019 £m	2018 £m
Operating profit/(loss)	31.3	(15.9)
Amortisation arising from business combinations (note 4)	12.1	11.6
Amortisation arising from development costs (note 4)	1.3	3.6
Amortisation arising from patents and licences (note 4)	0.1	0.1
Impairment of capitalised development costs	—	7.4
Depreciation – continuing	15.8	16.0
EBITDA	60.6	22.8
Non-underlying items	0.6	27.2
Underlying EBITDA	61.2	50.0

Constant currency revenue and operating profit

In our financial review we present a measure of constant currency revenue and operating profit. This is calculated by translating our results for the year ended 31 October 2019 at the average exchange rates for the comparative year ended 31 October 2018.

4. Operating profit

Operating profit from continuing operations is stated after charging/(crediting):

	2019 £m	2018 £m
Research and development costs		
– customer-funded	47.2	36.2
– internally-funded	5.0	4.6
Amortisation		
– arising from business combinations	12.1	11.6
– development costs	1.3	3.6
– patents and licences	0.1	0.1
Depreciation of property, plant and equipment		
– owned assets	14.9	14.9
– leased assets	0.9	0.4
Loss on disposal of non-current assets	0.7	0.2
Operating lease rentals		
– plant and machinery	0.6	1.0
– other	0.4	0.4
Government grants	(0.5)	—
Foreign exchange losses/(gains)	0.2	(0.7)
Staff costs (note 6)	127.0	112.3
Cost of inventories recognised as an expense	91.2	79.9

A detailed analysis of the auditor's remuneration on a worldwide basis is set out below:

Auditor's remuneration	2019 £m	2018 £m
Fees payable to the Company's auditor and its associates for:		
– the audit of the Company's annual accounts	0.2	0.2
– the audit of the Company's subsidiaries, pursuant to legislation	0.4	0.3
	0.6	0.5
Other services		
Audit-related assurance services	0.1	0.1
	0.7	0.6

4. Operating profit continued

Included in the fees for the audit of the Company's annual accounts is £0.1m (2018: £0.1m) in respect of the parent company.

A description of the work of the Audit Committee is set out in the Audit Committee report on pages 60 to 63, and includes an explanation of how auditor objectivity and independence is safeguarded when non-audit services are provided by the auditor. No services were provided by the auditor pursuant to contingent fee arrangements.

5. Results from discontinued operations

A strategic review of the Group's energetics portfolio was conducted during the year ended 31 October 2018 resulting in a decision to exit the commoditised energetics businesses. Accordingly, during the year the sale of Chemring Military Products, Inc. and Chemring Defence UK Limited were completed and Chemring Prime Contracts Limited was closed. The sale of the remaining business in discontinued operations, Chemring Ordnance, Inc., was announced on 21 November 2019.

	2019 £m	2018 £m
Revenue	43.4	138.6
Underlying operating (loss)/profit from discontinued operations	(3.5)	8.0
Tax on the underlying operating (loss)/profit from discontinued operations	6.2	(1.8)
Underlying profit after tax	2.7	6.2
Profit after tax is analysed as:		
Before exceptional items	2.7	6.2
Exceptional items	(3.8)	(72.0)
Tax on exceptional items	(0.1)	0.8
	(3.9)	(71.2)
Loss for the year from discontinued operations	(1.2)	(65.0)

In 2019 the exceptional items include a loss on disposal of £2.8m relating to the sale of Chemring Military Products, Inc. and Chemring Defence UK Limited, an increase to the disposal provision in respect of the disposal of the European Munitions businesses in 2014 of £1.1m, business restructuring costs of £0.8m and a £0.9m exceptional credit relating to the realisation of working capital that was previously impaired in respect of Chemring Ordnance, Inc.

In 2018 the exceptional items include the amortisation of acquired intangibles of £2.7m and an impairment loss of £69.3m in respect of the carrying values of Chemring Defence UK Limited, Chemring Ordnance, Inc., B.D.L. Systems Limited and Richmond Electronics and Engineering Limited was recorded.

Amortisation of acquired intangibles arising from business combinations is associated with acquisition costs under IFRS 3 *Business Combinations*. IFRS requires intangibles to be recognised on acquisition that would not have been capitalised had the business grown organically under Chemring's ownership. As such, these costs are not reflective of the underlying costs of the Group and therefore, in order to provide an explanation of results that is not distorted by the history of businesses units being acquired rather than being organically developed, have been excluded from the underlying measures.

As such, these costs are not reflective of the underlying activities of the discontinued operations and therefore have been treated as exceptional items. Impairment losses have been removed from underlying measures for improved comparability between reporting periods. This is in line with the Group's accounting policy.

The £6.2m tax credit in 2019 is comprised of a £1.3m current year tax credit and a £4.9m credit relating to prior year tax adjustments.

Details of the sale of the subsidiaries

The Group completed the sale of the entire issued stock capital of Chemring Military Products, Inc. to Global Ordnance LLC on 5 April 2019.

Under the terms of the agreement, the Group received £1.7m upon completion of the transaction. Deferred consideration of £0.7m is payable on the first anniversary of the transaction. A further deferred consideration amount of £0.4m is payable on the second anniversary of the transaction. All deferred consideration is considered recoverable.

The Group is entitled to further contingent consideration following the sale of up to £0.8m if certain performance-related and event-driven milestones are achieved by Chemring Military Products, Inc. No value has been assigned to this consideration based on the probability assessment of the associated milestones being reached.

The Group completed the sale of the entire issued share capital of Chemring Defence UK Limited to PWD Group Limited on 24 June 2019. Under the terms of the agreement, the Group received £0.0m upon completion of the transaction. Contingent consideration is payable if certain performance-related and event-driven milestones are achieved by Chemring Defence UK Limited. No value has been assigned to this consideration based on the probability assessment of the associated milestones being reached.

Notes to the Group financial statements continued

5. Results from discontinued operations continued

Details of the sale of the subsidiaries continued

	2019 £m	2019 £m	
	Chemring Military Products, Inc.	Chemring Defence UK Limited	Total £m
Consideration received or receivable:			
Cash	1.7	—	1.7
Fair value of deferred consideration	1.1	—	1.1
Total disposal consideration	2.8	—	2.8
Net assets and liabilities disposed of	(3.6)	(0.4)	(4.0)
Disposal costs	(1.1)	(0.5)	(1.6)
Loss on disposal before tax	(1.9)	(0.9)	(2.8)
Income tax on loss on disposal	—	—	—
Loss on disposal after tax	(1.9)	(0.9)	(2.8)

The carrying amount of assets and liabilities as at the date of sale were:

	5 April 2019 £m	24 June 2019 £m	
	Chemring Military Products, Inc.	Chemring Defence UK Limited	Total £m
Trade and other receivables	14.3	3.6	17.9
Total assets	14.3	3.6	17.9
Trade and other payables	(10.7)	(3.2)	(13.9)
Total liabilities	(10.7)	(3.2)	(13.9)
Net assets	3.6	0.4	4.0

The cash flow from discontinued operations is disclosed in note 31.

6. Staff costs

The average monthly number of employees, including executive directors, was:

	2019 Number	2018 Number
Direct	1,324	1,323
Indirect	988	882
Continuing operations	2,312	2,205
Discontinued operations	262	418
	2,574	2,623

At the year end, the number of employees was 2,616 of which 163 were at discontinued operations (2018: 2,559 of which 353 were at discontinued operations). The costs incurred in respect of employees at continuing operations, including share-based payments, were:

	2019 £m	2018 £m
Wages and salaries	106.8	94.8
Social security costs	12.5	10.6
Other pension costs	5.2	5.8
Share-based payment charge	2.5	1.1
Staff costs	127.0	112.3

7. Finance expense

	2019 £m	2018 £m
Bank overdraft and loan interest	1.2	1.2
Loan notes interest	3.7	3.5
Amortisation of debt finance costs	0.2	1.3
Interest (credit)/cost of retirement benefit obligations (note 30)	(0.2)	0.1
	4.9	6.1
Amount capitalised	(0.3)	—
Finance expense	4.6	6.1

The capitalisation rate used to determine the amount of borrowing costs to be capitalised is the weighted average interest rate applicable to the entity's general borrowings during the year, in this case 3%. During the year £0.3m (2018: £nil) of interest was capitalised in relation to the Tennessee capacity expansion programme.

There are future contractual cash flows for finance expenses as at 31 October 2019 of £1.8m (2018: £5.8m) of which £1.8m (2018: £3.7m) is due within one year and the remainder in future years.

8. Taxation

	2019 £m	2018 £m
Current tax charge – current year	(3.1)	(9.1)
Current tax (charge)/credit – prior year	(6.8)	7.6
Deferred tax charge – current year (note 23)	(0.3)	(14.7)
Deferred tax credit/(charge) – prior year (note 23)	6.6	(2.6)
Tax charge for continuing operations	(3.6)	(18.8)

Income tax in the UK is calculated at 19.0% (2018: 19.0%) of the taxable profit for the year. Tax for other jurisdictions is calculated at the rates prevailing in those jurisdictions. In 2018, the deferred tax charge of £17.3m above differed to the deferred tax charged to income disclosed in note 23 by £0.8m. This amount relates to deferred tax charged on discontinued operations.

The tax charge for continuing operations can be reconciled to the income statement as follows:

	2019 £m	2018 £m
Profit/(loss) before tax from continuing operations	26.7	(22.0)
Tax at the UK corporation tax rate of 19% (2018: 19.0%)	(5.1)	4.2
Expenses not deductible/income not taxable for tax purposes	1.5	(7.4)
Changes in tax rates	—	(4.7)
Tax losses not recognised/carried forward	2.3	0.6
Prior period adjustments	(0.2)	5.0
Adjustment to provision for interest restriction	(1.6)	(14.8)
Overseas profits taxed at rates different to the UK standard rate	(0.5)	(1.7)
Tax charge for continuing operations	(3.6)	(18.8)

In addition to the tax charge in the income statement, a tax charge of £0.5m (2018: £0.6m) has been recognised in equity in the year.

The effective rate of tax on the profit before tax of the Group is 13.5% (2018: 85.5%), and the effective rate of tax on the underlying profit before tax of the Group is 20.1% (2018: 22.9%).

Factors affecting the tax charge in future years

The Group's future tax charge and effective tax rate could be affected by several factors including: tax reform in countries around the world, including any arising from the implementation of the OECD's BEPS actions and European Commission initiatives such as the proposed tax and financial reporting directive or as a consequence of state aid investigations, future corporate acquisitions and disposals and any restructuring of our business.

See note 23 for detail on the impact of the US Tax Cuts and Jobs Act.

Notes to the Group financial statements continued

9. Dividends

	2019 £m	2018 £m
Dividends paid on ordinary shares of 1p each		
Final dividend of 2.2p per share for the year ended 31 October 2018 (2.0p per share for the year ended 31 October 2017)	6.2	5.6
Interim dividend of 1.2p per share for the year ended 31 October 2019 (1.1p per share for the year ended 31 October 2018)	3.3	3.1
Total dividends	9.5	8.7

Subject to approval at the Annual General Meeting, the final dividend of 2.4p per ordinary share will be paid on 24 April 2020 to all shareholders registered at the close of business on 3 April 2020. The total dividend for the year will therefore be 3.6p (2018: 3.3p) per ordinary share. As the final dividend is subject to approval by the shareholders at the Annual General Meeting, it has not been included as a liability in the financial statements for the year ended 31 October 2019.

The cumulative preference shares carry an entitlement to a dividend at the rate of 7p per share per annum which was paid in equal instalments on 30 April 2019 and 31 October 2019.

10. Earnings per ordinary share

Earnings per share is based on the average number of shares in issue, excluding own shares held, of 280,061,053 (2018: 279,768,360).

Diluted earnings per share has been calculated using a diluted average number of shares in issue, excluding own shares held, of 286,092,818 (2018: 285,993,316).

The number of shares used in the calculations are as follows:

	2019 Ordinary shares Number millions	2018 Ordinary shares Number millions
Weighted average number of shares used to calculate basic earnings per share	280.1	279.8
Additional shares issuable other than at fair value in respect of options outstanding	6.0	6.2
Weighted average number of shares used to calculate diluted earnings per share	286.1	286.0

The earnings used in the calculations of the various measures of earnings per share are as follows:

	2019			2018		
	£m	Basic EPS (pence)	Diluted EPS (pence)	£m	Basic EPS (pence)	Diluted EPS (pence)
Underlying profit after tax	31.5	11.2	11.0	19.2	6.9	6.7
Non-underlying items (note 3)	(8.4)			(60.0)		
Profit/(loss) from continuing operations	23.1	8.2	8.1	(40.8)	(14.6)	(14.6)
Loss from discontinued operations	(1.2)	(0.4)	(0.4)	(65.0)	(23.2)	(23.2)
Total profit/(loss) after tax	21.9	7.8	7.7	(105.8)	(37.8)	(37.8)

11. Goodwill

	£m
Cost	
At 1 November 2017	196.1
Foreign exchange adjustments	4.7
At 31 October 2018	200.8
Disposals	(3.0)
Foreign exchange adjustments	(1.6)
At 31 October 2019	196.2
Accumulated impairment losses	
At 1 November 2017	(70.7)
Impairment	(18.2)
Foreign exchange adjustments	(2.7)
At 31 October 2018	(91.6)
Disposals	3.0
Foreign exchange adjustments	0.9
At 31 October 2019	(87.7)
Carrying amount	
At 31 October 2019	108.5
At 31 October 2018	109.2

Goodwill acquired in a business combination is allocated at acquisition to the cash-generating units ("CGUs") that are expected to benefit from that business combination. The carrying amount of the goodwill has been allocated to the Group's principal CGUs, being the individual operating companies within the operating segment descriptions on pages 20 to 23.

The Group tests goodwill at least annually for impairment. Tests are conducted more frequently if there are indications that goodwill might be impaired. The recoverable amounts of the CGUs are determined from value-in-use calculations. The key assumptions for the value-in-use calculations have been individually estimated for each CGU and include the discount rates and expected changes to cash flows during the period for which management has detailed plans, which are underpinned by the winning and execution of key contracts.

Management estimates discount rates using pre-tax rates that reflect current market assessments of the time value of money and the risks specific to each of the CGUs. Pre-tax discount rates, derived from the Group's post-tax weighted average cost of capital of 7.3% (2018: 7.3%) which have been adjusted for a premium specific to each of the CGUs to account for differences in currency risk, country risk and other factors affecting specific CGUs, have been used to discount projected cash flows. These premiums range from 1% to 3% (2018: 2% to 4%).

Expected changes to cash flows during the period for which management has detailed plans relate to revenue forecasts, expected contract outcomes and forecast operating margins in each of the operating companies. The relative value ascribed to each varies between CGUs as the budgets are built up from the underlying operating companies within each CGU, but the key assumption for each CGU is that demand from the US and UK Governments and customers in our other principal markets for the product offering in each company will recover from its current low base.

The calculations have used the Group's forecast figures for the next five years. This is based on data derived from the five-year plan that has been approved by the Board. At the end of five years, the calculations assume the performance of the CGUs will grow at a nominal annual rate of 1.5% in perpetuity. Growth rates are based on management's view of industry growth forecasts. Changes in selling prices and direct costs are based on past practices and expectations of future changes.

The weighted average cost of capital is derived using beta values of a comparator group of defence companies adjusted for funding structures as appropriate.

The pre-tax discount rates used for value-in-use calculations and the carrying value of goodwill by the principal CGUs are:

	2019 %	2018 %	2019 £m	2018 £m
Roke Manor Research Limited	10.0	11.9	28.4	28.4
Chemring Energetics UK Limited	8.0	10.6	14.6	14.6
Chemring Sensors & Electronic Systems, Inc.	8.8	10.9	36.3	36.8
Chemring Energetic Devices, Inc.	10.8	13.3	16.1	16.3
Other			13.1	13.1
			108.5	109.2

The pre-tax discount rates used for other CGUs ranged from 8.0% to 10.0% (2018: 11.5% to 14.7%).

In 2018 the Board concluded that the goodwill relating to B.D.L. Systems Limited and Richmond Electronics & Engineering Limited was fully impaired and a charge of £14.7m was recorded. This assessment was based on current market conditions. B.D.L. Systems Limited and Richmond Electronics & Engineering Limited, which manufacture explosive ordnance disposal products, are part of the Sensors segment and were included in the CGUs classified as "Other" in the above table.

Notes to the Group financial statements continued

11. Goodwill continued

In addition in 2018, the Board concluded that the goodwill relating to the maintenance and repair business at Chemring Energetics UK Limited was fully impaired and a charge of £3.5m was recorded. This assessment was based on current market conditions. Chemring Energetics UK Limited is part of the Countermeasures & Energetics segment.

Following a detailed review, no other impairment losses were recognised in the years ended 31 October 2019 and 31 October 2018 for continuing operations.

Stress testing was performed on the forecasts to consider the impact of reasonably possible worst case scenarios in the first two years, including significant delays to major contracts, followed by a 10% fall in the forecast cash flows. Even under these circumstances, no other CGUs would require an impairment against goodwill.

A 1% addition to the discount rate for each CGU was also separately modelled, and would not result in any CGUs requiring any further impairment. Setting long-term growth rates beyond the five-year forecast period to 0.5% would not result in any CGUs requiring any further impairment.

12. Development costs and other intangible assets

	Development costs £m	Acquired technology £m	Acquired customer relationships £m	Patents and licences £m	Total £m
Cost					
At 1 November 2017	61.7	93.7	77.3	0.5	171.5
Additions	3.0	—	—	—	—
Disposals	(3.1)	(1.1)	—	(0.2)	(1.3)
Foreign exchange adjustments	1.1	3.3	2.5	0.1	5.9
At 31 October 2018	62.7	95.9	79.8	0.4	176.1
Additions	4.0	—	—	—	—
Disposals	(14.3)	—	—	—	—
Foreign exchange adjustments	(0.4)	(1.1)	(0.8)	—	(1.9)
At 31 October 2019	52.0	94.8	79.0	0.4	174.2
Amortisation					
At 1 November 2017	(28.0)	(64.7)	(49.7)	(0.1)	(114.5)
Charge	(3.6)	(8.2)	(6.1)	(0.1)	(14.4)
Disposals	2.8	0.8	—	0.1	0.9
Impairment	(9.5)	(0.7)	(5.4)	—	(6.1)
Foreign exchange adjustments	(0.4)	(2.5)	(1.8)	(0.1)	(4.4)
At 31 October 2018	(38.7)	(75.3)	(63.0)	(0.2)	(138.5)
Charge	(1.3)	(8.3)	(3.8)	(0.1)	(12.2)
Disposals	14.0	—	—	—	—
Foreign exchange adjustments	0.1	1.1	0.7	—	1.8
At 31 October 2019	(25.9)	(82.5)	(66.1)	(0.3)	(148.9)
Carrying amount					
At 31 October 2019	26.1	12.3	12.9	0.1	25.3
At 31 October 2018	24.0	20.6	16.8	0.2	37.6

Included within the development costs of £26.1m, individually material balances relate to Joint Biological Tactical Detection System £8.6m (2018: £8.9m) and Next Generation Chemical Detector £11.1m (2018: £9.8m). Development costs are amortised over their useful economic lives, estimated to be between three and ten years, with the remaining amortisation periods for these assets ranging up to eight years.

During the year ended 31 October 2018, the Group recognised an impairment of capitalised development costs of £9.5m following the appointment of a new Chief Executive who conducted a strategic review of the Group's product portfolio. This review was performed to rationalise the future resources on areas where the Group has a niche position and competitive advantage. Of the total impairment charge, £0.9m of the impairment charge related to discontinued operations. The £7.4m impairment charge, as disclosed in note 3, related to continuing operations, net of the release of an associated government grant.

Acquired intangibles are recognised at fair value on acquisition and are amortised over their estimated useful lives. Fair values for acquired intangibles are assessed by reference to future estimated cash flows, discounted at an appropriate rate to present value, or by reference to the amount that would have been paid in an arm's length transaction between two knowledgeable and willing parties. Other intangible assets are recognised at cost and are amortised over their estimated useful economic lives, which are set out in the accounting policies section.

12. Development costs and other intangible assets continued

Acquired technology of £12.3m includes individually material balances relating to Chemring Sensors & Electronic Systems £8.3m (2018: £12.6m), Chemring Energetic Devices £2.1m (2018: £5.6m) and Roke £1.5m (2018: £2.1m). The remaining amortisation periods for these assets are four years, eight years and three years respectively.

Acquired customer relationships of £12.9m include individually material balances relating to Chemring Energetic Devices £8.8m (2018: £10.5m), Chemring Sensors & Electronic Systems £2.7m (2018: £3.4m) and Roke £1.0m (2018: £2.1m). The remaining amortisation periods for these assets are seven years, four years and one year respectively.

In the year ended 31 October 2018, an impairment charge against acquired technology (£0.7m) and acquired customer relationships (£5.4m) was recognised in respect of the disposal group, and formed part of the overall impairment loss of £69.3m as disclosed in note 29.

13. Property, plant and equipment

	Land and buildings £m	Plant and equipment £m	Total £m
Cost or valuation			
At 1 November 2017	117.2	128.9	246.1
Additions	7.1	14.0	21.1
Disposals	(1.2)	(7.4)	(8.6)
Foreign exchange adjustments	1.8	2.3	4.1
At 31 October 2018	124.9	137.8	262.7
Additions	13.6	27.1	40.7
Disposals	(8.4)	(34.7)	(43.1)
Foreign exchange adjustments	(1.8)	(2.7)	(4.5)
At 31 October 2019	128.3	127.5	255.8
Depreciation			
At 1 November 2017	(21.0)	(65.0)	(86.0)
Charge	(3.6)	(14.1)	(17.7)
Impairment	(10.9)	(4.8)	(15.7)
Disposals	0.6	6.6	7.2
Foreign exchange adjustments	(0.7)	(1.7)	(2.4)
At 31 October 2018	(35.6)	(79.0)	(114.6)
Charge	(3.3)	(12.5)	(15.8)
Disposals	8.3	34.2	42.5
Foreign exchange adjustments	0.5	1.6	2.1
At 31 October 2019	(30.1)	(55.7)	(85.8)
Carrying amount			
At 31 October 2019	98.2	71.8	170.0
At 31 October 2018	89.3	58.8	148.1

During the year, £0.3m (2018: £nil) of interest was capitalised, as set out in note 7. £1.1m (2018: £1.1m) of capitalised interest was charged as depreciation and £nil (2018: £0.4m) was disposed of. This results in a net book value for capitalised interest of £10.0m (2018: £10.8m).

Included within land and buildings and plant and equipment are assets under construction of £8.6m and £6.2m respectively (2018: £2.5m and £1.8m). These assets are not depreciated.

In 2018, impairment losses were recognised in respect of Chemring Ordnance, Inc. following assessment of its carrying value.

Land and buildings were revalued at 30 September 1997 by Chestertons Chartered Surveyors, independent valuers not connected with the Group, on the basis of depreciated replacement cost for two pyrotechnic sites and on open market for the remainder, which represent Level 2 measurements in the fair value hierarchy.

	2019 £m	2018 £m
30 September 1997 depreciated replacement cost	5.8	5.8
Freehold at cost	122.5	119.1
Cost of land and buildings as at 31 October 2019	128.3	124.9

Notes to the Group financial statements continued

13. Property, plant and equipment continued

If stated under historical cost principles, the comparable amounts for the total of land and buildings would be:

	2019 £m	2018 £m
Cost	126.3	122.9
Accumulated depreciation	(29.2)	(34.7)
Historical cost value	97.1	88.2

All other tangible fixed assets are stated at historical cost.

At 31 October 2019, the Group had entered into contractual commitments for the acquisition of property, plant and equipment amounting to £20.7m (2018: £10.8m).

14. Subsidiary undertakings

All subsidiary undertakings have been reflected in these financial statements. The subsidiary undertakings held at 31 October 2019, which have a single class of ordinary shares all 100% owned by the Group, are shown below. All of these subsidiary undertakings are wholly controlled by Chemring Group PLC.

Subsidiary undertaking	Country of incorporation (or registration) and operation	Operating segment
Chemring Australia Pty Limited	Australia	Countermeasures & Energetics
B.D.L. Systems Limited	England	Dormant
Chemring Countermeasures Limited	England	Countermeasures & Energetics
Chemring Energetics Limited	England	Holding company
Chemring Europe Limited	England	Dormant
Chemring Finance Europe Limited	England	Non-trading
Chemring Investments Limited	England	Non-trading
Chemring Limited	England	Non-trading
Chemring North America Unlimited	England	Holding company
Chemring Prime Contracts Limited	England	Countermeasures & Energetics
Chemring Technology Solutions Limited	England	Sensors & Information
CHG Design Limited	England	Dormant
CHG Overseas Investments Limited	England	Non-trading
CHG Overseas Limited	England	Holding company
Chemring UAE Limited	England	Non-trading
Greys Exports Limited	England	Dormant
Kembrey Corporate Trustee Limited	England	Dormant
Kembrey Engineering Limited	England	Dormant
Kembrey Group Limited	England	Dormant
Kembrey Limited	England	Non-trading
Parkway No 10 Limited	England	Non-trading
Richmond EEI Limited	England	Dormant
Richmond Electronics & Engineering Limited	England	Dormant
Roke Manor Research Limited	England	Sensors & Information
Chemring Nobel AS	Norway	Countermeasures & Energetics
Chemring Energetics UK Limited	Scotland	Countermeasures & Energetics
Alloy Surfaces Company, Inc.	US	Countermeasures & Energetics
ASC Realty LLC	US	Property holding company
Chemring Energetic Devices, Inc.	US	Countermeasures & Energetics
Chemring North America Group, Inc.	US	Holding company
Chemring Ordnance, Inc.	US	Countermeasures & Energetics
CHG Flares, Inc.	US	Holding company
CHG Group, Inc.	US	Head office
Kilgore Flares Company LLC	US	Countermeasures & Energetics
Chemring Sensors & Electronic Systems, Inc.	US	Sensors & Information
Roke USA, Inc.	US	Sensors & Information
Tactical Systems and Ordnance, Inc.	US	Sensors & Information

The sale of Chemring Ordnance, Inc. was announced on 21 November 2019.

CHG Overseas Limited, Chemring North America Unlimited, Parkway No 10 Limited, Chemring Investments Limited, Chemring Energetics Limited, Chemring Finance Europe Limited, Chemring Limited, Kembrey Limited, Kembrey Group Limited, Chemring UAE Limited and CHG Overseas Investments Limited are exempt from the requirement to file audited accounts for the year ended 31 October 2019 by virtue of section 479A of the Companies Act 2006. See page 141 for the registered offices of the subsidiary undertakings.

15. Inventories

	2019 £m	2018 £m
Raw materials	38.8	30.9
Work in progress	25.1	21.9
Finished goods	14.2	18.6
	78.1	71.4

There are no significant differences between the replacement cost of inventory and the carrying amount shown above. The Group recognised £2.7m (2018: £9.6m) as a write down of inventories to net realisable value for continuing operations. See note 4 for details of cost of inventories recognised as an expense.

16. Trade and other receivables

	2019 £m	2018 £m
Trade receivables	30.6	45.8
Allowance for doubtful debts	(0.3)	(0.4)
	30.3	45.4
Advance payments to suppliers	4.4	0.7
Other receivables	7.0	3.5
Prepayments and accrued income	12.0	12.6
	53.7	62.2

All amounts shown above are due within one year.

The average credit period taken by customers on sales of goods, calculated using a countback basis, is 20 days (2018: 30 days). No interest is charged on receivables from the date of invoice to payment.

Given the Group's customer base, expected credit losses are typically not material, however the Group's policy is to provide in full for trade receivables outstanding for more than 120 days beyond agreed terms, unless there are facts and circumstances that support recoverability.

The directors consider that the carrying amount of trade and other receivables approximates to their fair values.

17. Cash and cash equivalents

Bank balances and cash comprise cash held by the Group and short-term deposits with an original maturity of three months or less. The carrying amount of these assets approximates to their fair value. For the purposes of the statement of cash flows, cash and cash equivalents comprises of cash at banks on hand of £1.3m (2018: £9.6m) less the bank overdraft included in short term borrowings of £4.6m (2018: £nil).

18. Borrowings

	2019 £m	2018 £m
Within current liabilities		
Loan notes – US dollar denominated	64.6	—
Bank overdrafts – US dollar denominated	4.6	—
Borrowings due within one year	69.2	—
Within non-current liabilities		
Bank borrowings	7.7	25.9
Loan notes – US dollar denominated	—	65.4
Preference shares	0.1	0.1
Borrowings due after more than one year	7.8	91.4
Total borrowings	77.0	91.4

Analysis of borrowings by currency:

	2019 £m	2018 £m
Sterling	7.8	26.0
US dollar	69.2	65.4
	77.0	91.4

Notes to the Group financial statements continued

18. Borrowings continued

The weighted average interest rates paid were as follows:

		2019 %	2018 %
Bank overdrafts		2.1	2.1
UK bank loans	– Sterling denominated	2.1	2.1
Loan notes	– Sterling denominated	—	6.8
	– US dollar denominated	5.7	5.7–6.3

An analysis of borrowings by maturity is as follows:

	2019				2018			
	Bank loans and overdrafts £m	Loan notes £m	Preference shares £m	Total £m	Bank loans and overdrafts £m	Loan notes £m	Preference shares £m	Total £m
Borrowings falling due:								
– within one year	4.6	64.6	—	69.2	—	—	—	—
Borrowings falling due:								
– within one to two years	—	—	—	—	—	65.4	—	65.4
– within two to five years	7.7	—	—	7.7	25.9	—	—	25.9
– after five years	—	—	0.1	0.1	—	—	0.1	0.1
	7.7	—	0.1	7.8	25.9	65.4	0.1	91.4
Total borrowings	12.3	64.6	0.1	77.0	25.9	65.4	0.1	91.4

The Group increased its existing revolving credit facility to £136.7m during the period. The revolving credit facility was first established in October 2018 and has a four-year initial term with options to extend by a further two years. None of the borrowings in the current or the prior year were secured.

There have been no breaches of the terms of the loan agreements during the current or prior year.

The Group has the following undrawn borrowing facilities available, in respect of which all conditions precedent have been met. Interest costs under these facilities are charged at floating rates.

	2019 £m	2018 £m
Undrawn borrowing facilities	130.2	68.1

The Group is subject to two key financial covenants, which are tested quarterly. These covenants relate to the leverage ratio, being the ratio between underlying earnings before interest, tax, depreciation and amortisation ("underlying EBITDA") and net debt, and the interest cover ratio between underlying EBITDA and finance costs. The calculation of these ratios involves the translation of non-sterling denominated debt using average, rather than closing, rates of exchange. The Group complied with these covenants throughout the year.

19. Trade and other payables

	2019 £m	2018 £m
Within current liabilities		
Trade payables	6.7	12.1
Other payables	24.1	20.9
Interest payable	1.6	1.7
Other tax and social security	2.8	3.3
Advance receipts from customers	15.3	5.7
Accruals	12.3	12.5
Deferred income	5.5	12.4
	68.3	68.6

Trade payables and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. Advance receipts from customers represent the obligation to transfer goods or services to a customer for which consideration has been received. The amount of £5.7m included in advance receipts from customers recognised at 31 October 2018 has been recognised as revenue in 2019 (2018: £30.7m). No revenue was recognised in 2019 from performance obligations satisfied in previous years.

The average credit period taken on purchases of goods is 16 days (2018: 34 days) using year-end trade payables divided by cost of sales. No interest is payable on trade payables from the date of invoice to payment.

20. Financial risk management

The Group uses financial instruments to manage financial risk wherever it is appropriate to do so. The main risks addressed by financial instruments are liquidity risk, foreign currency risk, interest rate risk and credit risk. The Group's policies in respect of the management of these risks, which remained unchanged throughout the year, are set out below.

(a) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers.

The impairment provisions for financial assets disclosed in note 16 "Trade and other receivables" are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the Group's past history and existing market conditions, as well as forward-looking estimates at the end of each reporting period. Customers are mainly multinational organisations or government agencies with whom the Group has long-term business relationships. The Group's principal customers are government defence departments, such as the US Department of Defense, the UK Ministry of Defence, US and UK defence prime contractors, such as BAE Systems and General Dynamics, and distributors of products for their onward sale to end users.

Approximately half of continuing revenue in 2019 related to the US DoD, the UK MOD and the US and UK defence prime contractors, who consistently pay within terms and are deemed low credit risk as a result. For all other customers the Group's policy is to trade under a letter of credit. If there is any doubt over recoverability, the Group's policy is to provide in full for trade receivables outstanding for more than 120 days beyond agreed terms. The balances which might be affected by credit risk are trade receivables and cash and cash equivalents.

(b) Capital management

The Group manages its capital to ensure that all entities in the Group will be able to continue as a going concern while meeting the returns to stakeholders. The capital structure of the Group consists of equity (as disclosed in the consolidated statement of changes in equity), retained earnings, cash and cash equivalents (note 17), a revolving credit facility ("RCF") and private placement notes (note 18). The Group seeks to manage its capital through an appropriate mix of these items.

The Group increased its revolving credit facility to £136.7m during the period. The RCF was first established in October 2018 and has a four-year initial term with options to extend by a further two years. As at 31 October 2019, the RCF was drawn by £8.5m. Private placement notes of \$83.6m matured in November 2019 and were repaid using a mixture of internal resources and the RCF.

(c) Financial risk management

The primary risks that the Group is exposed to are liquidity risk, foreign currency risk, interest rate risk and credit risk. It is the Group's policy to manage these risks under the following policies:

i. Liquidity risk management

Liquidity risk is the risk that the Group does not have sufficient financial resources to meet its obligations as they fall due. The Group manages liquidity risk by maintaining adequate reserves and by continually monitoring forecast and actual cash flows. The Group's policy is to maintain continuity of funding through available cash and cash equivalents and the RCF.

ii. Foreign currency risk management

The Group's presentational currency is sterling. The Group is subject to exposure on the translation of the assets of foreign subsidiaries, whose functional currencies differ from the Group. The Group's primary balance sheet translation exposures are to the US dollar, Australian dollar and Norwegian krone. The Group minimises the balance sheet translation exposures, where it is practical to do so, by funding subsidiaries with long-term loans, on which exchange differences are taken to reserves. US dollar borrowings held by the Group are treated as a net investment hedge against the US dollar assets of the Group.

The Group faces currency exposures arising from the translation of profits earned in foreign currency. These exposures are not hedged. Exposures also arise from foreign currency denominated trading transactions undertaken by subsidiaries deemed transactional exposures. The Group's policy is to hedge transactional exposures above £250,000 in the banking market on a one-to-one basis using forward contracts. Below £250,000, the exposures are netted across subsidiaries and any surplus or deficit hedged in the banking market using spot or forward contracts. The Group's policy is that there is no speculative trading in financial instruments. During the year ended 31 October 2019, there were no options or structured derivatives utilised.

iii. Interest rate risk management

The Group finances its operations through a combination of retained profits, bank and loan note borrowings. The UK borrowings are denominated in sterling and US dollars, and at the shorter end are subject to floating rates of interest.

Notes to the Group financial statements continued

20. Financial risk management continued

IFRS 9 Financial Instruments

Chemring Group PLC is not a financial institution and does not have any complex financial instruments. The Group does not apply hedge accounting and the Group's customers are generally governments that are considered creditworthy and pay consistently within agreed payment terms. As such, the adoption of IFRS 9 is not assessed as having a significant impact on the Group.

The Group has assessed which business models apply to the financial assets held by the Group on 1 November 2018, the date of the initial application of IFRS 9, and has classified its financial instruments into the appropriate IFRS 9 categories.

	2019		2018	
	Carrying value £m	Fair value £m	Carrying value £m	Fair value £m
Assets carried at amortised cost				
Trade receivables	30.3	30.3	45.4	45.4
Accrued income	8.3	8.3	9.0	9.0
Other receivables	7.0	7.0	3.5	3.5
Cash and cash equivalents	1.3	1.3	9.6	9.6
Assets classified as held for sale	—	—	25.5	25.5
Assets carried at fair value				
Derivative financial instruments	0.2	0.2	0.1	0.1
Assets classified as held for sale	7.0	7.0	18.2	18.2
Liabilities carried at fair value				
Derivative financial instruments	(1.2)	(1.2)	(0.5)	(0.5)
Liabilities classified as held for sale	(1.8)	(1.8)	(10.2)	(10.2)
Liabilities carried at amortised cost				
Trade payables	(6.7)	(6.7)	(17.1)	(17.1)
Other payables	(24.1)	(24.1)	(20.9)	(20.9)
Interest payable	(1.6)	(1.6)	(1.7)	(1.7)
Other tax and social security	(2.8)	(2.8)	(3.3)	(3.3)
Accruals	(12.3)	(12.3)	(12.5)	(12.5)
Liabilities classified as held for sale	—	—	(16.7)	(16.7)
Borrowings	(77.0)	(77.0)	(91.4)	(95.8)
Provisions	(17.2)	(17.2)	(20.7)	(20.7)

The following items are not financial instruments as defined by IFRS 9:

- (a) prepayments made/advances received (right to receive future goods or services, not cash or a financial asset);
- (b) tax receivables and payables and similar items (statutory rights and obligations, not contractual); or
- (c) deferred revenue and warranty obligations (obligations to deliver goods and services, not cash or financial assets).

21. Financial instruments

The following table details the fair value of derivative financial instrument assets/(liabilities) recognised in the balance sheet:

	2019 £m	2018 £m
Included in current assets	0.2	0.1
Included in current liabilities	(0.9)	(0.3)
Included in non-current liabilities	(0.3)	(0.2)
Forward foreign exchange contracts	(1.0)	(0.4)

There was a £0.6m loss (2018: £0.4m loss) on the movement in the fair value of derivative financial instruments recognised in the income statement.

21. Financial instruments continued

The table below details the maturity profile of the nominal value of the Group's derivative financial instruments and loans:

	2019			2018		
	Derivative instruments £m	Loans and overdrafts £m	Total £m	Derivative instruments £m	Loans and overdrafts £m	Total £m
Falling due:						
– within one year	0.7	69.2	69.9	0.2	—	0.2
– within one to two years	0.3	—	0.3	0.1	65.4	65.5
– within two to five years	—	7.8	7.8	(0.1)	26.0	25.9
	1.0	77.0	78.0	0.2	91.4	91.6

Fair value hierarchy

IFRS 7 *Financial Instruments: Disclosures* requires companies that carry financial instruments at fair value in the balance sheet to disclose their level of visibility, determining into which category those financial instruments fall under the fair value hierarchy.

The fair value measurement hierarchy is as follows:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 – inputs for the asset or liability that are not based on observable market data (i.e. as unobservable inputs).

The following tables present the Group's assets and liabilities that are measured at fair value:

		2019		2018	
	Fair value hierarchy	Carrying amount £m	Fair value £m	Carrying amount £m	Fair value £m
Held at fair value					
Derivative financial instruments – assets	Level 2	0.2	0.2	0.1	0.1
Assets classified as held for sale	Level 3	7.0	7.0	18.2	18.2
Derivative financial instruments – liabilities	Level 2	(1.2)	(1.2)	(0.5)	(0.5)
Liabilities classified as held for sale	Level 3	(1.8)	(1.8)	(10.2)	(10.2)
		4.2	4.2	7.6	7.6

The assets and liabilities under Level 3 on the fair value hierarchy relate to discontinued businesses (see note 29 for further details). The fair value of derivative financial instruments is estimated by discounting the future contracted cash flow, using readily available market data.

Sensitivity analysis

For the year ended 31 October 2019 the closing exchange rate for the US dollar was 1.29 (2018: 1.28) and the average exchange rate was 1.26 (2018: 1.34).

For the year ended 31 October 2019 a 10 cent strengthening in the US dollar exchange rate would have increased reported net debt by approximately £5.7m (2018: £5.6m).

The following table details the Group's sensitivity to a 10 cent movement in the US dollar rate against sterling with regards to its income statement.

The Group considers a 10 cent strengthening or weakening of US dollars against sterling as a reasonable possible change in foreign exchange rates. The other functional currencies used in the Group (Norwegian krone and Australian dollars) are not significant enough to have a material impact on the Group results in the event of a reasonable possible change to their exchange rates.

	+10 cents US dollar impact		–10 cents US dollar impact	
	2019 £m	2018 £m	2019 £m	2018 £m
Continuing operations				
Revenue	(12.9)	(9.3)	15.1	10.8
Underlying operating profit	(1.8)	(1.9)	2.5	2.2
Interest	0.2	0.2	(0.4)	(0.3)
Underlying profit before tax	(1.6)	(1.7)	2.1	1.9

As at 31 October, 84% of the Group's gross debt is at a fixed rate of 5.68% and the remainder is at floating rates. The Group monitors its exposure to movements in interest rates, having regard to prevailing market conditions and considers the use of interest rate swaps on an ongoing basis to manage this exposure. The Group has not entered into any interest rate swaps as of 31 October 2019.

As the Group mainly has fixed interest rate debt, a change in interest rates would not have an immediate significant impact on the income statement. A change in interest rates of 1% throughout the year would cause the Group's finance expense to change by £0.1m.

Notes to the Group financial statements continued

22. Provisions

	Legal provision £m	Environmental provision £m	Restructuring provision £m	Disposal provision £m	Other provision £m	Total £m
At 1 November 2018	9.0	3.2	3.3	2.2	3.0	20.7
Provided	—	—	—	1.1	—	1.1
Foreign exchange adjustments	—	—	(0.1)	(0.1)	—	(0.2)
Paid	(2.2)	(0.1)	(1.7)	(0.3)	—	(4.3)
Released	—	0.1	(0.2)	—	—	(0.1)
At 31 October 2019	6.8	3.2	1.3	2.9	3.0	17.2

These provisions are classified on the balance sheet as follows:

	2019 £m	2018 £m
Included in current liabilities	4.8	6.7
Included in non-current liabilities	12.4	14.0
	17.2	20.7

The legal provision represents the estimated legal liabilities faced by the Group at the balance sheet date. Further details of the Group's contingent liabilities are set out in note 34.

The environmental provision is held in respect of potential liabilities, associated with the Group's facility in Chicago, US. The range of possible outcomes is between £1.0m and £7.2m.

The restructuring provision relates principally to the Tennessee capacity expansion programme which is expected to be completed in 2021. The range of possible outcomes is estimated between £1.0m and £2.0m.

The disposal provision relates to estimated liabilities faced by the Group in respect of the disposal of its European Munitions businesses in 2014, under the terms of their respective sale agreements. The range of possible outcomes is between £nil and £17.0m, and the risk of economic outflow relating to these reduces with the passage of time. These are expected to be utilised over the next seven years.

Other provisions relate to the Group's offset obligations. As a result of sales transactions in certain jurisdictions, the Group may enter into contracts that have offset commitments. The offset obligation is valued based on the amounts delivered under the contract over a certain period of time. The range of possible outcomes of the offset obligations of the Group depends on the solution agreed and is between £nil and £5.7m. A provision of £3.0m (2018: £3.0m) has been recognised to cover the estimated offset obligation.

Provisions are subject to uncertainty in respect of the outcome of future events. Legal provisions will be utilised based on the outcome of cases and the level of costs incurred defending the Group's position. Environmental provisions will be utilised based on the outcome of further environmental studies and remediation work. Restructuring provisions will be utilised based on actual costs incurred for demolition and environmental remediation and these will be impacted by the result of external assessments. Disposal provisions will be utilised based on the outcome of certain events which are specified in sale and purchase agreements. It is not possible to estimate more accurately the expected timing of any resulting outflows of economic benefits.

23. Deferred tax

The following are the principal deferred tax assets/(liabilities) recognised by the Group and movements thereon:

	Accelerated tax depreciation £m	Pensions £m	US interest deductions £m	Tax losses £m	Acquired intangibles £m	Other £m	Total £m
At 1 November 2017	(12.3)	0.1	22.6	1.5	(10.3)	8.1	9.7
(Charge)/credit to income	4.1	(1.2)	(22.6)	1.1	5.8	(5.3)	(18.1)
(Charge)/credit to equity	—	(0.1)	—	—	—	(0.5)	(0.6)
Transfers	(0.6)	—	—	—	(0.5)	(0.2)	(1.3)
At 1 November 2018	(8.8)	(1.2)	—	2.6	(5.0)	2.1	(10.3)
(Charge)/credit to income	1.7	(0.1)	—	5.1	(2.0)	1.6	6.3
(Charge)/credit to equity	—	(0.7)	—	—	0.2	—	(0.5)
Transfers	(0.1)	0.1	—	(0.2)	(1.0)	1.2	—
At 31 October 2019	(7.2)	(1.9)	—	7.5	(7.8)	4.9	(4.5)
Analysed as:							
Deferred tax assets	1.5	—	—	7.5	0.6	8.9	18.5
Deferred tax liabilities	(8.7)	(1.9)	—	—	(8.4)	(4.0)	(23.0)
At 31 October 2019	(7.2)	(1.9)	—	7.5	(7.8)	4.9	(4.5)
Deferred tax assets	1.7	—	—	2.6	25.0	7.5	36.8
Deferred tax liabilities	(10.5)	(1.2)	—	—	(30.0)	(5.4)	(47.1)
At 31 October 2018	(8.8)	(1.2)	—	2.6	(5.0)	2.1	(10.3)

The Finance Act 2016, which provided for reductions in the main rate of UK corporation tax from 20% to 19% effective from 1 April 2017 and to 17% effective from 1 April 2020, was substantively enacted on 19 September 2016.

The closing UK deferred tax asset as at 31 October 2019 has been calculated at the rates which will be in force when the assets and liabilities are expected to reverse.

The US Tax Cuts and Jobs Act ("TCJA") was substantively enacted on 22 December 2017. The TCJA provides for a reduction in the main rate of federal corporate income tax from 35% to 21% for accounting periods beginning on or after 1 January 2018, thus impacting the Group for its 2019 financial year, however the impact on the deferred tax asset was recognised in the year ended 31 October 2018.

Certain deferred tax assets and liabilities have been offset in accordance with the Group's accounting policy. Deferred tax balances after offset are analysed on the balance sheet as per the table above.

At the balance sheet date, the Group had unrecognised tax losses of £11.0m (2018: £29.9m) and unrecognised interest deductions as a result of US interest limitations regulations of £28.0m (2018: £25.9m) potentially available for offset against future profits in certain circumstances. No deferred tax asset has been recognised in respect of these amounts because of the unpredictability of future taxable qualifying profit streams.

24. Share capital

	2019 £m	2018 £m
Issued and fully paid		
282,489,995 (2018: 281,763,364) ordinary shares of 1p each	2.8	2.8

During the year, 726,631 ordinary shares (2018: 175,289) were issued for cash to employees under the Group's approved savings-related share schemes.

The Company's share capital also includes 62,500 7% cumulative preference shares of £1 each, which are all issued and fully paid up, and are classified for accounting purposes within non-current liabilities. The cumulative preference shares carry an entitlement to a dividend at the rate of 7p per share per annum, payable in equal instalments on 30 April and 31 October each year. Holders of the preference shares have the right on a winding-up to receive, in priority to any other classes of shares, the sum of £1 per share together with any arrears of dividends.

Notes to the Group financial statements continued

25. Reserves

The share premium account, the special capital reserve and the revaluation reserve are not distributable.

The special capital reserve was created as part of a capital reduction scheme involving the cancellation of the share premium account which was approved by the Court in 1986, in accordance with the requirements of the Companies Act 1985.

Included within retained earnings are £3.6m (2018: £3.7m) relating to the share-based payment reserve and £0.6m (2018: £0.7m) of the Company's own shares held by the Group's Employee Share Ownership Plan Trust.

Group dividends (note 9) are payable out of the parent company retained earnings as disclosed in the parent company financial statements. This provides cover over the declared final dividend of 7.4p per ordinary share for the year ended 31 October 2019.

26. Own shares

	2019 £m	2018 £m
At 1 November 2018	7.8	9.6
Transactions	—	(1.8)
At 31 October 2019	7.8	7.8

The own shares reserve represents the cost of shares in the Company purchased in the market and held by the Group to satisfy awards under the Group's share-based incentive schemes, details of which are set out in note 28. No ordinary shares (2018: nil) were acquired during the year and no ordinary shares (2018: 410,104) were distributed following the vesting of awards under the PSP. The total number of ordinary shares held in treasury at 31 October 2019 was 1,788,710 (2018: 1,788,710), with an average cost of 439.0p (2018: 439.0p) per share.

This represents 0.6% (2018: 0.6%) of the total issued and fully paid ordinary share capital.

27. Obligations under non-cancellable operating leases

	2019 £m	2018 £m
Minimum lease payments under operating leases recognised in the income statement	1.1	1.4

At the balance sheet date, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, falling due as follows:

	2019 £m	2018 £m
Within one year	2.2	1.7
In the second to fifth years	5.9	3.5
Over five years	0.2	0.1
	8.3	5.3

Operating lease payments represent rentals payable by the Group. Leases are largely negotiated for an average term of three years and rentals are largely fixed for the lease period, with an option to extend for a further period at the then prevailing market rate.

28. Share-based payments

The Group operates share-based compensation arrangements to provide incentives to the Group's senior management and eligible employees. The Group recognised a net charge of £2.5m (2018: £1.1m) in respect of share-based payments during the year.

Details of the four schemes which operated during the year are set out below.

The Chemring Group Performance Share Plan (the "PSP") and The Chemring Group Performance Share Plan 2016 (the "2016 PSP")

Under the PSP and the 2016 PSP, conditional awards of ordinary shares are made at nil cost to employees. Awards ordinarily vest on the third anniversary of the award date. The PSP commenced in March 2006 and expired in March 2016, when it was replaced by the 2016 PSP, which has broadly similar terms. Awards outstanding at 31 October 2019 all now relate to the 2016 PSP as the vesting date of any remaining PSP awards was reached during the year.

	PSP		2016 PSP	
	Number of conditional shares		Number of conditional shares	
	2019	2018	2019	2018
Outstanding at the beginning of the year	1,699,869	3,169,973	3,853,797	2,183,887
Awarded	—	—	2,952,924	2,228,787
Vested	—	(410,104)	—	—
Lapsed	(1,699,869)	(1,060,000)	(881,855)	(558,877)
Outstanding at the end of the year	—	1,699,869	5,924,866	3,853,797
Subject to vesting at the end of the year	—	—	—	—

28. Share-based payments continued**The Chemring Group Performance Share Plan (the "PSP") and The Chemring Group Performance Share Plan 2016 (the "2016 PSP")** continued

The following awards were outstanding at 31 October 2019:

Date of award	Number of ordinary shares under award	Vesting price per share Pence	Date when awards due to vest
24 March 2017	1,591,317	nil	24 March 2020
19 January 2018	1,042,039	nil	19 January 2021
26 June 2018	481,147	nil	26 June 2021
22 March 2019	2,810,363	nil	22 March 2022

The Group has applied a discount to the share-based payments, to reflect the anticipated achievement of the stipulated targets for each 2016 PSP award based on the predicted figures within the Group's financial projections and the expected number of leavers over the life of the awards.

The 2016 PSP awards made in the year ended 31 October 2019 had targets based on earnings per share growth and total shareholder return.

The awards have been valued using the following modelling inputs:

	Date awarded			
	22 March 2019	26 June 2018	19 January 2018	24 March 2017
Share price at valuation	140p	218p	188p	196p
Exercise price	nil	nil	nil	nil
Risk-free rate	0.6%	0.6%	0.6%	0.2%
Expected volatility	30.0%	36.1%	34.7%	28.8%
Fair value	98.2p	153.3p	132.2p	165.5p

The weighted average fair value of awards made during the year was 98.2p (2018: 136.9p).

In the year ended 31 October 2019 no awards vested (2018: 410,104). The charge recognised in respect of the awards is based on their fair value at the grant date.

The Chemring Group Restricted Share Plan (the "RSP")

Under the RSP, deferred awards of ordinary shares are made at nil cost to employees. Awards ordinarily vest on the second or third anniversary of the award date. The first awards under the RSP were made in February 2013.

	Number of deferred shares	
	2019	2018
Outstanding at the beginning of the year	50,000	50,000
Awarded	—	—
Exercised	(50,000)	—
Outstanding at the end of the year	—	50,000
Subject to vesting at the end of the year	—	—

The Chemring Group 2008 and 2018 UK Sharesave Plan (the "UK Sharesave Plan")

Options were granted during the year on 29 July 2019.

	2019		2018	
	Number of share options	Weighted average exercise price Pence	Number of share options	Weighted average exercise price Pence
Outstanding at the beginning of the year	1,901,810	135.1	1,813,653	126.7
Granted	591,995	154.0	461,603	178.0
Exercised	(717,423)	108.1	(175,289)	143.8
Lapsed	(347,638)	150.4	(198,157)	150.4
Outstanding at the end of the year	1,428,744	152.8	1,901,810	135.1
Subject to exercise at the end of the year	65,524	106.2	42,420	157.8

Notes to the Group financial statements continued

28. Share-based payments continued

The Chemring Group 2008 and 2018 UK Sharesave Plan (the "UK Sharesave Plan") continued

The following options were outstanding at 31 October 2019:

Date of award	Number of ordinary shares under award	Exercise price per share Pence	Dates between which options may be exercised
30 July 2014	2,100	142.0	1 October 2019–31 March 2020
30 July 2015	33,848	152.0	1 October 2020–31 March 2021
27 July 2016	63,424	105.0	1 October 2019–31 March 2020
27 July 2016	71,997	105.0	1 October 2021–31 March 2022
27 July 2017	311,725	148.0	1 October 2020–31 March 2021
27 July 2017	54,322	148.0	1 October 2022–31 March 2023
30 July 2018	235,770	178.0	1 October 2021–31 March 2022
30 July 2018	67,068	178.0	1 October 2023–31 March 2024
29 July 2019	549,921	154.0	1 October 2022–31 March 2023
29 July 2019	38,569	154.0	1 October 2024–31 March 2025

The weighted average fair value of options granted in the year was 30.0p (2018: 44.0p).

The weighted average fair value of options exercised in the year was 26.9p (2018: 36.6p).

The weighted average share price on exercise of the options during the year was 108.1p (2018: 143.8p).

The fair values of the share options in the UK Sharesave Plan are based on the difference between the exercise price and the share price on the grant date of the option.

29. Assets and liabilities classified as held for sale

In 2018, a strategic review of the Group's energetics portfolio was conducted. The Board concluded that the future focus within the energetics segment should be on the energetic devices businesses. It therefore made the decision to exit a number of commoditised energetics businesses including: Chemring Defence UK Limited, Chemring Prime Contracts Limited, Chemring Military Products, Inc. and Chemring Ordnance, Inc.. Accordingly, these businesses were presented as held for sale as at 31 October 2018.

As of 31 October 2019 the sale of Chemring Defence UK Limited and Chemring Military Products, Inc. had been completed and Chemring Prime Contracts Limited closed. The accounting on disposal is set out in note 5.

The net assets of Chemring Ordnance, Inc. continued to be held for sale at 31 October 2019. On 21 November 2019 the Group announced the conditional divestment of Chemring Ordnance, Inc. See note 36 for further details.

Impairment losses relating to the disposal group

Impairment losses of £nil (2018: £69.3m) for write downs relating to the discontinued operations to the lower of their carrying amount and their fair value less costs to sell have been included in non-underlying items (see note 5). The impairment losses have been applied to reduce the carrying amount of goodwill, property, plant and equipment, capitalised development costs, inventory and receivables.

Assets and liabilities classified as held for sale

As at 31 October 2019, the discontinued operations were stated at fair value less costs to sell and comprised the following assets and liabilities:

	2019 £m	2018 £m
Deferred tax asset	—	4.4
Inventory	4.7	7.3
Trade and other receivables	2.3	32.0
Assets classified as held for sale	7.0	43.7
Deferred tax liability	—	(6.1)
Trade and other payables	(1.8)	(18.4)
Current tax	—	(2.4)
Liabilities directly associated with assets classified as held for sale	(1.8)	(26.9)

The above items are presented at the lower of carrying amount and fair value less costs to sell. For those business units where the carrying value of the assets and liabilities is expected to be realised through sale, no fair value adjustments have been carried out. £nil (2018: £25.5m) of the assets classified as held for sale and £nil (2018: £16.7m) of the liabilities classified as held for sale are shown at carrying value.

The assets and liabilities at fair value less costs to sell are valued on an undiscounted basis, with impairments down to realisable value applied to assets in order of increasing liquidity. This fair value measurement for the disposals has been categorised as a Level 3 fair value based on the inputs to the valuation technique used. £7.0m (2018: £18.2m) of assets classified as held for sale and £1.8m (2018: £10.2m) of liabilities classified as held for sale are shown at fair value.

The costs to sell these businesses are estimated at £1.3m (2018: £0.8m).

30. Retirement benefit obligations

In the UK, the Group operates a defined benefit scheme (the "Chemring Group Staff Pension Scheme"). In Norway, Chemring Nobel operates a defined benefit scheme (the "Chemring Nobel Scheme"). The Group's other UK and overseas pension arrangements are all defined contribution schemes, with a combined cost of £5.2m (2018: £5.8m) for continuing operations.

The Chemring Group Staff Pension Scheme is a funded scheme and the assets of the scheme are held in a separate trustee administered fund. The scheme was closed to future accrual on 6 April 2012. A full actuarial valuation for the Scheme as at 6 April 2018 has been prepared and updated to 31 October 2019, using the projected unit credit method. The main assumptions for the scheme are detailed below. The surplus of the Chemring Group Staff Pension Scheme was £9.6m at 31 October 2019 (2018: £7.5m).

Under the funding plan agreed with the trustees following the 2018 actuarial valuation, the Company agreed to eliminate the deficit indicated by that valuation in the period to 31 December 2018. This funding plan provided for one further contribution of £0.4m which was made in November 2018. No further deficit recovery payments are required and the Group was released from the bank guarantee of £7.2m given to the Scheme in respect of future contributions. The Company and the trustees monitor funding levels annually, and a new funding plan is agreed with the trustees every three years, based on actuarial valuations. The next actuarial valuation is due as at 6 April 2021 which the future funding requirements will be reassessed.

The trust deed provides for an unconditional right to a return of surplus assets in the event of a plan wind-up. The trustees gave no rights to unilaterally wind up or augment the benefits due to members of the scheme. Based on these rights, any net surplus in the UK scheme is recognised in full.

The Chemring Nobel Scheme is a funded scheme and the assets of the scheme are held in a separate fund. The actuarial liability has been calculated at 31 October 2019 by a qualified actuary using the projected unit credit method. The main assumptions used were a discount rate of 1.8% and rate of increase in deferred pensions of 3%. The net surplus of the Chemring Nobel Scheme was £nil at 31 October 2019 (2018: £nil) and as such is immaterial for further detailed disclosures.

The movement in the net defined benefit liability is as follows:

	Defined benefit obligations		Defined benefit asset		Net defined benefit asset/(liability)	
	2019 £m	2018 £m	2019 £m	2018 £m	2019 £m	2018 £m
At 1 November	(83.4)	(83.8)	90.9	83.2	7.5	(0.6)
Included in profit or loss						
Administrative expenses	—	—	(0.4)	—	(0.4)	—
Past service cost	0.3	(0.8)	—	—	0.3	(0.8)
Net interest cost	(2.3)	(2.3)	2.5	2.2	0.2	(0.1)
	(2.0)	(3.1)	2.1	2.2	0.1	(0.9)
Included in other comprehensive income						
Remeasurement gain/(loss):						
Actuarial gain/(loss) arising from:						
– Demographic and financial assumptions	(7.1)	(0.8)	—	—	(7.1)	(0.8)
– Experience adjustment	(0.1)	(0.1)	—	—	(0.1)	(0.1)
– Return on plan assets excluding interest income	—	—	8.8	1.8	8.8	1.8
	(7.2)	(0.9)	8.8	1.8	1.6	0.9
Other						
Contributions by the employer	—	—	0.4	7.9	0.4	7.9
Additional contributions by the employer	—	—	—	0.2	—	0.2
Net benefits paid out	3.5	4.4	(3.5)	(4.4)	—	—
At 31 October	(89.1)	(83.4)	98.7	90.9	9.6	7.5

The Chemring Group Staff Pension Scheme had 948 members at the end of the year (2018: 966). Of these members 55.2% (2018: 53.2%) were pensioners drawing benefits from the scheme and the balance were deferred members. The duration of the liability is long, with pension payments expected to be made for at least the next 40 years.

Notes to the Group financial statements continued

30. Retirement benefit obligations continued

The pension schemes' assets are analysed as follows:

	2019 £m	2018 £m	2019 %	2018 %
Equities	42.5	27.9	43.1	30.7
Liability Driven Investment	21.8	22.5	22.1	24.8
Corporate bonds	22.8	34.9	23.1	38.4
Assets held by insurance company	2.0	2.3	2.0	2.5
Cash	9.6	3.3	9.7	3.6
	98.7	90.9	100.0	100.0

The schemes' assets are invested in accordance with the statement of investment principles after taking professional advice from the schemes' investment advisers. The investment strategy is to split the assets into a growth portfolio of index trading equity funds, real return funds, and a matching portfolio of leveraged liability driven pooled funds.

The principal assumptions used in the actuarial valuation of the Chemring Group Staff Pension Scheme were as follows:

	2019 %	2018 %
Discount rate	2.0	2.8
Rate of increase in deferred pensions	2.6	2.1
Rate of increase in pensions in payment (where applicable)	2.8	3.1
Inflation – RPI	2.9	3.2
– CPI	2.8	2.1

In determining defined benefit obligations, the Group uses mortality assumptions which are based on published mortality tables. For the Chemring Group Staff Pension Scheme, the actuarial table currently used is SAPS Normal Health pensioner tables with future improvements in line with CMI 2018 and a 1.25% long-term trend rate.

This results in the following life expectancies at age 65:

	2019	2018
Future pensioners – male	89.0	89.2
– female	90.6	90.8
Current pensioners – male	87.6	87.8
– female	89.1	89.3

The most significant assumptions in the pension valuation are the discount rate applied to the liabilities, the inflation rate to be applied to pension payments and the mortality rates. If the discount rate used in determining retirement benefit obligations were to change by 0.1% then it is predicted that the deficit in the scheme would change by approximately £1.4m. A change in the rate of inflation by 0.1% is predicted to change the deficit by approximately £0.5m and a one year change to the longevity assumption would change the deficit by approximately £3.2m. The principal risks to the schemes are that the investments do not perform as well as expected, the discount rate continues to fall driven by lower market interest rates and the rate of improvement in mortality assumed is insufficient and life expectancies continue to rise.

The Group anticipates contributions to the defined benefit schemes for the year ending 31 October 2020 will be £nil (2019: £0.4m).

31. Cash generated from operating activities

	2019 £m	2018 £m
Operating profit/(loss) from continuing operations	31.3	(15.9)
Amortisation of development costs	1.3	3.6
Amortisation of intangible assets arising from business combinations	12.1	11.6
Amortisation of patents and licences	0.1	0.1
Loss on disposal of non-current assets	0.7	0.2
Depreciation of property, plant and equipment	15.8	15.3
Non-cash movement of non-underlying items	0.6	35.3
Share-based payment expense	2.5	1.1
Operating cash flows before movements in working capital	64.4	51.3
(Increase)/decrease in inventories	(7.9)	1.6
Decrease in trade and other receivables	10.4	0.2
(Decrease) in trade and other payables	(2.7)	(8.3)
(Decrease) in provisions	(0.3)	(0.1)
Operating cash flow from continuing underlying operations	63.9	44.7
Discontinued operations		
Operating cash flow from discontinued underlying operations	13.7	12.2
Cash impact of non-underlying items from discontinued operations	(7.1)	(0.1)
Tax paid	(0.7)	—
Net cash inflow from discontinued operating activities	5.9	12.1
Net cash inflow/(outflow) from discontinued investing activities	0.5	(1.2)
Net cash inflow from discontinued operations	6.4	10.9

32. Reconciliation of net cash flow to movement in net debt

	2019 £m	2018 £m
Decrease in cash and cash equivalents	(12.6)	(24.5)
Decrease in debt and lease financing due to cash flows	18.4	26.0
Decrease in net debt resulting from cash flows	5.8	1.5
Effect of foreign exchange rate changes	0.5	(2.0)
Amortisation of debt finance costs	(0.2)	(1.3)
Movement in net debt	6.1	(1.8)
Net debt at the beginning of the year	(81.8)	(80.0)
Net debt at the end of the year	(75.7)	(81.8)

33. Analysis of net debt

	At 1 November 2018 £m	Cash flows £m	Non-cash changes £m	Exchange rate effects £m	At 31 October 2019 £m
Cash and cash equivalents (including bank overdraft)	9.6	(12.6)	—	(0.3)	(3.3)
Debt due within one year (excluding bank overdraft)	—	—	(64.6)	—	(64.6)
Debt due after one year	(91.3)	18.4	64.4	0.8	(7.7)
Preference shares	(0.1)	—	—	—	(0.1)
	(81.8)	5.8	(0.2)	0.5	(75.7)

Accrued interest is included in the carrying amount of financial liabilities measured at amortised cost and therefore is not presented as a separate line item.

Notes to the Group financial statements continued

34. Contingent liabilities

At 31 October 2019, the Group had contingent liabilities in respect of bank and contractual performance guarantees and other matters arising in the ordinary course of business. Where it is expected that a material liability will arise in respect of these matters, appropriate provision is made within the financial statements. As the conditions of these guarantees are currently being met, no obligating event is foreseeable and therefore no provision has been made.

The Group is, from time to time, party to legal proceedings and claims, and is involved in correspondence relating to potential claims, which arise in the ordinary course of business.

Pricing of an historic contract

A dispute between Alloy Surfaces Company, Inc. and the US Army, in relation to disputed pricing of a certain historic contract fulfilled by Alloy Surfaces Company, Inc., proceeded to a hearing in front of the US Armed Services Board of Contract Appeals ("ASBCA") in April 2017. ASBCA have not issued its decision in relation to this matter, and therefore it is too early to predict the outcome of the hearing. The range of possible outcomes is between £nil to £12.0m. A provision of £1.0m (2018: £1.0m) exists to cover estimated legal costs for the Group with regards to this issue.

Controlled Foreign Company ("CFC") Finance Company exemption

Since 2013, the Group has benefited from the UK's Controlled Foreign Company ("CFC") Finance Company exemption. On 2 April 2019 the European Commission delivered a judgement which concluded in some circumstances the UK's CFC exemption may breach state aid rules. The UK government disagrees with the conclusion that the UK's CFC rules were partially in breach of EU law, and has therefore applied to the EU courts for annulment of the Commission's decision. Given the early stage of this process, it is too early to determine whether a tax liability is probable. The range of possible outcomes is between £nil and £15m, plus interest.

Serious Fraud Office investigation

In accordance with the Serious Fraud Office ("SFO") News Release dated 18 January 2018, an investigation was opened by the SFO into Chemring Group PLC ("CHG") and its subsidiary, Chemring Technology Solutions Limited ("CTSL"), following a self-report made by CTSL. The investigation relates to bribery, corruption and money laundering arising from the conduct of business by CHG and CTSL including any officers, employees, agents and persons associated with them. It is too early to predict the outcome of the SFO's investigation, in which the Group continues to co-operate fully.

Countermeasures UK Incident

On 10 August 2018 an incident occurred at our countermeasures facility in Salisbury. The Group responded immediately to support those who were injured, and maintains appropriate employers' liability insurance that we expect will provide full compensation in due course. We continue to fully support the Health and Safety Executive ("HSE") as it undertakes its investigation. Whilst provisions have been recorded for costs that have been identified, it is possible that additional uninsured costs and, depending on the outcome of the HSE investigation, financial penalties may be incurred. At this stage these costs are not anticipated to be material in the context of the Group's financial statements.

35. Related party transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note. Transactions with the Group's pension schemes are disclosed in note 30.

Remuneration of key management personnel

For the purposes of remuneration disclosure, key management personnel includes only the directors and excludes the other senior business managers and members of the Executive Committee. Their remuneration is set out below in aggregate for each of the categories specified in IAS 24 *Related Party Disclosures*. Further information on the remuneration of individual directors is provided in the audited part of the directors' remuneration report on pages 71 to 85.

The directors of the Company had no material transactions with the Company during the year, other than in connection with their service agreements. The remuneration of the executive directors is determined by the Remuneration Committee, having regard to the performance of the individuals and market trends. The remuneration of the non-executive directors is determined by the Board, having regard to the practice of other companies and the particular demands of the Group.

	2019 £m	2018 £m
Remuneration of key management personnel	3.3	2.2

Further detail can be found in the directors' remuneration report on pages 66 to 85.

36. Events since the end of the year

On 21 November 2019, the Group announced that a conditional agreement had been entered into for the sale of Chemring Ordnance, Inc. to Nammo Defense Systems Inc. The sale, which is subject to regulatory approval by the US authorities, is expected to complete no later than the end of Q2 FY20. The consideration of \$17m is payable in cash on completion, subject to normal working capital and other closing adjustments. Chemring Ordnance, Inc. was treated as discontinued and held for sale in these financial statements, see notes 5 and 29.

On 19 November 2019 the Group repaid \$83.6m of private placement loan notes. This was funded from existing bank facilities and cash.

Parent company balance sheet

As at 31 October 2019

		2019		2018	
	Note	£m	£m	£m	£m
Non-current assets					
Property, plant and equipment	1	0.2		0.2	
Investments in subsidiaries	2	634.6		652.8	
Amounts owed by subsidiary undertakings	4	395.1		436.9	
Retirement benefit surplus	12	5.1		3.1	
			1,035.0		1,093.0
Current assets					
Trade and other receivables	4	21.5		8.1	
Cash and cash equivalents		25.1		—	
			46.6		8.1
Total assets			1,081.6		1,101.1
Current liabilities					
Borrowings	6	(64.6)		—	
Trade and other payables	5	(322.1)		(294.0)	
			(386.7)		(294.0)
Non-current liabilities					
Borrowings	6	—		(84.6)	
Trade and other payables	5	(25.7)		(63.0)	
Provisions	7	(2.9)		(5.0)	
Deferred tax	11	(0.4)		(0.1)	
Preference shares	8	(0.1)		(0.1)	
			(29.1)		(152.8)
Total liabilities			(415.8)		(446.8)
Net assets			665.8		654.3
Equity					
Share capital	9		2.8		2.8
Share premium account			306.2		305.4
Special capital reserve			12.9		12.9
Retained earnings			351.7		341.0
			673.6		662.1
Own shares	10		(7.8)		(7.8)
Total equity			665.8		654.3

Profit attributable to shareholders

In accordance with the concession granted under section 408 of the Companies Act 2006, the profit and loss account of Chemring Group PLC has not been presented separately in these financial statements. There is no material difference between the results disclosed and the results on an unmodified historical cost basis. The Company reported a profit for the year ended 31 October 2019 of £18.1m (2018: £28.2m).

These financial statements of Chemring Group PLC (registered number 86662) were approved and authorised for issue by the Board of directors on 16 December 2019.

Signed on behalf of the Board


Michael Ord
 Director


Andrew Lewis
 Director

Parent company statement of comprehensive income

For the year ended 31 October 2019

	2019 £m	2018 £m
Profit after tax attributable to equity holders of the parent as reported	18.1	28.2
Items that will not be reclassified subsequently to profit and loss		
Actuarial gains/(losses) on pension scheme, net of deferred tax	0.6	(0.2)
Total comprehensive income attributable to the equity holders of the parent	18.7	28.0

Parent company statement of changes in equity

For the year ended 31 October 2019

	Share capital £m	Share premium account £m	Special capital reserve £m	Retained earnings £m	Own shares £m	Total £m
At 1 November 2018	2.8	305.4	12.9	341.0	(7.8)	654.3
Profit after tax	—	—	—	18.1	—	18.1
Other comprehensive income	—	—	—	0.6	—	0.6
Total comprehensive income	—	—	—	18.7	—	18.7
Ordinary shares issued	—	0.8	—	—	—	0.8
Share-based payments (net of settlement)	—	—	—	1.5	—	1.5
Dividends paid	—	—	—	(9.5)	—	(9.5)
At 31 October 2019	2.8	306.2	12.9	351.7	(7.8)	665.8

	Share capital £m	Share premium account £m	Special capital reserve £m	Retained earnings £m	Own shares £m	Total £m
At 1 November 2017	2.8	305.3	12.9	321.5	(9.6)	632.9
Profit after tax	—	—	—	28.2	—	28.2
Other comprehensive loss	—	—	—	(0.2)	—	(0.2)
Total comprehensive income	—	—	—	28.0	—	28.0
Ordinary shares issued	—	0.1	—	—	—	0.1
Share-based payments (net of settlement)	—	—	—	0.2	—	0.2
Transactions in own shares	—	—	—	—	1.8	1.8
Dividends paid	—	—	—	(8.7)	—	(8.7)
At 31 October 2018	2.8	305.4	12.9	341.0	(7.8)	654.3

The auditor's remuneration for audit and other services is disclosed in note 4 to the Group financial statements.

A final dividend of 2.4p per ordinary share has been proposed. See note 9 to the Group financial statements.

As at 31 October 2019 the Company had distributable reserves of £348.1m (2018: £336.3m). When required, the Company can receive dividends from its subsidiaries to further increase distributable reserves.

Notes to the parent company financial statements

1. Property, plant and equipment

	Land and buildings £m	Plant and equipment £m	Total £m
Cost			
At 1 November 2017 and 31 October 2018	0.1	0.3	0.4
At 31 October 2019	0.1	0.3	0.4
Depreciation			
At 31 November 2017	—	0.1	0.1
Charge	—	0.1	0.1
At 31 October 2018	—	0.2	0.2
Charge	—	—	—
At 31 October 2019	—	0.2	0.2
Carrying amount			
At 31 October 2019	0.1	0.1	0.2
At 31 October 2018	0.1	0.1	0.2

The Company had no capital commitments as at 31 October 2019 or 31 October 2018. Land and buildings represent leasehold improvements.

2. Investments in subsidiaries

	Shares in subsidiary undertakings £m	Loans to subsidiary undertakings £m	Total £m
Cost			
At 1 November 2017	662.5	6.6	669.1
Additions	30.0	—	30.0
At 31 October 2018 and 31 October 2019	692.5	6.6	699.1
Impairment			
At 1 November 2017	43.9	—	43.9
Impairment	2.4	—	2.4
At 31 October 2018	46.3	—	46.3
Impairment	18.2	—	18.2
At 31 October 2019	64.5	—	64.5
Carrying amount			
At 31 October 2019	628.0	6.6	634.6
At 31 October 2018	646.2	6.6	652.8

The additions of £30.0m in the year ended 31 October 2018 represent a capital contribution to CHG Overseas Limited.

Investment values are allocated to their respective cash-generating units ("CGUs"). The carrying amount of the investments has been allocated to the Group's principal CGUs, being the individual operating companies within the operating segment descriptions on pages 20 to 23. Where the investment value relates to an intermediate holding company, the CGUs that are the subsidiaries of that holding company are used to support the carrying value.

The Company tests investments at least annually for impairment. Tests are conducted more frequently if there are indications that investments might be impaired. The recoverable amounts of the CGUs are determined from value-in-use calculations. The key assumptions for the value-in-use calculations have been individually estimated for each CGU and are detailed in note 11 of the Group financial statements.

In 2019 the Company concluded that the investment relating to Chemring Europe Limited and Chemring International Limited was fully impaired and a charge of £18.2m was recorded.

In 2018 the Company concluded that the investment value relating to Chemring Defence UK Limited and Chemring Prime Contracts Limited was fully impaired and a charge of £2.4m was recorded.

Stress testing was performed on the forecasts to consider the impact of reasonably worst case scenarios in the first two years, including significant delays to major contracts and new product lines, followed by a 10% fall in the forecast cash flows. This would result in an impairment of £36.5m to CHG Overseas Limited being required.

A 1% addition to the discount rate for each CGU was also separately modelled, and would result in an impairment of £54.0m to CHG Overseas Limited being required.

Setting long-term growth rates beyond the five-year forecast period to 0.5% would result in an impairment of £30.4m to CHG Overseas Limited being required.

Notes to the parent company financial statements continued

3. Investments in Group undertakings

Details of the Group undertakings at 31 October 2019 are set out in note 14 to the Group financial statements.

The directors consider that the carrying value of the investments does not exceed their fair value.

4. Trade and other receivables

	2019 £m	2018 £m
Within current assets		
Trade receivables	—	0.1
Amounts owed by subsidiary undertakings	19.7	5.7
Other receivables	1.3	0.9
Corporation tax recoverable	—	0.7
Prepayments and accrued income	0.5	0.7
	21.5	8.1
Within non-current assets		
Amounts owed by subsidiary undertakings	395.1	436.9
	395.1	436.9

An asset of £0.2m (2018: £0.1m) is recognised within other receivables in respect of the fair value of derivative financial instruments, as set out in note 21 to the Group financial statements. The directors consider that the carrying value of the trade and other receivables approximates to their fair value.

Interest on amounts owed by subsidiary undertakings is charged between 4%-8%. No interest is charged on trade and other receivables from the date of invoice to payment.

5. Trade and other payables

	2019 £m	2018 £m
Within current liabilities		
Corporation tax payable	1.1	—
Derivative financial instruments (note 21 to the Group financial statements)	0.9	0.3
Trade payables	0.3	0.8
Amounts owed to subsidiary undertakings	313.4	287.7
Other payables	4.6	3.3
Other tax and social security	0.2	0.2
Accruals and deferred income	1.6	1.7
	322.1	294.0
Within non-current liabilities		
Derivative financial instruments (note 21 to the Group financial statements)	0.3	0.2
Amounts owed to subsidiary undertakings	25.4	62.8
	25.7	63.0

Interest on amounts owed to subsidiary undertakings attracts interest rates between 1%-4%. No interest is payable on trade payables from the date of invoice to payment.

6. Borrowings

	2019 £m	2018 £m
Within current liabilities		
Loan notes – US dollar denominated	64.6	—
Borrowings due within one year	64.6	—
Within non-current liabilities		
Bank borrowings	—	19.2
Loan notes – US dollar denominated	—	65.4
Borrowings due after more than one year	—	84.6
Total borrowings	64.6	84.6

6. Borrowings continued

An analysis of borrowings by maturity is as follows:

	2019 £m	2018 £m
Borrowings falling due:		
– less than one year	64.6	—
– within one to two years	—	65.4
– within two to five years	—	19.2
	64.6	84.6

The interest incurred on the above borrowings is detailed within notes 7 and 18 to the Group financial statements.

7. Provisions

	Legal provision £m	Total £m
At 1 November 2018	5.0	5.0
Provided	—	—
Released	—	—
Paid	(2.1)	(2.1)
At 31 October 2019	2.9	2.9

It is not possible to estimate more accurately the expected timing of any resulting outflows of economic benefits. The legal provision represents the estimated legal costs relating to ongoing investigations.

8. Preference shares

	2019 £m	2018 £m
Cumulative preference shares (62,500 shares of £1 each)	0.1	0.1

The cumulative preference shares carry an entitlement to a dividend at the rate of 7p per share per annum, payable in equal instalments on 30 April and 31 October each year. Holders of the preference shares have the right on a winding-up to receive, in priority to any other classes of shares, the sum of £1 per share together with any arrears of dividends.

9. Share capital

	2019 £m	2018 £m
Issued, allotted and fully paid		
282,489,995 (2018: 281,763,364) ordinary shares of 1p each	2.8	2.8

During the year, 726,631 ordinary shares (2018: 175,289) were issued for cash to employees under the Group's approved savings-related share schemes.

The preference shares are presented as a liability and accordingly are excluded from called-up share capital in the balance sheet.

Share-based incentive schemes

Full details of the schemes are set out in note 28 to the Group financial statements.

10. Own shares

	2019 £m	2018 £m
At the beginning of the year	7.8	9.6
Transactions	—	(1.8)
At the end of the year	7.8	7.8

The own shares reserve represents the cost of shares in Chemring Group PLC purchased in the market and held by the Group to satisfy awards under the Group's share-based incentive schemes (see note 28 to the Group financial statements). During the year, no ordinary shares (2018: nil) were acquired and no ordinary shares (2018: 410,104) were distributed following the vesting of awards under the Chemring Group Performance Share Plan. The total number of ordinary shares held in treasury at 31 October 2019 was 1,788,710 (2018: 1,788,710), with an average cost of 439.0p (2018: 439.0p) per share. This represents 0.6% (2018: 0.6%) of the total issued and fully paid ordinary share capital.

Notes to the parent company financial statements continued

11. Deferred tax

	2019 £m	2018 £m
At the beginning of the year	(0.1)	(0.4)
Charge to income statement	—	0.3
Charge to other comprehensive income	(0.3)	—
Deferred tax liability at the end of the year	(0.4)	(0.1)
The amount provided represents:		
Other timing differences	(0.4)	(0.1)

At the balance sheet date, the Company had unrecognised tax losses of £nil (2018: £17.5m) potentially available for offset against future profits in certain circumstances.

12. Pensions

The Company has assumed its share of the assets and liabilities of the Group's defined benefit pension scheme. An analysis of the surplus/(deficit) balance is shown below:

	Total £m
At 31 November 2017, retirement benefit obligation	(0.2)
Contributions	3.5
Other finance costs	—
Actuarial movements	(0.2)
At 31 October 2018, retirement benefit surplus	3.1
Transfer of retirement benefit surplus from subsidiary	0.8
Contributions	0.4
Other finance costs	(0.1)
Actuarial movements	0.9
At 31 October 2019, retirement benefit surplus	5.1

Further details are set out in note 30 to the Group financial statements.

13. Staff costs

	2019 Number	2018 Number
Average monthly number of total employees (including executive directors)	30	29
The costs incurred in respect of these employees (including share-based payments) were:		
	2019 £m	2018 £m
Wages and salaries	4.9	3.9
Social security costs	0.6	0.5
Other pension costs	0.5	0.4
Share-based payment	1.9	0.6
	7.9	5.4

Disclosures in respect of directors' emoluments can be found in the directors' remuneration report on pages 66 to 85.

Accounting policies

1. General information

Chemring Group PLC is a company incorporated in England and Wales under registration number 86662. The address of the registered office is Roke Manor, Old Salisbury Lane, Romsey, Hampshire, SO51 0ZN. The nature of the Group's operations and its principal activities are set out in note 2 of the Group financial statements and in the directors' report on pages 86 to 89. These financial statements are the consolidated financial statements of Chemring Group PLC and its subsidiaries (the "Group").

Chemring Group PLC and the companies in which it directly and indirectly owns investments are separate and distinct entities. In this publication of the annual report and accounts, the collective expressions "Chemring" and "the Group" may be used for convenience where reference is made in general to those companies. Likewise, the words "we", "us", "our" and "ourselves" are used in some places to refer to the subsidiaries of the Group in general. These expressions are also used where no useful purpose is served by identifying any particular company or companies.

The financial statements are presented in pounds sterling, being the currency of the primary economic environment in which the Group operates, and rounded to the nearest £0.1m. Foreign operations are included in accordance with the foreign currencies accounting policy.

Going concern

The directors have, at the time of approving the financial statements, a reasonable expectation that the Group and the Company have adequate resources to continue to adopt the going concern basis of accounting in preparing these financial statements. Further detail is contained in the statement on going concern on page 56.

2. Adoption of new and revised standards

The following standards, amendments and interpretations have been issued by the International Accounting Standards Board (IASB) or by the IFRS IC. The Group's approach to these is as follows:

- i) The following International Financial Reporting Committee ("IFRIC") interpretations, amendments to existing standards and new standards were adopted in the year ended 31 October 2019 but have not materially impacted the reported results or the financial position:
 - Amendments to IFRS 2 *Classification and Measurement of Share-based Payment Transactions*;
 - IFRS 9 *Financial Instruments Recognition and Measurement*;
 - Annual Improvements to IFRSs 2014–2016 Cycle; and
 - IFRIC 22 *Foreign Currency Transactions and Advance Consideration*.
- ii) At the date of authorisation of this announcement, the following standards and interpretations that are potentially relevant to the Group and which have not yet been applied in these reported results were in issue but not yet effective (and in some cases had not yet been adopted by the European Union):

Effective for periods beginning on or after 1 January 2019

- IFRS 16 *Leases*;
- Amendments to IAS 19 *Employee Benefits*;
- Annual Improvements to IFRSs 2015–2017 Cycle; and
- IFRIC 23 *Uncertainty over Income Tax Treatments*.

Effective for periods beginning on or after 1 January 2021

- IFRS 17 *Insurance Contracts*.

The directors do not expect the adoption of these standards and interpretations will have a material impact on the results of the Group in future periods except as follows:

- IFRS 16 *Leases* will impact the measurement, recognition, presentation and disclosure of leases, particularly operating leases where the term is longer than 12 months.

Under IFRS 16 *Leases*, lessees will be required to apply a single model to recognise a lease liability and asset for all leases, including those classified as operating leases under current accounting standards, unless the underlying asset has a low value or the lease term is 12 months or less. The adoption of IFRS 16 will have an impact on the results as each lease will give rise to a right of use asset which will be depreciated on a straight line basis, and a lease liability with a related interest charge. The depreciation and interest will replace the operating lease payments currently recognised as an expense.

The Group intends to apply the modified retrospective approach and measure the right of use assets based on the lease liability value calculated at 1 November 2019, with no restatement of prior periods.

The Group expects to recognise a lease liability and right-of-use asset of £6.9m at 1 November 2019 as a result of applying IFRS 16, with no impact on retained earnings or total cash flows. The impact on the income statement of reclassifying operating costs to finance costs is expected to be immaterial.

The standalone parent financial statements of Chemring Group PLC expect to recognise a lease liability and right-of-use asset of £0.4m at 1 November 2019 as a result of applying IFRS 16, with no impact on retained earnings or total cash flows. The impact on the income statement of reclassifying operating costs to finance costs is expected to be immaterial.

3. Group accounting policies

Basis of preparation

These financial statements have been prepared in accordance with IFRS adopted for use in the EU and therefore comply with Article 4 of the EU IAS Regulation. These financial statements have also been prepared in accordance with IAS, IFRS and related IFRIC interpretations, subsequent amendments to those standards and related interpretations, future standards and related interpretations issued or adopted by the International Accounting Standards Board ("IASB") that have been endorsed by the EU (collectively referred to as IFRS). These are subject to ongoing review and endorsement by the EU or possible amendment by interpretive guidance from the IASB and the IFRIC, and are therefore still subject to change.

In accordance with IFRS 5, the 2018 comparative figures in the consolidated income statement and consolidated statement of cash flows and related notes have been represented to show only continuing operations. Discontinued operations are shown as a single line item in the consolidated income statement as required by the standard. The comparative balance sheet has not been represented in respect of held for sale assets, in accordance with IFRS 5.

The financial statements are prepared under the historical cost convention, except as described below under the heading of "Derivative financial instruments".

The particular accounting policies adopted have been applied consistently throughout the current and previous year.

Basis of consolidation

The Group financial statements consolidate those of the Company and all of its subsidiaries. A subsidiary undertaking is an entity over which the Group has the power to govern the financial and operating policies so as to obtain benefits from its activities. The results of subsidiaries acquired are consolidated from the date on which control passes to the Group and the results of disposed subsidiaries are consolidated up to the date on which control passes from the Group.

The Company considers that it has the power to govern the financial and operating policies of the US entities falling within the Special Security Agreement and these entities have therefore been consolidated in these financial statements.

The Company and all of its subsidiaries make up their financial statements to the same date. All intra-group transactions, balances, income and expenses are eliminated on consolidation.

Accounting policies continued

3. Group accounting policies continued

Operating profit

Operating profit is stated before the share of results of associates and before finance income and expense. The use of underlying measures, in addition to total measures, is considered by the Board to improve comparability of business performance between periods. Underlying measures referred to are stated before costs relating to acquisitions and disposals, business restructuring costs, profit/loss on disposal of businesses, items deemed to be of an exceptional nature, impairment of goodwill and acquired intangibles, impairment of assets held for sale, amortisation of acquired intangibles and gains/losses on the movement in the fair value of derivative financial instruments, and excludes discontinued operations.

Revenue recognition

The majority of the Group's revenue arises from the manufacture and shipment of goods. Sales contracts are reviewed for performance obligations but the principal driver for timing of revenue recognition is delivery obligations, typically based on Incoterms. Once the relevant delivery obligation has been met and as applicable, customer acceptance received, revenue can be recognised. This also applies to sales where there are no goods shipped but a deliverable is completed at a certain point in time, such as the issue of a report.

Revenue also arises from milestone contracts, typically with larger and more complex projects that contain multiple performance obligations. Often the contracts are divided into milestones for payment purposes anyway, but judgement is required when assessing the way the contract is divided up to ensure that each element is a separate and valid performance obligation. If they are not, the relevant revenue amount is allocated across the other obligations as appropriate. There are no contracts with a significant financing component.

At the start of the contract, the total transaction price is estimated as the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods and services to the customer, excluding sales taxes. This is based on the agreed contract price and therefore significant judgment is not required.

The Group provides warranties to its customers to give them assurance that its products and services will function in line with agreed-upon specifications. Warranties are not provided separately and, therefore, do not represent separate performance obligations.

A number of sales contracts allow for bill and hold arrangements, where the customer has bought the goods but has not yet taken physical possession. This usually arises when the customer has limited storage space or there have been delays in their own production schedule. For such revenue to be recognised the bill and hold arrangement must be substantive and the relevant goods must be clearly identified as belonging to the customer and ready for immediate shipment at the customer's request.

These categories of sales are common across all segments.

Sale of goods

Revenue from the sale of goods is recognised when all of the following conditions are satisfied:

- the Group has identified a sales contract with a customer;
- the performance obligations within this contract have been identified;
- the transaction price has been determined;
- this transaction price has been allocated to the performance obligations in the contract; and
- revenue is recognised as or when each performance obligation is satisfied.

Performance obligations are satisfied when the customer gains control of promised goods or services from the contract.

Rendering of services

Revenue from a contract to provide services, including customer-funded research and development, is recognised by reference to the stage of completion of the contract. Stage of completion is typically estimated by either completion of relevant milestones or proportion of contract costs incurred for work performed to date, as appropriate.

Another significant source of Group revenue, especially within the Sensors & Information segment, arises from time and materials contracts, where revenue is typically billed on a monthly basis based on work performed to date.

Acquisitions and disposals

On acquisition of a subsidiary, associate or jointly controlled entity, the cost is measured as the fair value of the consideration. The assets, liabilities and contingent liabilities of subsidiary undertakings that meet the IFRS 3 (Revised) *Business Combinations* recognition criteria are measured at the fair value at the date of acquisition, except that:

- deferred tax assets or liabilities, and liabilities or assets relating to employee benefit arrangements, are recognised and measured in accordance with IAS 12 *Income Taxes* and IAS 19 (Revised) *Employee Benefits* respectively;
- liabilities or equity instruments related to the replacement by the Group of an acquiree's share-based payment awards are measured in accordance with IFRS 2 *Share-based Payments*; and
- assets (or disposal groups) that are classified as held for sale, in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, are measured in accordance with that standard.

Where cost exceeds fair value of the net assets acquired, the difference is recorded as goodwill.

Where the fair value of the net assets exceeds the cost, the difference is recorded directly in the income statement. The accounting policies of subsidiary undertakings are changed where necessary to be consistent with those of the Group.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see below), or additional assets or liabilities recognised, to reflect new information obtained about facts and circumstances that existed as at the acquisition date that, if known, would have affected the amounts recognised as at that date.

The measurement period runs from the date of acquisition to the date the Group obtains complete information about facts and circumstances that existed as at the acquisition date, subject to a maximum period of one year.

In accordance with IFRS 3 (Revised) *Business Combinations*, acquisition and disposal-related items are recognised through the income statement. Acquisition and disposal-related items refer to credits and costs associated with the acquisition and disposal of businesses, together with the costs of aborted bids and the establishment of joint ventures.

Discontinued operations and assets held for sale

When the Group makes a decision to exit a significant business unit or separate major line of business, the associated operations and cash flows are classified as discontinued operations in the financial statements, in accordance with the provisions of IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

These discontinued operations may represent components of the Group that have already been disposed of or are classified as held for sale.

Non-current assets and disposal groups classified as held for sale are measured at the lower of carrying amount and fair value less costs to sell.

3. Group accounting policies continued

Discontinued operations and assets held for sale continued
Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered through a sales transaction rather than continuing use. This condition is regarded as met only when the sale is highly probable and the asset or disposal group is available for immediate sale in its present condition. Management must be committed to the sale which should be expected to qualify as a completed sale within one year from the date of classification.

Intangible assets – goodwill

The purchased goodwill of the Group is regarded as having an indefinite useful economic life and, in accordance with IAS 36 *Impairment of Assets*, is not amortised but is subject to annual tests for impairment. On disposal of a subsidiary, associate or jointly controlled entity, the amount attributable to goodwill is included in the determination of the profit or loss on disposal.

Acquired intangibles

The Group recognises separately from goodwill intangible assets that are separable or arise from contractual or other legal rights and whose fair value can be measured reliably. These intangible assets are amortised at rates calculated to write down their cost or valuation to their estimated residual values by equal instalments over their estimated useful economic lives, which are:

- technology – average of ten years
- customer relationships – average of ten years

Development costs

Development costs that qualify as intangible assets are capitalised as incurred and, once the relevant intangible asset is ready for use, are amortised on a straight-line basis over their estimated useful lives, averaging eight years (2018: eight years).

The carrying value of development assets is assessed for recoverability at least annually or when a trigger is identified.

Patents and licences

Patents and licences are measured initially at purchase cost and are amortised on a straight-line basis over their estimated useful lives, averaging eight years (2018: eight years).

Property, plant and equipment

Other than historically revalued land and buildings, property, plant and equipment is held at cost less accumulated depreciation and any recognised impairment loss. Borrowing costs on significant capital expenditure projects are capitalised and allocated to the cost of the project.

No depreciation is provided on freehold land. On other assets, depreciation is provided at rates calculated to write down their cost or valuation to their estimated residual values by equal instalments over their estimated useful economic lives, which are:

- freehold buildings – up to fifty years
- leasehold buildings – the period of the lease
- plant and equipment – up to ten years

Impairment of non-current assets

Assets that have indefinite lives are allocated to the Group's cash-generating units and tested for impairment at least annually. Assets that are subject to depreciation or amortisation are reviewed for impairment whenever changes in circumstances indicate that the carrying value may not be recoverable. To the extent that the carrying value exceeds the recoverable amount, an impairment loss is recorded for the difference as an expense in the income statement. The recoverable amount used for impairment testing is the higher of the value-in-use and the asset's fair value less costs of disposal. For the purpose of impairment testing, assets are grouped at the lowest levels for which there are separately identifiable cash flows.

Inventories

Inventories are recorded at the lower of cost and net realisable value. Cost represents materials, direct labour, other direct costs and related overheads, and is determined using a weighted average cost basis. Net realisable value is based on estimated selling price, less further costs expected to be incurred to completion and disposal.

Provision is made for slow-moving, obsolete and defective items where appropriate.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to prepare for their intended use, are added to the cost of those assets, until such time as the assets are ready for their intended use. Once the assets are ready for their intended use, these capitalised borrowing costs are depreciated in line with the underlying asset.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

Government grants

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants for staff retraining costs are recognised as income over the periods necessary to match them with the related costs and are deducted in reporting the related expense.

Government grants relating to property, plant and equipment are treated as deferred income and released to the income statement over the expected useful economic lives of the assets concerned.

Tax

The tax expense represents the sum of current tax and deferred tax.

Current tax is based on taxable profit for the year. Taxable profit differs from profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years, and it excludes items of income or expense that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted at the balance sheet date.

Deferred tax represents amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences, and deferred tax assets are recognised to the extent that it is probable taxable profits will be available in the future against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Accounting policies continued

3. Group accounting policies continued

Tax continued

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the income statement, except where it relates to items charged or credited directly to equity, in which case the deferred tax is also dealt with in equity.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities, when they relate to income taxed by the same tax authority, and when the Group intends to settle its current tax assets and liabilities on a net basis.

Special capital reserve

The special capital reserve was created as part of a capital reduction scheme involving the cancellation of the share premium account which was approved by the Court in 1986, in accordance with the requirements of the Companies Act 1985.

Foreign currencies

The individual financial statements of each Group company are presented in its functional currency, being the currency of the primary economic environment in which it operates. For the purpose of these Group financial statements, the results and financial position of each Group company are expressed in pounds sterling, which is the functional currency of the Company, and the presentation currency for these financial statements.

In preparing the financial statements of each Group company, transactions in foreign currencies, being currencies other than the entity's functional currency, are recorded at the rates of exchange prevailing on the dates of the transactions. At each balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing on the balance sheet date. Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items and on the retranslation of monetary items are included in the income statement for the period.

In order to hedge its exposure to certain foreign exchange risks, the Group enters into forward foreign exchange contracts which are accounted for as derivative financial instruments (see below for details of the Group's accounting policies in respect of such derivative financial instruments).

For the purpose of presenting these financial statements, the assets and liabilities of the Group's foreign operations are translated at exchange rates prevailing on the balance sheet date. Income and expense items are translated at the average exchange rates for the period.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

Financial instruments

Financial assets and liabilities are recognised in the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument.

Financial assets

Trade receivables

Trade receivables do not carry any interest and are stated at their fair value and amortised cost as reduced by appropriate allowances for expected credit losses.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of change in value.

Financial liabilities and derivative financial instruments

Financial liabilities

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into.

Bank borrowings

Interest bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, and direct issue costs are accounted for on an accruals basis in the income statement using the effective interest method, and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Trade payables

Trade payables are not interest bearing and are stated at their fair value and amortised cost.

Derivative financial instruments

The Group's activities expose it to the financial risks of foreign currency transactions, and it uses forward foreign exchange contracts to hedge its exposure to these transactional risks. The Group does not use derivative financial instruments for speculative purposes.

Derivative financial instruments are recognised at fair value on the date the derivative contract is entered into and are revalued to fair value at each balance sheet date. The fair values of derivative financial instruments are calculated by external valuers.

The method by which any gain or loss is recognised depends on whether the instrument is designated a hedging instrument or not. To be designated as a hedging instrument, the instrument must be documented as such at inception, and must be assessed at inception and on an ongoing basis to be highly effective in offsetting changes in fair values or cash flows of hedged items.

Hedge accounting principles are used for forward foreign exchange contracts where appropriate, with movements in fair value taken to equity, until such time as the underlying amounts of the contract mature. At maturity or disposal of the net investment, the amounts held in equity will be recycled to the income statement. Changes in fair value of any ineffective portion of net investment hedges and interest rate swap contracts are recognised in the income statement immediately.

Where derivative financial instruments do not meet the criteria for hedge accounting principles, the changes in fair value are immediately recognised in the income statement.

Hedges of net investments in foreign operations

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in the statement of comprehensive income and accumulated in the translation reserve. The gain or loss relating to the ineffective portion is recognised immediately in the income statement.

3. Group accounting policies continued

Retirement benefit costs

Payments to defined contribution retirement benefit schemes are charged as an administrative expense in the period to which they relate. For defined benefit schemes, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at each balance sheet date. Actuarial gains and losses are recognised in the statement of comprehensive income in full in the period in which they occur.

Past service cost is recognised immediately to the extent that the benefits are already vested, and otherwise is amortised on a straight-line basis over the average period until the benefits become vested.

The discount on scheme liabilities less the expected return on scheme assets on defined benefit obligations is included within finance expense.

The retirement benefit obligation recognised in the balance sheet represents the present value of the defined benefit obligation as adjusted for unrecognised past service cost and as reduced by the fair value of scheme assets. Any asset resulting from this calculation is limited to past service cost, plus the present value of available refunds and reductions in future contributions to the scheme.

Leased assets

Where the Group enters into a lease which entails taking substantially all the risks and rewards of ownership of an asset, the lease is treated as a finance lease. The asset is recorded in the balance sheet as property, plant and equipment, and is depreciated over the shorter of its estimated useful economic life and the lease term. Future instalments under such leases, net of finance charges, are recognised as a liability. The finance element of the instalments is charged to the income statement at a constant rate of interest on the remaining balance of the obligation.

All other leases are operating leases, for which rental charges are recognised in the income statement on a straight-line basis over the life of the lease.

Share-based compensation

The Group operates equity-settled and cash-settled share-based compensation schemes.

For grants made under the Group's share-based compensation schemes, the fair value of an award is measured at the date of grant and reflects any market-based vesting conditions. Non-market-based vesting conditions are excluded from the fair value of the award. At the date of grant, the Company estimates the number of awards expected to vest as a result of non-market-based vesting conditions, and the fair value of this estimated number of awards is recognised as an expense in the income statement on a straight-line basis over the vesting period. At each balance sheet date, the impact of any revision to vesting estimates is recognised in the income statement over the vesting period. Proceeds received, net of any directly attributable transaction costs, are credited to share capital and share premium.

For cash-settled share-based grants, the total amount recognised is based on the fair value of the liability incurred. The fair value of the liability is remeasured at each balance sheet date, with changes in the fair value recognised in the income statement.

Provisions

Provisions are recognised when the Group has a present obligation, either legal or constructive, as a result of a past event, it is probable that the Group will be required to settle that obligation, and a reliable estimate can be made of the amount of the obligation. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the estimated cash flows to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

Environmental provisions

Where the Group is liable for decontamination work or the restoration of sites to their original condition, an estimate is made of the costs needed to complete these works, discounted back to present values, relying upon independent third party valuers where appropriate.

Restructuring provisions

A restructuring provision is recognised when the Group has developed a detailed formal plan for the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement the plan or announcing its main features to those affected by it. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring and not those associated with the ongoing activities of the entity.

Warranty provisions

Provisions for the expected cost of warranty obligations under local sale of goods legislation are recognised at the date of sale of the relevant products, based upon the best estimate of the expenditure required to settle the Group's obligations.

Disposal provisions

Disposal provisions relate to estimated liabilities faced by the Group in respect of discontinued operations and other disposed entities under the terms of their respective sale agreements.

Contingent liabilities

The Group exercises judgement in recognising exposures to contingent liabilities related to pending litigation or other outstanding claims subject to negotiated settlement, mediation, arbitration or government regulation, as well as other contingent liabilities. Judgement may be necessary in assessing the likelihood that a pending claim will succeed, or a liability will arise, and/or to quantify the possible range of the financial settlement.

Accounting policies continued

3. Group accounting policies continued Alternative Performance Measures

In the analysis of the Group's financial performance and position, operating results and cash flows, APMs are presented to provide readers with additional information. The principal APMs presented are underlying measures of earnings including underlying operating profit, underlying profit before tax, underlying profit after tax, underlying EBITDA, underlying earnings per share and underlying operating cash flow. In addition, EBITDA, net debt and constant currency metrics are presented which are also considered non-IFRS measures. These measures are consistent with Information regularly reviewed by management to run the business, including planning, budgeting and reporting purposes and for its internal assessment of the operational performance of individual businesses.

The directors believe that the use of these APMs assist in providing additional information on the underlying trends, performance and position of the Group. APMs are used to improve the comparability of information between reporting periods by adjusting for items that are non-recurring or otherwise non-underlying. Management consider non-underlying items to be:

- amortisation of acquired intangibles;
- material exceptional items, for example relating to acquisitions and disposals, business restructuring costs and legal costs;
- material exceptional items from changes in legislation, for example the GMP equalisation court ruling and the enactment of the US Tax Cuts and Jobs Act;
- gains or losses on the movement in the fair value of derivative financial instruments; and
- the tax impact of all of the above.

The Group's use of APMs is consistent and we provide comparatives alongside all current period figures.

Further detail on the APMs presented within these financial statements, including a reconciliation to the IFRS equivalent, is presented in note 3.

Exceptional items

Exceptional items are excluded from management's assessment of profit because by their size or nature they could distort the Group's underlying quality of earnings. They are typically gains or losses arising from events that are not considered part of the core operations of the business. These items are excluded to reflect performance in a consistent manner and are in line with how the business is managed and measured on a day-to-day basis.

Post balance sheet events

In accordance with IAS 10 *Events after the Balance Sheet Date*, the Group continues to disclose events that it considers material, non-disclosure of which can influence the economic decisions of users of the financial statements.

4. Chemring Group PLC – parent company accounting policies

FRS 101 Reduced Disclosure Framework

The financial statements have been prepared in accordance with FRS 101 *Reduced Disclosure Framework*.

The Company operates a multi-employer defined benefit scheme including employees of other Group companies. Following FRS 101, the scheme assets and liabilities have been allocated across the Group companies using a method that management considers to be the most appropriate, based on scheme membership.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements, in accordance with FRS 101:

- share-based payments;
- financial instruments;
- fair value measurements;
- presentation of comparative information in respect of certain assets;
- IFRSs issued but not yet effective;
- related party transactions;
- assumptions and sensitivities for impairment review; and
- cash flow.

Investment in Group undertakings

Investments are stated at cost less any provision for impairment in value.

Critical accounting judgements and sources of estimation uncertainty

There are no critical accounting judgements and sources of estimation uncertainty for the Company.

5. Accounting judgements and sources of estimation uncertainty

When applying the Group's accounting policies, management must make judgements, assumptions and estimates concerning the future that affect the carrying amounts of assets and liabilities at the balance sheet date and the amounts of revenue and expenses recognised during the period. Such judgements, assumptions and estimates are based upon factors including historical experience, the observance of trends in the industries in which the Group operates, and information available from the Group's customers and other external sources.

At the balance sheet date there were no key judgements concerning the future that have significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year. Revenue recognition does however include a degree of judgement, as disclosed below:

Accounting judgements

Revenue recognition

In 2017 the Group adopted IFRS 15 *Revenue from Contracts with Customers*. The standard recognises revenue on the basis of the satisfaction of performance obligations.

Management has to consider whether performance obligations should be recognised at a single point in time, which is generally the case for the sale of products by the Group, or over a period of time, which is more common for certain service contracts.

In making its judgement about obligations that are satisfied at a point in time, management has to consider at what point control has passed to the customer, allowing revenue to be recognised. This is typically determined through a consideration of customer acceptance testing, contract terms and delivery arrangements.

The key assumptions concerning the future and other key sources of estimation uncertainty at the balance sheet date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year include:

5. Accounting judgements and sources of estimation uncertainty continued

Key sources of estimation uncertainty

Goodwill impairment

Determining whether goodwill is impaired requires an estimation of the value-in-use of the cash-generating units to which goodwill has been allocated. The value-in-use calculation requires the entity to estimate the future cash flows expected to arise from the cash-generating unit, and to determine a suitable discount rate in order to calculate present value (see note 11). In reviewing the carrying value of goodwill of the Group's businesses, the Board has considered the separate plans and cash flows of these businesses consistent with the requirements of IAS 36 *Impairment of Assets*. The plans and cash flows of these businesses reflect current and anticipated conditions in the defence industry. The total goodwill intangible asset is set out in note 11, which shows a carrying value of £108.5m at 31 October 2019.

Capitalised development costs

IAS 38 *Intangible Assets* requires that development costs, arising from the application of research findings or other technical knowledge to a plan or design of a new substantially improved product, are capitalised, subject to certain criteria being met. Determining the future cash flows generated by the products in development requires estimates which may differ from the actual outcome. In particular, this can depend on the estimation applied to future milestone events to secure long-term positions on production contracts, for example Programs of Record for the US DoD. The total capitalised development intangible asset is set out in note 12, which shows a carrying value of £26.1m at 31 October 2019. Included in this balance are individually material balances relating to Joint Biological Tactical Detection System (£8.6m) and Next Generation Chemical Detector (£11.1m).

Deferred tax assets on tax losses and US interest deductions

The category of deferred tax asset which contains significant estimation uncertainty and which requires management judgement in assessing its recoverability relates to US interest limitations and tax losses carried forward (see note 23).

Applicable accounting standards permit the recognition of deferred tax assets only to the extent that it is probable that future taxable profits will be available to utilise the tax losses carried forward. The assessment of future taxable profits involves significant estimation uncertainty, principally relating to an assessment of management's projections of future taxable income based on business plans and ongoing tax planning strategies. These projections include assumptions about the future strategy of the Group, the economic and regulatory environment in which the Group operates, future tax legislation and customer behaviour, amongst other variables.

Provisions

The Group holds provisions where appropriate in respect of future economic outflows which arise due to past events. These are subject to uncertainty in respect of the outcome of future events. Estimates, judgements and assumptions are based on factors including historical experience, the observance of trends in the industries in which the Group operates, and information available from the Group's customers and other external sources. Actual outflows of economic benefit may not occur as anticipated, and estimates may prove to be incorrect, leading to further charges or releases of provisions as circumstances change. The provisions held by the Group as at 31 October 2019 are set out in note 22.

Taxation

The Group operates in a number of countries around the world. Uncertainties exist in relation to the interpretation of complex tax legislation, changes in tax laws and the amount and timing of future taxable income. In some jurisdictions agreeing tax liabilities with local tax authorities can take several years. This could necessitate future adjustments to taxable income and expense already recorded. At the year end date, tax liabilities and assets are based on management's best judgements around the application of the tax regulations and management's estimate of the future amounts that will be settled.

The Group's operating model involves the cross-border supply of goods into end markets. There is a risk that different tax authorities could seek to assess higher profits (or lower costs) to activities being undertaken in their jurisdiction, potentially leading to higher total tax payable by the Group.

At 31 October 2019 there is a provision of £5.8m in respect of uncertain tax positions. Due to the uncertainties noted above, there is a risk that the Group's judgements are challenged, resulting in a different tax payable or recoverable from the amounts provided. Management estimates that the reasonably possible range of outcomes is between £nil and £5.8m.

The key uncertainties impacting taxation arise from potential changes to legislation such as the OECD's Base Erosion and Profit Shifting (BEPS) project.

Defined benefit pension scheme

Included in the Group's defined benefit pension scheme's assets is an insurance policy asset that falls under the Level 3 fair value hierarchy category, where inputs for the asset are not based on observable market data. The asset is offset exactly with a corresponding liability for the same value that is included in the defined benefit pension obligation. The complex nature of the valuation of the Level 3 insurance policy asset is subject to estimation uncertainty in relation to the methodology and assumptions used.

Estimation is required in the determination of the discount rate and inflation assumptions underpinning the valuation of the liabilities of the Group's defined benefit pension schemes. There is a range of possible values for each of the actuarial assumptions and small changes in assumptions may have a significant impact on the size of the deficit. Note 30 provides information on the key assumptions and analysis of their sensitivities.

Independent auditor's report to the members of Chemring Group PLC

1. Our opinion is unmodified

We have audited the financial statements of Chemring Group PLC ("the Company") for the year ended 31 October 2019 which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity, consolidated balance sheet, consolidated cash flow statement, parent company balance sheet, parent company statement of comprehensive income, parent company statement of changes in equity, and the related notes, including the accounting policies in notes 1 to 5.

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 October 2019 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union;
- the parent Company financial statements have been properly prepared in accordance with UK accounting standards, including FRS 101 *Reduced Disclosure Framework*; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion is consistent with our report to the Audit Committee.

We were first appointed as auditor by the directors on 17 March 2018. The period of total uninterrupted engagement is for the two financial years ended 31 October 2019. We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities. No non-audit services prohibited by that standard were provided.

Overview

Materiality: Group financial statements as a whole	£1.8m (2018: £1.8m) 5% of underlying profit before tax (2018: 5% of three year average underlying profit before tax) normalised to exclude this year's non-underlying items
Coverage:	94% of total profits and losses that made up Group profit before tax including continuing operations only (2018: 88% of total profits and losses that made up Group profit before tax (including all operations classed as continuing and discontinuing))

Key audit matters		vs 2018
Recurring risks	Revenue recognition	◀▶
	Recoverability of parent Company's investments in and intergroup receivable balances with subsidiaries	◀▶
New risk	The impact of uncertainties due to the UK exiting the European Union on our audit	▲

2. Key audit matters: our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgment, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. We summarise below the key audit matters, in arriving at our audit opinion above, together with our key audit procedures to address those matters and, as required for public interest entities, our results from those procedures. These matters were addressed, and our results are based on procedures undertaken, in the context of, and solely for the purpose of, our audit of the financial statements as a whole, and in forming our opinion thereon, and consequently are incidental to that opinion, and we do not provide a separate opinion on these matters.

	<i>The risk</i>	<i>Our response</i>
The impact of uncertainties due to the UK exiting the European Union on our audit Refer to page 61 (Audit Committee report), page 127 (accounting policy) and page 123 (financial disclosures).	Unprecedented levels of uncertainty: All audits assess and challenge the reasonableness of estimates, in particular as described in recoverability of parent Company's investments in and intergroup receivable balances with subsidiaries below, and related disclosures and the appropriateness of the going concern basis of preparation of the financial statements (see below). All of these depend on assessments of the future economic environment and the Group's future prospects and performance. In addition, we are required to consider the other information presented in the annual report including the principal risks disclosure and the long-term viability statement and to consider the directors' statement that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy. Brexit is one of the most significant economic events for the UK and at the date of this report its effects are subject to unprecedented levels of uncertainty of outcomes, with the full range of possible effects unknown.	We developed a standardised firm-wide approach to the consideration of the uncertainties arising from Brexit in planning and performing audits. Our procedures included: • Our Brexit knowledge: we considered the directors' assessment of Brexit related sources of risk for the Group's business and financial resources compared with our own understanding of the risks. We considered the directors' plans to take action to mitigate the risks; • Sensitivity analysis: when addressing parent Company's investments in and intergroup receivable balances with subsidiaries risk and other areas that depend on forecasts, we compared the directors' analysis to our assessment of the full range of reasonably possible scenarios resulting from Brexit uncertainty, and where cash flows are required to be discounted, considered adjustments to discount rates for the level of remaining uncertainty; and • Assessing transparency: as well as assessing individual disclosures as part of our procedures on parent Company's investments in, and intergroup receivable balances with subsidiaries we considered all of the Brexit related disclosures and disclosures in relation to going concern together, including those in the strategic report, comparing the overall picture against our understanding of the risks.
		Our results • As reported under parent Company's investments in and intergroup receivable balances with subsidiaries we found the resulting estimates and related disclosures in relation to going concern to be acceptable. However, no audit should be expected to predict the unknowable factors or all possible future implications for a company and this is particularly the case in relation to Brexit.

Independent auditor's report to the members of Chemring Group PLC continued

2. Key audit matters: our assessment of risks of material misstatement continued

	The risk	Our response
Revenue recognition (£335.2m; 2018: £297.4m) Refer to page 61 (Audit Committee report), page 128 (accounting policy) and page 95 (financial disclosures).	Revenue cut-off: There is a cut-off risk over the existence of goods and services revenue due to pressures on management to increase profitability and other key metrics, increasing the risk of fraudulent premature revenue recognition. Certain 'point in time' contracts require management to exercise some judgment with respect to determining the timing of the satisfaction of the performance obligations. A number of service contracts are recognised 'over time' based on the estimate of the stage of completion of the service. This estimate requires a determination of the future costs to complete the service which is both inherently uncertain and open to manipulation as changes in the estimate directly impact the amount of revenue to be recognised in current accounting period.	Our procedures included: - Control design: Evaluating controls over the revenue process for goods recognised at a point of time and services delivered over time, including their operating effectiveness; - Corroborating terms: assessing management's assumptions behind the timing of when control transfers to the customer against the customer contract for a sample of 'point in time' contracts. Assessing management's assumptions behind the timing of revenue recognition based on percentage of completion including reviewing the sample of 'over time' service contracts to the proportion of revenue recognised relative to the stage of completion; - Tests of detail: for the 'point in time' contracts comparing the timing of revenue recognition for a sample of goods revenue transactions in the final month of the accounting period against the point at which control transfers to the customer. For a sample of 'over-time' service contracts assessing the costs incurred and forecast to assess stage of completion and comparing this to other indicators such as customer certified milestones and settled invoices; - Challenging management's assumptions: making enquiries of contract project teams to obtain an understanding of the performance of the project throughout the year and at year-end where revenue is recognised 'over time' based on the estimate of percentage of completion. Performing forecasting accuracy check by comparing the previously forecast costs for a sample of service contracts with the actual results. Considering contract progress after the reporting date to determine if the outturn result had been accurately forecasted; and - Assessing transparency: assessing the adequacy of the Group's disclosures about the degree of judgment and estimation involved in determining the timing of revenue recognition for 'point in time' and 'over time' revenue, accordingly. Our results - We found the timing of revenue recognition to be acceptable (2018: acceptable).

	The risk	Our response
Recoverability of parent Company investments in and intergroup receivable balances with subsidiaries (Investments in subsidiaries: £634.6m; 2018: £652.8m, inter-group receivables with subsidiaries £395.1m; 2018: £436.9m) Refer to page 61 (Audit Committee report), page 132 (accounting policy) and pages 123 (financial disclosures).	Forecast-based valuation A history of business combinations results in significant parent Company's investments in, and intergroup receivable balances with, subsidiaries. Due to the above and the movement in share price, parent Company equity is greater than the total value of market capitalisation and debt, thus the recoverability of parent Company investments in and intergroup receivable balances with subsidiaries is reliant on the estimates made of the valuation of future cash flows and assumptions that underpin the valuation of future cash flows generated by subsidiaries. The estimated recoverable amount of parent Company investments and intragroup receivables is subjective due to the inherent uncertainty involved in forecasting and discounting future cash flows for CGUs.	Our procedures included: • Extrapolating past forecasting accuracy: assessing three years' historical accuracy of the cash flows forecasting and building comparable variations in forecasting accuracy into our own models that were used to re-perform the valuation; • Our sector experience: evaluating assumptions used, in particular those relating to operating cash flow forecasts; • Benchmarking assumptions: benchmarking discount rates (including the underlying assumptions used) against market data, including publicly available analysts' reports and peer comparison using input from our own valuation experts; • Sensitivity analysis: performing sensitivity analysis by reviewing the impact of reasonable downward changes to the assumptions noted above; • Comparing valuations: comparing the carrying amount of the investments and intergroup receivables with the expected value of the business based on the Group's market capitalisation and the fair value of the net debt; and • Assessing transparency: assessing whether parent Company's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions reflected the risks inherent in the valuation of parent Company's investments in and intergroup receivable balances with subsidiaries. Our results • We found the resulting estimate of the recoverable amount of parent Company investments in and intergroup receivable balances with subsidiaries to be acceptable (2018: acceptable).

We continue to perform procedures over recoverability of Group goodwill and Group other intangibles. However, due to a lower risk of valuation errors following impairment charges recorded in the prior year, we have not assessed this as one of the most significant risks in our current year audit and, therefore, it is not separately identified in our report this year.

Independent auditor's report to the members of Chemring Group PLC continued

3. Our application of materiality and an overview of the scope of our audit

Materiality for the Group financial statements as a whole was set at £1.8m (2018: £1.8m), determined with reference to a benchmark of underlying Group profit before tax, normalised to exclude this year's non-underlying items as disclosed in note 3, of which it represents 5% (2018: 5%).

Materiality for the parent Company financial statements as a whole was set at £1.35m (2018: £1.4m) determined with reference to a benchmark of parent Company net assets, of which it represents 0.2% (2018: 0.2%).

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding £0.1m (2018: £0.1m), in addition to other identified misstatements that warranted reporting on qualitative grounds. We use a higher threshold of £250,000 for matters only related to reclassification.

Of the Group's eleven continuing trading components, we subjected eight to full scope audits for Group purposes and two to specified risk-focused audit procedures over revenue and inventory. The components for which we performed work other than audits for Group reporting purposes were not individually significant but were included in the scope of our Group reporting work in order to provide further coverage over the Group's results. The components within the scope of our work accounted for the percentages illustrated opposite.

The remaining 10% of total Group revenue, 4% of total profits and losses that made up Group profit before tax and 5% of total Group assets is represented by one component. For this residual component, we performed analysis at an aggregated Group level to re-examine our assessment that there were no significant risks of material misstatement within this.

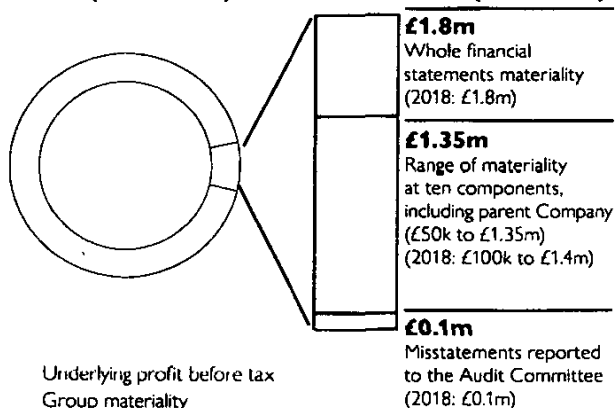
The Group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group team approved component materiality, which ranged from £50k to £1.35m, having regard to the mix of size and risk profile of the Group across the components. The work on six of the ten components was performed by component auditors and the rest, including the audit of the parent company, was performed by the Group team. The Group team performed procedures on the items excluded from underlying Group profit before tax.

The Group team visited two overseas components located in Australia and the US to assess the audit risk and strategy. Additionally we performed inspection of the work covering key audit matters at all component audit teams performing audit for Group reporting purposes.

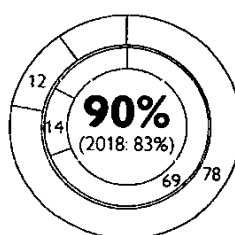
Teleconference meetings were held with all component auditors. At these meetings, the Group audit team provided further input into audit risk and strategy, and the findings reported to the Group audit team were discussed in more details, and any further work required by the Group team was then performed by the component auditors.

Underlying profit before tax
£39.4m (2018: £24.9m)

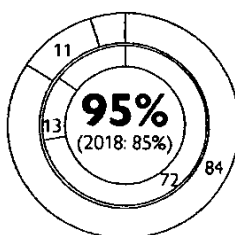
Group materiality
£1.8m (2018: £1.8m)



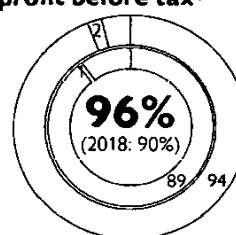
Group revenue*



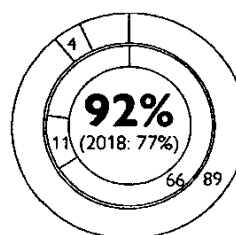
Group total assets*



Total profits and losses that made up Group profit before tax*



Total profits and losses that made up Group profit before non-underlying items and tax*



Full scope for Group audit purposes 2019

Specified risk-focused audit procedures 2019

Full scope for Group audit purposes 2018

Specified risk-focused audit procedures 2018

Residual components

- * In 2019 audit coverage has been calculated on the above measures including only continuing operations. In 2018 audit coverage has been calculated on the above measures, including all operations classed as continuing and discontinuing.

4. We have nothing to report on going concern

The directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Company or the Group or to cease their operations, and as they have concluded that the Company's and the Group's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Our responsibility is to conclude on the appropriateness of the directors' conclusions and, had there been a material uncertainty related to going concern, to make reference to that in this audit report. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the Group and the Company will continue in operation.

In our evaluation of the directors' conclusions, we considered the inherent risks to the Group's and Company's business model and analysed how those risks might affect the Group's and Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Group's and Company's available financial resources over this period were:

- manufacturing facilities safety incidents; and
- the impact of political considerations on defence spending budget cuts.

As these were risks that could potentially cast significant doubt on the Group's and the Company's ability to continue as a going concern, we considered sensitivities over the level of available financial resources indicated by the Group's financial forecasts taking account of reasonably possible (but not unrealistic) adverse effects that could arise from these risks individually and collectively and evaluated the achievability of the actions the directors consider they would take to improve the position should the risks materialise. We also considered less predictable but realistic second order impacts, such as the impact of Brexit and the erosion of customer or supplier confidence, which could result in a rapid reduction of available financial resources.

Based on this work, we are required to report to you if:

- we have anything material to add or draw attention to in relation to the directors' statement on pages 88 and 89 of the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Company's use of that basis for a period of at least twelve months from the date of approval of the financial statements; or
- the related statement under the Listing Rules set out on page 88 is materially inconsistent with our audit knowledge.

We have nothing to report in these respects, and we did not identify going concern as a key audit matter.

5. We have nothing to report on the other information in the annual report and accounts

The directors are responsible for the other information presented in the annual report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and directors' report

Based solely on our work on the other information:

- we have not identified material misstatements in the strategic report and the directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

Directors' remuneration report

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

Disclosures of principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, we have nothing material to add or draw attention to in relation to:

- the directors' confirmation within the long-term viability statement on page 56 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;
- the principal risks disclosures describing these risks and explaining how they are being managed and mitigated; and
- the directors' explanation in the long-term viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Under the Listing Rules we are required to review the long-term viability statement. We have nothing to report in this respect.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgments that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our financial statements audit and the directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy; or
- the section of the annual report describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We are required to report to you if the corporate governance report does not properly disclose a departure from the eleven provisions of the UK Corporate Governance Code specified by the Listing Rules for our review.

We have nothing to report in these respects.

Independent auditor's report to the members of Chemring Group PLC continued

6. We have nothing to report on the other matters on which we are required to report by exception

Under the Companies Act 2006, we are required to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent Company financial statements and the part of the directors' remuneration report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

7. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on pages 88 and 89, the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or other irregularities (see below), or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud, other irregularities or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

Irregularities – ability to detect

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience and through discussion with the directors and other management (as required by auditing standards), and discussed with the directors and other management the policies and procedures regarding compliance with laws and regulations. We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit. This included communication from the Group to component audit teams of relevant laws and regulations identified at Group level.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the Group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation and taxation legislation and we assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the Group is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the Group's licences to operate. We identified the following areas as those most likely to have such an effect: health and safety, environmental and anti-bribery and corruption, recognising the nature of the Group's activities and the governmental nature of many of Group's customers. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the directors and other management and inspection of regulatory and legal correspondence, if any. Through these procedures, we became aware of actual or suspected non-compliance and considered the effect as part of our procedures on the related financial statement items. The identified actual or suspected non-compliance was not sufficiently significant to our audit to result in our response being identified as a key audit matter. Our procedures included examination of legal advice provided from management experts, evaluating directors' and other management estimates of outflow taking into account latest available information, considering the adequacy of the Group's disclosures in respect of associated provisions and contingent liabilities recorded.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations (irregularities) is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there remained a higher risk of non-detection of irregularities, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

8. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.



Andrew Campbell-Orde (Senior Statutory Auditor)

for and on behalf of KPMG LLP,
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16 December 2019

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Find out more online

For more information about Chemring Group PLC, please visit www.chemring.co.uk where the latest shareholder information can be accessed, including:

- Current share price
- Shareholder services and notices
- Analysts' forecasts
- Key financial information
- Corporate governance
- Regulatory news
- Financial calendar
- Results and presentations

Chemring Group PLC's 2019 annual report and accounts and the notice for the Annual General Meeting can also be viewed and downloaded at www.chemring.co.uk/investors.

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