

Climate-related disclosures

Executive summary

The transition and physical effects of climate change continue to accelerate, and impactful action is required to reduce global emissions. We recognise the need for transparency to enable our stakeholders to understand the climate-related risks that we may face as a Group, how we can manage them, and how we support our businesses as they seize opportunities to decarbonise their own operations and their respective sectors.

This second TCFD Report reflects our and our businesses' progress in integrating climate considerations into business strategy and risk management. Being a continual journey, we recognise the opportunity to continue to refine our climate-related disclosures over time, as regulatory requirements and our stakeholders' expectations evolve, new ways of improving our climate data availability and quality emerge, and our climate analytics capabilities and understanding of implications associated with climate change develop.

This report consists of four thematic sections. The Governance section describes how climate risks and opportunities are managed in our governance structures. The Strategy section focuses on the integration of climate-related considerations into our Group strategy. The Risk Management section reflects our established processes for identifying and managing climate risks across our governance structures, and the eventual oversight of our businesses' progress on managing climate-related risks and acting on associated opportunities. Finally, the Metrics and Targets section explores the indicators we use to drive our businesses as they work to achieve our Group short, medium and long-term climate targets.

For clarity around compliance of the following information with the TCFD framework, the TCFD All Sector Guidance and Supplemental Guidance for Non-Financial Groups⁽¹⁾ and the requirements arising from Listing Rule 9.8.6R(8), we consider our disclosure to be consistent with all TCFD recommendations and recommended disclosures, as shown in the below TCFD cross-reference and disclosure consistency summary.

Recommendation	Recommended disclosures	Page
Governance Disclose the organisation's governance around climate-related risks and opportunities	a) Describe the Board's oversight of climate-related risks and opportunities	26
	b) Describe management's role in assessing and managing climate-related risks and opportunities	26-27
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	27-31
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	31-33
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	34
Risk Management Disclose how the organisation identifies, assesses, and manages climate-related risks	a) Describe the organisation's processes for identifying and assessing climate-related risks	34
	b) Describe the organisation's processes for managing climate-related risks	34
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management	35
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	35
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	35
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	35

(1) https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf.

Governance

Melrose Board believes that the integration of sustainability and climate-related matters into our “Buy, Improve, Sell” strategy is crucial to the success of our businesses. Sustainable value creation is integrated into our business model, as illustrated on pages 4 to 5.

Our established sustainability governance and risk framework with clear accountabilities enables us to identify and review climate-related risks and opportunities. We recognise that addressing climate-related risks must reflect our business model, and also take into account impacts on the Group’s investment focus, existing and future employees, financial position and performance, and remain relevant to our businesses’ sectoral challenges. Climate change is reviewed at various levels on a cross-functional basis including the Board, its committees, the Melrose senior management team and the divisional executive management and sustainability teams. Please see our Group sustainability and climate change governance framework on pages 54 to 55 for further information.

a) Describe the Board’s oversight of climate-related risks and opportunities.

The Melrose Board of Directors, supported by the Melrose senior management team, has oversight of and ultimate responsibility for Melrose’s sustainability strategy, targets, disclosures, and reporting. The Board assesses climate-related risks and opportunities among other sustainability and environmental material topics and monitors the Group’s performance towards achieving its climate-related targets. The Board also oversees our alignment with the TCFD recommendations and the commitments set out in our Group Net Zero Transition Plan, which was published in 2022 in line with the UK Transition Plan Taskforce’s (“TPT”) guidance.

The Board receives annual training and quarterly updates on key sustainability and climate-related matters that impact the Group and its businesses, and on the specific measures that need to be implemented to improve our businesses’ performance towards achieving our Group climate-related targets.

The Board regularly considers climate-related matters when reviewing and guiding strategy and overseeing its implementation. This oversight occurs through the Board attending business reviews during the year at which the CEOs of our Group businesses are regularly invited to present, as well as through the provision of Board papers and presentations by the Melrose senior management team at quarterly Board meetings. Through this oversight of the Group sustainability strategy, governance policies and risk management, and of the Melrose senior management team in its supervision of climate-related matters with the Group businesses, the Board oversees the implementation of improvement measures. Progress in improving the management and progress of climate-related matters is monitored by the Melrose senior management team and reported to the Board for its review, challenge and discussion on a quarterly basis. This includes the tracking of Group targets, and key metrics such as year-on-year reduction in emissions, increase in climate-related R&D spend, the number of new products contributing to decarbonisation and other innovation programmes.

The Audit Committee with the support of the Melrose senior management team updates the Board on climate risk management by monitoring and reviewing the effectiveness of the risk management processes, including the review of the Group’s principal risks which include the climate change risk.

The Remuneration Committee implements the Company’s Directors’ remuneration policy (“Directors’ Remuneration Policy”). The Remuneration Committee considers that the most appropriate place to recognise progress in relation to sustainability and climate-related matters within the Melrose executive remuneration structure is in the annual bonus plan, as part of the strategic objectives. As part of the renewal of the existing Directors’ Remuneration Policy at the 2023 annual general meeting, the Remuneration Committee is proposing to adjust the weightings of the performance measures in the annual bonus plan such that ESG can become a specific focus of the award, with a defined component to ensure further incentivisation to deliver the Company’s ESG strategy. The 2023 Directors’ Remuneration Policy will enable an award based on financial performance metrics of at least 50%, ESG performance metrics of at least 10%, and the remainder based on strategic performance metrics. This structure will provide the Remuneration Committee with flexibility each year to set the factors that are most appropriate to the Company and its strategy and, consistent with current market practice, will be disclosed retrospectively due to commercial sensitivity (consistent with the approach taken to the existing strategic element). The intention will be to increasingly align the ESG factors with performance against the Company’s published targets in this area, as the quality of data increases. However, it is proposed that the current executive Directors for the duration of the 2023 Directors’ Remuneration Policy will continue on the current arrangements, with a maximum opportunity of 100% of salary, split between financial performance metrics (at least 50%) and strategic and/or personal objectives (which will continue to include ESG). Please see the Directors’ Remuneration report on pages 119 to 144 of the 2022 Annual Report for more details.

Oversight of sustainability and climate-related issues is integrated across our Board and its committees as outlined in the Group sustainability and climate change governance framework on pages 54 to 55.

b) Describe management’s role in assessing and managing climate-related risks and opportunities.

The Melrose senior management team plays a key role in escalating material sustainability and climate risks and opportunities to the Board and ensuring that the implications of these are considered within the Board’s agenda, governance framework, business strategy and where relevant, financial plans, to address climate-related risks and pursue opportunities. More information on how we determine the materiality of climate-related risks and their financial impact can be found in the Strategy b) section on pages 31 to 33.

The Melrose senior management team incorporates the Group’s sustainability function, which is overseen by the Group Company Secretariat, and is responsible for executing the Group’s sustainability strategy, as approved by the Board. This includes the monitoring of improvement actions and performance towards achieving Group climate-related targets (including reduction in energy consumption and emissions, increase in climate-focused R&D and new products contributing to the decarbonisation of our businesses’ sectors), the TCFD recommendations and the inaugural Group Net Zero Transition Plan.

Climate-related risks and opportunities are discussed regularly among the Melrose Executive Committee including at weekly management meetings as appropriate, and in decision-making that relates to setting strategy to mitigate identified risks or capitalise on opportunities. Risks and opportunities that are considered by the Melrose senior management team to be material to the Group are reported to the Board each quarter.

Where relevant, the Melrose senior management team considers climate-related risks and opportunities with the businesses’ respective executive management teams when reviewing and guiding strategy, which can include the approval of major capital expenditure. As such, the Melrose senior management team regularly engages with the executive teams and sustainability leads of each business, to identify and assess their sustainability and climate-focused improvement plans, performance against Group climate-related targets, and their sustainability reporting alongside financial and operational metrics.

The Melrose senior management team oversees the identification of Group climate-related risks and opportunities with the support of the businesses, who identify, monitor, and manage the specific risks relevant to their sectors, markets and operating activities. These are reported to the Melrose senior management team to ensure that risks and opportunities are identified with reference to our businesses’ strategies and sectors, and that required controls are in place for appropriate mitigation and management.

The Melrose senior management team also oversees the assessment of Group climate-related risks and opportunities with the support of advisors where appropriate, who contribute to the awareness and analysis of climate-related risks and opportunities that are relevant to the Group businesses’ sectors, in light of the evolving regulatory requirements and industry best practice. Insight and analysis of risk impacts and trends are collated, challenged and reported to the Audit Committee, and ultimately to the Board by the Melrose senior management team.

Melrose runs a decentralised business model and believes that the tactical implementation of climate-related actions and initiatives is most effective when carried out by our businesses themselves, and overseen by their respective executive teams. This is where direct impact can be made within their distinct business strategies and sectoral contexts. As such, each business’s CEO and executive management team are accountable for reducing negative impact on the climate within their operations and interacting with their respective supply chains in line with the adopted Group sustainability targets and commitments. Each business’s sustainability team coordinates and collaborates with other operational functions to execute programmes aimed at progressing towards achieving our Group climate-related targets. The Melrose senior management team has ultimate oversight of each business’s sustainability and climate-related performance and conducts quarterly reviews to assess progress and align actions for each Group climate-related target alongside other sustainability metrics and targets.

The assessment and management of sustainability and climate-related risks and opportunities are integrated across our cross-functional Melrose senior management team, which includes Group corporate, tax, risk management, finance, legal and sustainability functions. Our Group sustainability and climate change governance framework depicts the relationships between the Melrose senior management team and the Board, its committees, and divisional executive and sustainability teams, as well as external advisors.

Strategy

a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long-term.

Climate scenario analysis

Melrose carried out an initial climate scenario assessment in 2021, using two Representative Concentration Pathways (“RCPs”) scenarios, which set the most conventional and understood pathways for concentrations of GHG emissions and, effectively, the amount of warming that could occur by the end of the century. The results of this analysis can be found on our website at www.melroseplc.net/sustainability/our-key-principles/respect-and-protect-the-environment/climate-change.

To aid readers of this report, we provide a summary of the two scenarios, together with an overview of our climate risks and opportunities.

Low-carbon scenario (RCP 2.6)

Very stringent. Emissions start declining immediately and get to zero by 2100. Warming likely to be below 2°C.

High-carbon scenario (RCP 6.0)

Some mitigation. Emissions rise to 2080 and fall causing high physical impacts. Warming likely to exceed 2°C.

Our climate scenario modelling of both risks and opportunities over the short, medium and long-term time horizons reflects the investment and value creation cycle of our “Buy, Improve, Sell” model as the Group aims to increase the value of its businesses at the point of their sale by integrating climate risk and opportunity considerations during its ownership. The time horizons used for the scenario analysis are as follows:

Climate scenario time horizons

Short-term until 2024	Aligned with Melrose’s investments and immediate improvement phase.
Medium-term until 2027	Aligned with Melrose’s ownership and the “Improve” aspect of our business model.
Long-term until 2040	Expected to align with the period beyond Melrose’s ownership.

Melrose Group transition and physical risks by time horizon and climate scenario

Risk type	2024	2027	2040
Transition			
Technology			
Low-carbon scenario RCP 2.6	Medium	Medium	High
High-carbon scenario RCP 6.0	Low	Medium	Medium
Market			
Low-carbon scenario RCP 2.6	Medium	Medium	Medium
High-carbon scenario RCP 6.0	Low	Low	Medium
Carbon policy and regulations			
Low-carbon scenario RCP 2.6	Medium	High	High
High-carbon scenario RCP 6.0	Low	Low	Medium
Reputation			
Low-carbon scenario RCP 2.6	Low	Medium	Medium
High-carbon scenario RCP 6.0	Medium	Medium	High

Risk type	2024	2027	2040
Physical			
Property			
Combined scenario (RCP 2.6/6.0)	Low	Low	Medium
Supply Chain			
Combined scenario (RCP 2.6/6.0)	Low	Low	Medium
Production			
Combined scenario (RCP 2.6/6.0)	Low	Low	Medium

Increasing magnitude of risks before mitigation activities



Our transition risks are closely aligned with associated opportunities, informing the strategic focus of our businesses' efforts towards mitigation actions."

Climate-related risks and opportunities

We have identified four transition risks and three physical risks that have the potential to materially impact the Group and its current businesses. Material risks are those that could have a significant effect on our businesses' operations, strategy, and financial planning if they are not managed appropriately over the three time horizons. As shown by our climate scenario analysis, transition risks are more material within the Group than physical risks. It was also found that our transition climate risks are very closely aligned with associated opportunities, informing the allocation of Melrose's investment and the strategic focus of our businesses' efforts towards mitigating the Technology, Regulatory and Market risks.

Against three transition risks we identified three opportunities, which are considered material and, if seized upon successfully, will improve not just the Group's and our businesses' performance, but also reduce our impact on the planet. We reflect below on some of the key short, medium, and long-term transition risks faced by the Group and some of its businesses and the corresponding opportunities that they seek to seize with focused investment from Melrose.

Transition climate risks

Technology Risk

Group level scenario analysis	2024	2027	2040
Low-carbon scenario RCP 2.6	Medium	Medium	High
High-carbon scenario RCP 6.0	Low	Medium	Medium

Group level

Risk description

The increasing demand for lower-carbon technologies can render current products obsolete, and the investment in new technologies that are not focused on climate, unsuccessful. Due to the very nature of its focus on the industrial sectors, the Group is exposed to technology risks as it buys manufacturing businesses with a view to improving them during its ownership. Very often, the businesses operate in industries in which the reduction of carbon footprint can be challenging. The participants within these sectors are under increasing pressure to develop and scale new lower-carbon technologies that help to drive down emissions (for example, use of hydrogen, zero-carbon aircrafts, increasing penetration of battery electric vehicles ("BEVs") and plug-in hybrid electric vehicles ("PHEVs")). This pressure is likely to increase over time under both climate scenarios.

Opportunity description

The Group is well-positioned to contribute to decarbonisation and the acceleration of the global ambition to reach Net Zero given its access to businesses in sectors that are in most need of investment and support to combine carbon focus with efforts to improve their productivity and international competitiveness. Opportunity therefore lies in the potential to gain a competitive advantage in the early development of alternative lower-carbon technologies and the manufacturing of products that are compatible with new emerging technologies which support the transition to a low-carbon economy. Our analysis of the technology risk once again underlines the business opportunity that Melrose has as a Group in enabling the net zero transition, building on its over two decades long expertise in the UK and international manufacturing arena.

Divisional/sector level

Risk description

Under the low-carbon scenario in particular, the Technology risk is expected to increase across the aerospace and automotive industries due to the rising pressure to develop and scale new lower-carbon technologies to drive down emissions (for example, use of hydrogen, zero-carbon aircrafts, increasing penetration of BEVs and PHEVs).

Aerospace: Potential Technology risk is associated with hydrogen fuel aircraft due to the incompatibility of current aircraft components with hydrogen fuel. Managing the development of hydrogen technology needs to be carried out carefully to account for increased operating and R&D costs needed to respond to new machinery, and the needs for training and competence development.

Automotive: Investment in new technologies such as hydrogen technology or components for electric vehicles ("EVs") may fail to gain traction resulting in R&D losses. The progression in technology is leading to greater electrification of vehicles and it is projected that the BEVs' and PHEVs' share of global production will be 29% in 2027. This may cause disruptions to the automotive industry as some components, such as propshafts, used in internal combustion engine ("ICE") vehicles are becoming obsolete. If technology is not made more competitive the overall attractiveness of EVs will decrease and slow the demand for EV compatible components, risking the investments made in EV technology.

Opportunity description

Aerospace: GKN Aerospace is already investing in low-carbon R&D in line with the Group sustainability target and is active in initiatives aimed at upskilling the future leaders of the aerospace sector. For more information about GKN Aerospace's opportunities to address the Technology risk, please see page 32.

Automotive: Opportunity lies in improving the competitiveness of EV products compared to fossil fuel-based vehicles, to ensure that the overall attractiveness of EVs does not decrease or slow the demand for EV-compatible components, and that the investments already made in EV technology are not at risk. For more information about GKN Automotive's opportunities to address the Technology risk, please see page 32.

Market Risk

Group level scenario analysis	2024	2027	2040
Low-carbon scenario RCP 2.6	Medium	Medium	Medium
High-carbon scenario RCP 6.0	Low	Low	Medium

Group level

Risk description

The Market risk comes from the changing demand for products due to shifting customer sentiment towards lower-carbon options. The Market risk is intrinsically linked with the Technology and Sector reputation risks, hence the mitigation strategies are similar. Under the lower-carbon scenario, Market risk exposure remains a stable medium across all time horizons. Under the high-carbon scenario, exposure does not manifest until 2040.

Opportunity description

The transition to low-carbon transport presents an opportunity to produce components that will differentiate the Group's businesses from competitors and position them for growth in their markets. In line with its sustainability principles, the Group leverages its unique expertise and knowledge of the manufacturing sectors and markets, to boost its businesses' productivity, ensuring the highest standards of product safety and encouraging them to adhere to the highest market standards.

Divisional/sector level

Risk description

There is potential uncertainty around which aerospace and automotive technologies will prevail in the market and which technologies customers will favour, and the businesses need to be cognisant of shifting consumer preferences.

Aerospace: The projected shift of consumer demand to lower-carbon travel options can potentially cause a threat to overall air travel demand. This may result in fewer aircraft and hence fewer component purchases. Additionally, in certain markets, passengers may prefer to start using alternative modes of transportation such as trains, and although air traffic is expected to grow until 2040, it is predicted to be slower than in the early 21st century.

Automotive: As with the Technology risk, a more rapid than the forecast shift to EVs and sustainable transport could result in several components manufactured for ICEs not being needed by EV customers. Failure to adapt to an increased demand for electric components may cause a loss in market share.

Opportunity description

Aerospace: The projections for the Market risk to be 'low' in the short and medium term, and only rise to "medium" in the long term under RCP 2.6, are due to the potential passenger transportation volume expected to increase with global population and economic growth. This presents multiple opportunities, including its contribution to the industry in the replenishment of existing fleets with the very latest lightweight and efficient components and products, and planning new aircraft and engine design to further improve efficiency and reduce emissions. With its market position, GKN Aerospace has a unique opportunity to address the increasing passenger demand for lower-carbon options and become a frontrunner in the production of parts for zero-carbon aircraft using sustainable aviation fuels.

Automotive: With all of its products designed to meet the highest international and OEM standards for hazardous materials and recyclability, therefore minimising the CO₂ impact of its customers' vehicles, GKN Automotive is well-positioned to address the Market risk. Additionally, it is now a supplier on nine of the top ten addressable BEV platforms, outside of China, and has an order book that is matching the market in terms of the shift to EVs. For more information, please see page 32.

Carbon policy and regulations Risk

Group level scenario analysis	2024	2027	2040
Low-carbon scenario RCP 2.6	● Medium	● High	● High
High-carbon scenario RCP 6.0	● Low	● Low	● Medium

Group level

Risk description

The Group's exposure to the potential carbon policy and regulatory risk is dictated by its historical focus on buying and improving businesses which often operate in some of the most carbon-intensive industries. This presents a risk of potential tightening of carbon policies and regulation, including stricter emissions standards for production activities, taxes on specific products and processes and carbon pricing on carbon-intensive materials, which can affect the Group's performance.

Divisional/sector level

Risk description

Due to the energy-intensive nature of manufacturing, our businesses are exposed to increasing carbon policy and regulatory risks in short, medium and long-term horizons, particularly under the low-carbon RCP 2.6 scenario. The high carbon RCP 6.0 scenario assumes less near-term regulatory intervention and as such, risk exposure does not begin to manifest until 2040. Carbon prices are forecast to increase over the medium and long term to make businesses more responsible for their energy use and carbon emissions. The scope of carbon prices is also forecast to encompass more industries, with particular attention paid to carbon-intensive such as manufacturing. Increases in the cost of carbon are also likely to impact not only our businesses' direct energy bills but also their supply chain costs. For more information on mitigation of the policy and legal risk, please see page 33.

Automotive and Powder Metallurgy: Products and components are being increasingly regulated with various restrictions, such as the EU's target of reducing CO₂ emissions from new cars and vans by 55% by 2030, and a complete ban on the sale of new ICE vans and cars by 2030. This means that components manufactured by GKN Automotive and GKN Powder Metallurgy must be developed in line with these regulations. **Powder Metallurgy:** Several manufacturing practices are more challenging to decarbonise. For example, some of GKN Powder Metallurgy's processes, such as the use of furnaces which are energy-intensive, present a risk with increasing carbon regulations and pricing. Current limitations of technology and cost prove a barrier to decarbonising these processes, and GKN Powder Metallurgy is continuously exploring ways to improve.

Sector reputation Risk

Group level scenario analysis	2024	2027	2040
Low-carbon scenario RCP 2.6	● Low	● Medium	● Medium
High-carbon scenario RCP 6.0	● Medium	● Medium	● High

Group level

Risk description

Melrose's current portfolio of businesses operate in some of the highest emitting and hardest to decarbonise sectors. The expectation of accelerating the path towards Net Zero comes with a responsibility for affecting positive climate impact across supply chains, product use habits, and sectoral contribution to more efficient policy measures. Reputation risk appears to be 'low' in the short term under the low-carbon scenario, and it is the only climate risk that was found to be more prominent under the high-carbon scenario. This is due to assumptions around increased stakeholder pressure and the limited carbon policies and interventions assumed in this scenario, which could mean that emissions in manufacturing sectors stay relatively high and that the Group's short and medium-term emissions reduction targets are missed. This could result in reputational damage, as well as a reduction in access to capital from environmentally conscious investors.

Opportunity description

The identified challenges also present significant opportunities through process integration (such as combining various operations to reduce consumption of resources and therefore emissions), developing and commercialising low-carbon alternative components and other innovative solutions that decrease energy use.

Divisional/sector level

Risk description

Stakeholders, including suppliers, customers and investors, prefer manufacturers that better align with their own climate-related targets and commitments. Those companies that cannot decarbonise fast enough risk becoming misaligned with the expectations of their stakeholders.

Opportunity description

Our businesses are well prepared to meet their major customers' expectations relating to environmental and climate performance, leveraging the Group's corporate governance framework, policies and sustainability targets and commitments to maintain a focus on decarbonising their own operations and increase the focus on developing and providing low-carbon components. For examples of mitigation strategies of each of our businesses, please refer to page 33.

Physical climate risks

In the Group 2021 climate scenario analysis, physical climate risks were given a single combined risk rating, as it was established that physical outcomes were not likely to begin to diverge significantly until after 2040 under both scenarios assessed. The below overview sets out the results of the analysis of physical climate risk exposure considering three risk categories.

Melrose Group-level exposure to physical climate risks

Physical Risks and Potential Impact Ranking – Combined scenario RCP 2.6/6.0				2024	2027	2040
Property – risks from physical damage to property because of extreme weather events (acute) or changes to the climate experienced over a period of time (chronic).				● Low	● Low	● Medium
Supply Chain – risks from disruption to the supply chain because of extreme weather events (acute) or changes to the climate experienced over a period of time (chronic). For example, impacts of extreme weather events in key supplier locations.				● Low	● Low	● Medium
Production – risks to the production process or demand for products because of changes in the climate. For example, potential impacts of higher temperatures on labour productivity and production outputs.				● Low	● Low	● Medium

Combined scenario RCP 2.6/6.0	Property			Supply Chain			Production		
	2024	2027	2040	2024	2027	2040	2024	2027	2040
GKN Aerospace	● Low	● Low	● Medium	● Low	● Low	● Medium	● Low	● Low	● Medium
GKN Automotive	● Low	● Low	● Medium	● Low	● Low	● Medium	● Low	● Low	● Medium
GKN Powder Metallurgy	● Medium	● Medium	● Medium	● Low	● Low	● Medium	● Low	● Low	● Medium

Overall, exposure to material or unmitigated physical climate risks was found to be significantly lower across the divisions relative to transition risks in both the short and medium-term under both scenarios. Physical risks begin to increase in the longer term (from 2040), for example through the increasing likelihood of river flooding risk in the UK or increasing wildfire risk in California.

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

Climate change has a direct impact on product strategy, development, and financial planning across our businesses. Over the last three years, with the support of the Board and Melrose senior management team, our businesses have invested c.£340 million on climate-related R&D programmes that primarily aim to develop technologies that help their customers improve energy efficiency and reduce GHG emissions compared with conventional technologies.

During 2022, we continued to consider the findings from our climate scenario analysis and progressed our Group sustainability improvement actions, including consideration of some of the potential financial impacts across the assessed climate scenarios for our businesses' sectors. Much of this analysis remains qualitative at this stage, but the Group has begun to consider quantifiable impacts against certain risks internally, where the underlying data is available and where current visibility of the risks allows. The potential financial impacts of the Group's positive and negative exposure to climate risks and opportunities require many assumptions to be made in respect of factors such as low-carbon technology forecasts, energy consumption, carbon pricing forecasts, and others, which are subject to high variability. The analysis conducted to date shows that our overarching business strategy would not be impacted, and importantly, mitigating actions are already in place for most risks, which significantly reduces potential negative financial impacts. There will be opportunities to continue to iterate our analysis as the scope of relevant data and assumptions becomes available both internally and externally to support and inform further quantitative assessment.

Please see pages 111 and 184 of the 2022 Annual Report for further details on how the climate change risk is taken into account in the Group's impairment testing which includes short to medium-term planning (five years) for each of the Group's cash-generating units ("CGUs"), and addresses known risks from climate change and other environmental factors impacting forecast costs as well as the opportunities in associated markets as they prepare for change, for example, hydrogen propulsion within the aerospace industry and electrification within the automotive industry, which may impact revenues.

We outline further how climate-related risks influence the Group and its businesses, alongside some cases that exemplify the risks our businesses face, and how these are addressed through mitigation, and strategies to capitalise on them. In defining the risk and opportunity types, we were guided by the examples of climate-related risks and opportunities and potential financial impacts recommended by TCFD (Tables A1.1 and A1.2 in the TCFD Implementing Guidance⁽¹⁾).

(1) www.tcfidhub.org/wp-content/uploads/2022/04/Table-A1.1-and-A1.2-marked.pdf.

TCFD risk type	Sub-category risks	Potential financial impact
Technology	<ul style="list-style-type: none"> Substitution of existing products and services with lower emissions options Costs to transition to lower emissions technology 	<ul style="list-style-type: none"> Increased R&D costs to respond to technology and market trends and increasing capital expenditure to invest in new and specialist machinery
TCFD opportunity type	Opportunity categories	Potential financial impact
Products and services	<ul style="list-style-type: none"> Development and/or expansion of low emission goods and services Development of new products or services through R&D and innovation Ability to diversify business activities Shift in consumer preferences 	<ul style="list-style-type: none"> Increased revenue through demand for lower emissions products and services

Mitigation and strategy to capitalise

Whilst Technology risk is significant for the Group over the medium to long term, mitigating activities can be introduced to reduce risk and ultimately provide the businesses with new opportunities through continued focus, investment and collaboration. The Group's targets for climate-related R&D spend, and new low-carbon products help identify new technologies to guide and capitalise on the businesses' individual climate-focused capital expenditure programmes. Melrose's businesses actively collaborate with other aerospace and automotive sector participants to support the decarbonisation of air and motor travel, ensuring that they are at the forefront of innovation, as climate-focused organisations.

Examples of our businesses' actions to address the Technology climate change risk

GKN Aerospace	GKN Automotive	GKN Hydrogen
GKN Aerospace leads a ground-breaking UK collaboration programme H2GEAR which is developing hydrogen propulsion systems that can reduce GHG emissions by over 90% compared to kerosene in sub-regional or regional flights. Critically, it enables the incorporation of hydrogen-electric power into engines and minimises the disruption risk that hydrogen technology could cause. Producing components that are compatible with new technological developments will allow GKN Aerospace to capitalise on developing revenue streams early on in their lifetime and become recognised for the production of new sustainable components.	GKN Automotive is well-positioned as a top tier 1 supplier to global automotive OEMs to benefit from the opportunities presented by the ongoing transition to EVs, with its product and technology portfolio aligned to this industry megatrend. Although the industry transition to EVs may lead to a certain reduction in production of propshafts, this will be offset with an increased demand for eDrive components and systems which GKN Automotive already has over 20 years' experience in, and its market-leading sidshaft technology for BEVs.	GKN Hydrogen's modular product offering is expected to be well-placed to flourish alongside the growth of renewable energy sources, with applications in micro grids and residential building, industry and transportation, power back-up, and in off-grid standalone energy storage. With safety requirements, sustainability, and flexibility of great importance to this expansion of energy storage, GKN Hydrogen's technologies are primed for rapid growth in their application as they provide reliable and secure hydrogen storage.

TCFD risk type	Sub-category risks	Potential financial impact
Market	<ul style="list-style-type: none"> Changing consumer behaviour Substitution of existing products and services with lower emissions options 	<ul style="list-style-type: none"> Potential impact on revenue due to changing product demand (for example, reduced demand for ICE parts and increasing demand for EV parts in the automotive sector)
TCFD opportunity type	Opportunity category	Potential financial impact
Markets	<ul style="list-style-type: none"> Access to new markets 	<ul style="list-style-type: none"> Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Mitigation and strategy to capitalise

Changing market demands for low-carbon products pose a significant medium to long-term unmitigated risk for the Group. The Group's businesses are responding by seeking to gain a better understanding of current and potential future consumer actions and by aligning investment and strategy accordingly.

Examples of our businesses' actions to address the Market climate change risk

GKN Aerospace	GKN Automotive	GKN Powder Metallurgy
Increased focus on individual carbon footprints may result in reduced demand for conventional air travel, particularly for airlines with older, less efficient fleets. For GKN Aerospace, this presents multiple opportunities: in the near to medium term, supporting the industry in the replenishment of existing fleets with the very latest lightweight and efficient components and products, and planning new aircraft and engine design to further improve efficiency and reduce emissions. In the medium to long term, it has an opportunity to become a frontrunner in the production of parts for zero-carbon aircraft using sustainable aviation fuels.	GKN Automotive continues to grow its significant share of the rapidly expanding EV market. It already holds a strong position through its leading driveline technologies, and over 20 years of eDrive system development. GKN Automotive has content on nine out of the top ten selling addressable BEV platforms outside of China, and its eDrive technologies have powered more than 2 million EVs to date.	GKN Powder Metallurgy is also well placed to capitalise on the low-carbon market opportunity with further development of products such as its e-pump system that substitutes engine-driven pumps on vehicle transmissions. The new system can achieve a fuel benefit of up to 10% compared to a conventional engine driven pump and offers customers a lower-carbon alternative. As the world's leading provider of powder metal solutions, GKN Powder Metallurgy is also committed to pursuing growth opportunities in the magnets for EVs market, in response to the supply challenges the industry is facing. Its dedicated magnets project team, bringing together multidisciplinary experts, operates out of the business's Innovation Centres for metal powders (in Cinnaminson, US) and for sinter metal manufacturing (in Radevormwald, Germany).

TCFD risk type	Sub-category risks	Potential financial impact
Policy and legal	<ul style="list-style-type: none"> Increased pricing of GHG emissions Enhanced emissions-reporting obligations Increased cost of raw materials 	<ul style="list-style-type: none"> Increased operating costs and revenue deriving from carbon taxes and regulatory interventions, as well as increasing costs of the raw components in manufacturing

Mitigation

Melrose has a Group-level priority to support its businesses in driving the decarbonisation of their respective sectors and has set Group-level emissions reduction targets. In recognition of the carbon-intensive nature of certain manufacturing production processes within our businesses' operations, the Group has set a target to reduce energy intensity, which will help to avoid or mitigate our businesses' potential exposure to the evolving carbon regulation and the potential financial impact of increased carbon prices.

Our businesses also invest in identifying and implementing energy reduction initiatives. Our Group interim and long-term targets to source renewable electricity also guide our businesses in their carbon intensity reduction programmes across their operations. The Group's participation in the CDP Supply Chain engagement initiative has helped to quantify some of our businesses' Scope 3 emissions footprint, and also to identify suppliers with the largest carbon footprint whose products and components may be most impacted by carbon pricing.

Examples of our businesses' actions to address the Policy and legal climate change risk

GKN Aerospace	GKN Automotive	GKN Powder Metallurgy
To address the expectations from its large customers, GKN Aerospace is considering assessing embodied carbon as part of its product portfolio which will help it to understand the impact of using materials with high-carbon footprint to enable them to adjust product design to reduce it.	To help understand the most carbon-intense parts of the business in efforts to reduce its emissions, GKN Automotive is in the process of implementing a tool which would assess CO ₂ emissions from the manufacturing of its purchased components and raw materials. Additionally, in 2022, it has set Science Based Targets for its own emissions which will be validated with the SBT ⁽¹⁾ in 2023.	To reduce its exposure to carbon pricing regulations, GKN Powder Metallurgy continuously seeks to reduce the emissions in its manufacturing processes. One of the examples of this was the review of its furnaces' shift patterns which resulted in 20% of its furnaces being shut down at any one time, significantly reducing energy consumption and therefore emissions.

TCFD risk type	Sub-category risks	Potential financial impact
Reputation	<ul style="list-style-type: none"> Increased stakeholder concern (investors) 	<ul style="list-style-type: none"> Reduction in capital availability (due to investor preferences shifting towards companies that are less exposed to high-emitting activities)
TCFD opportunity type	Opportunity category	Potential financial impact
Resilience	<ul style="list-style-type: none"> Participation in renewable energy programmes and adoption of energy efficiency measures 	<ul style="list-style-type: none"> Increased revenue through new products and services related to ensuring resilience, as well as increased reliability of supply chain and ability to operate under various conditions

Mitigation and strategy to capitalise

Melrose has a Group-level priority to support its businesses in driving the decarbonisation of their respective sectors and has set Group-level emissions reduction targets to support this. The achievement of these Group targets, including the target of 50% of new products which contribute to the decarbonisation of the sectors in which our businesses operate by 2025, 75% by 2030 and 100% by 2040, will put the Group and its businesses in a good position to have sector-leading positions on the key industry platforms for producing and commercialising low-carbon products and technologies.

Examples of our businesses' actions to address the Reputation climate change risk

GKN Aerospace	GKN Automotive	GKN Powder Metallurgy
GKN Aerospace's collaboration in initiatives such as the FlyZero programme which aims to realise zero-carbon emission commercial aviation by 2030.	All GKN Automotive's products are designed to meet the highest international and OEM standards for hazardous materials and recyclability, therefore minimising the CO ₂ impact of its customers' vehicles. Improved fuel efficiency of GKN Automotive's components allows customers to use them with the confidence that their final product will be within their fuel efficiency targets.	GKN Powder Metallurgy's several product and service offerings with innovative technologies that will be key to the low-carbon transition, including the additive manufacturing business, which can reduce the carbon footprint of manufactured products by using much less material than traditional manufacturing processes.

(1) The Science Based Targets initiative.

c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Our climate scenario analysis focused on a selection of climate-related risk and opportunity categories across physical and transition risk areas, their materiality, levels of exposure and responses to them under two scenarios: low-carbon (RCP 2.6) and high-carbon (RCP 6.0). The scenario analysis is available on our website at www.melroseplc.net/sustainability/our-key-principles/respect-and-protect-the-environment/climate-change.

To identify key characteristics for assessing climate-related risks and opportunities, we took into consideration a number of assumptions related to policy, macroeconomic trends, emissions pathways, and technology assumptions that were publicly available. There will be opportunities to continue to iterate our analysis as the scope of relevant data and assumptions becomes available both internally and externally to improve this initial assessment.

The analysis of the two different temperature scenarios has allowed us to verify and confirm the resilience and adaptability of our "Buy, Improve, Sell" business strategy in meeting expectations of the global transition to a low-carbon economy. By concluding that our strategy can be resilient to climate-related scenarios, we take into account three key considerations. Firstly, the Group has a responsibility to help decarbonise manufacturing sectors that can be among the hardest to decarbonise, and to drive industrial businesses that we own to achieve Net Zero by 2050. Secondly, the integration of sustainability and climate considerations into our investment cycle reflects the projected timelines for temperature changes within our two adopted climate scenarios⁽¹⁾, meaning that upon acquiring a new business, we instil best practice governance frameworks and refocus its strategy and investment to attain stronger performance all round, including towards achieving our Group sustainability targets and commitments. Finally, we have a robust risk management framework, which enables the Board's and the Melrose senior management team's continuous focus on increasing the value of the Group's businesses for all stakeholders and safeguarding them from any potential risks.

Risk Management

a) Describe the organisation's processes for identifying and assessing climate-related risks.

The objectives of the Board and Melrose senior management team include safeguarding and increasing the value of the businesses and assets of the Group for stakeholders as a whole. Achievement of these objectives requires the development of policies and appropriate internal control frameworks to ensure the Group's resources are managed properly, and for key risks to be identified and mitigated where possible. The nature of how climate change transition and physical risks impact each of our businesses is not homogenous and considering that the Group operates on a decentralised basis, each business is individually responsible for developing and managing its own processes to monitor the associated risks that are relevant for its respective sector and business strategy as overseen by the Melrose senior management team.

As a principal Group risk, climate change risk undergoes the continuous assessment through the established Melrose risk management processes of identification, evaluation, mitigation, analysis, review and monitoring, as is the case with other principal Group risks. Melrose's 'top-down', 'bottom-up' risk management framework connects risk oversight and assessment at the Group level with the identification and assessment of risk exposure at the business unit level. For further details on the Group's approach to assessing the impact of climate change risk and mitigation actions, please see pages 38 to 48 of the 2022 Annual Report.

In 2021, we conducted and published our first formal Group climate change scenario analysis, and in 2022, we reassessed climate-related risks for continued relevance as part of the review of the Group risk register given the more prominent place that climate change risk has assumed in the risk register. Climate-related risks were assessed alongside climate-related opportunities, based on the same criteria that was used to determine and rate the divisional-level risks and their relative significance in comparison to Group-level risks. This allowed for their integration into the wider Group risk management framework.

Climate Change principal Group risk comprises transition and physical risks, capturing the climate risks identified by our businesses, and is reviewed and updated as required, at least annually. Using the three time horizons, our risks are ranked on both likelihood (the probability of the risk occurring) and impact (the financial and reputational outcome of the risk occurring), resulting in a combined Group risk register with a low, medium or high-risk rating for each time horizon and scenario. In the initial scenario analysis, the physical risks were given a single rating across both scenarios⁽¹⁾. This is because the temperature outcomes of the scenarios do not begin to diverge meaningfully until after 2040. This is the time at which the physical impacts of climate change are expected to start becoming noticeably different depending on the scenario that is being considered. In the 2022 reassessment of physical risks this assumption has been maintained. The above likelihood and impact criteria allow the materiality of risks to be determined, meaning that Melrose can prioritise the management of the most material risks by allocating appropriate resources to it.

The Group's exposure to climate-related risks is through the individual businesses that we own, and the opportunities that derive from mitigating measures are considered in each business's own sustainability strategies, guided by Melrose, but set and implemented at a business level, in line with our decentralised business model. We are aware that the effects of climate change on specific sectors and businesses are highly variable. For more details on the identified climate-related transition and physical risks, please see page 28.

b) Describe the organisation's processes for managing climate-related risks.

The Audit Committee monitors, oversees and reviews the effectiveness of the risk management and internal control processes implemented across the Group, through regular updates and discussions with the Melrose senior management team and a review of the key findings presented by the internal and external auditors. The Board is responsible for considering the Audit Committee's recommendations and ensuring implementation by divisional management of those recommendations it deems appropriate for the Group.

With Melrose's support, guidance and oversight, each of our businesses are individually responsible for developing and managing their own processes to monitor sustainability and climate-related risks and opportunities as appropriate to their respective business strategies and sectors. Each of them invests in and implements appropriate systems and processes to manage their impact on the environment and climate change, and continually reviews these in line with evolving expected practices. As such, the executive management team of each business is responsible for regularly reviewing and considering the levels of significant climate-related risks, their impact on business strategies and the effectiveness of management and mitigation controls. For more information on how we manage each identified climate-related risk on Group and divisional levels, please refer to pages 29 to 30.

(1) Specifically, the RCP 2.6 scenario which is aligned with the Paris Agreement's stated 2°C limit/1.5°C aim.

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

Climate Change as a principal Group risk was previously embedded within the Legal, Regulatory and Environmental principal Group risk. In 2021, to reflect the emerging risks involved with the increased frequency of extreme weather and climate-related disasters, coupled with tightening legislation and regulations in this area, climate change risk was realigned as a new standalone principal Group risk.

Climate change risk comprises transition and physical risks as identified in our 2021 climate scenario analysis. These risks undergo reassessment every year by the Melrose senior management team to determine the risk trend, impact and likelihood, taking into account the composition of the Group at the time of reassessment. The transition and physical climate risks are then presented to the Audit Committee for consideration alongside the other principal Group risks on a biannual basis in the form of reports prepared by the Melrose senior management team. The Chairman of the Audit Committee updates the Board to inform the Board's review, challenge and setting of the Group's appetite for each principal Group risk including Climate Change. The Board's assessment of each of the principal Group risks and their management, are disclosed on pages 38 to 48 of the 2022 Annual Report which shows the relative significance of climate-related risks compared to other Group risks.

Given the dynamic nature of our Group composition and the transitional nature of our businesses' sectors, the impact of the climate change risk on the Group will fluctuate over time as will its impact on our businesses, as they each move through our "Buy, Improve, Sell" cycle. The incorporation of climate change considerations into the overall risk management process helps to understand the specific transition and physical risks, as well as the potential opportunities deriving from mitigating measures.

Metrics and Targets

a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

We disclose a wide range of metrics associated with climate change, including GHG emissions by type, energy consumption by type, as well as renewable electricity consumption, water withdrawal and waste generation.

All of our metrics used for assessment of climate-related risks and opportunities, shown in the table below, are linked to Melrose's strategy through the corresponding sustainability targets and commitments, presented on pages 8 to 10. The Group sustainability highlights on page 3 depict our performance against select targets.

Risk and opportunity	Metrics
Technology risk and opportunity	Expenditure on R&D relating to solutions that contribute to the decarbonisation of our businesses' sectors ⁽²⁾
Market risk and opportunity	Revenue from new products that contribute to the decarbonisation of our businesses' sectors
Carbon policy and regulations risk	Total GHG footprint, total energy consumption and percentage of electricity from renewable sources
Sector reputation risk and opportunity	Melrose's external sustainability rating (for example, MSCI or Sustainalytics)

b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions and the related risks.

Our energy consumption and emissions data, the statement of alignment with the GHG Protocol and statement on SECR disclosures can be found on page 24. We currently disclose Scopes 1 and 2, and select Scope 3 GHG emissions in line with the GHG Protocol methodology, representing a breakdown of the Group's emissions by type and intensity measurement. Our chosen intensity ratio is energy consumption and emissions reported above normalised megawatts usage ("MWh") and tonnes of CO₂e per £1,000 of turnover, which we believe remains the most appropriate intensity ratio for Melrose given our business model and structure. The data is reported against normalised megawatts usage ("MWh") and tonnes of CO₂e meaning that the data has been standardised from the source units in which it was initially collected. The turnover figures used to calculate the intensity ratio include continuing businesses only and do not include any share of revenues from entities in which the Group holds an interest of 50% or less.

We also disclose select Scope 3 GHG emissions against Category 3 (fuel and energy-related activities not included in Scope 1 or Scope 2) and Category 6 (business travel). We have started to gather emissions data from our businesses' upstream supply chain (through the CDP Supply Chain engagement initiative⁽³⁾ and partial GHG inventories across our businesses) to help us understand, quantify and in future, disclose a broader range of Scope 3 emissions. Key priorities for 2023 in relation to further developing our climate-related data include the collection, measurement, understanding and reporting of our businesses' suppliers' emissions (Scope 3), with primary focus on upstream emissions. The completion of GHG inventories, currently ongoing within each of our businesses' carbon footprinting projects, will allow the Group to assess the materiality of select Scope 3 emissions in line with its reporting boundary. It will also contribute to further expanding the Group's Scope 3 emissions reporting in line with GHG Protocol.

c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

Melrose's overarching decarbonisation ambition is to achieve Net Zero by 2050. To ensure this long-term target is met, in 2021 we set milestone targets to achieve reduction of CO₂e/£m revenue by 20% on average across the businesses by 2025. In the medium term we aim to reduce emissions intensity by 40% by 2030. Our other main climate-related targets are:

- Source 50% of our electricity from renewable sources by 2025 and 75% by 2030⁽⁴⁾.
- Achieve 50% of total R&D expenditure on climate-related R&D per year to contribute to the decarbonisation of the sectors in which our businesses operate by 2025, 75% by 2030 and 100% by 2040.
- Achieve 50% of new products which contribute to the decarbonisation of the sectors in which our businesses operate by 2025, 75% by 2030 and 100% by 2040.

Each business is individually responsible for developing processes to monitor and manage environmental data and assess progress against Group and divisional targets. By monitoring these metrics and targets, we can drive our businesses to seek to mitigate their exposure to risks such as carbon pricing and technology. We also seek to allocate resource to capitalise on opportunities that climate change may provide, particularly in respect of R&D investment, helping to keep our businesses at the forefront of climate-focused innovation including hydrogen technologies and the transition to EVs. Please see the overview of our Group targets and commitments on pages 8 to 10.

(2) Please refer to page 31 for climate-focused R&D investment to date.

(3) For more details, please refer to page 11.

(4) Where renewable electricity is commercially and reasonably available in the relevant jurisdiction.