



Continuing the journey towards TCFD compliance

May 2022

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Highlights

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There has been a step change in the level of climate-related disclosures – both in the front and back halves of annual reports, but the journey towards Task Force on Climate-related Financial Disclosures (TCFD) compliance is far from over – both in respect of the quality of the disclosures but also their integration into the broader strategic narrative. There is no room for companies to stand still.

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With changes to TCFD guidance, and new standards and regulations being debated and implemented both in the UK and internationally, the bar for TCFD disclosures and reflecting climate in the financial statements continues to rise.

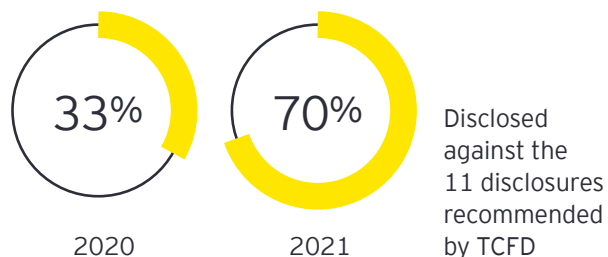
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Even premium listed companies which have published their first disclosures in their annual reports as required by Listing Rule (LR) 9.8.6R(8) and associated LR Guidance as issued in December 2020, will need to do more in their next annual report(s) to take account of changes issued in December 2021 to the Listing Rule Guidance and if applicable, the Department for Business, Energy & Industrial Strategy (BEIS) Regulations and non-binding guidance that apply for financial years commencing on or after 6 April 2022.



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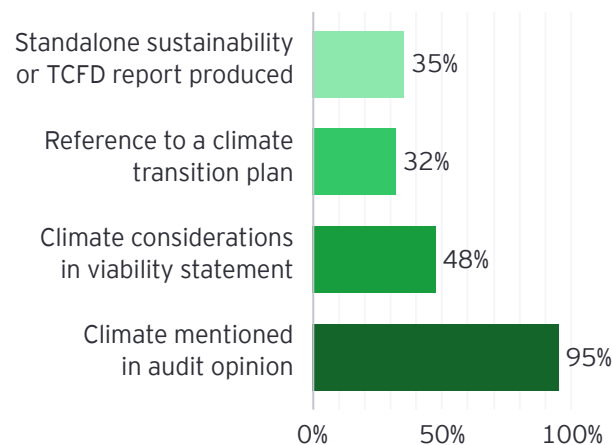
Compared to 33% last year, 70% of companies this year indicate that they have disclosed against all 11 disclosures recommended by the TCFD. However, companies very seldom acknowledged having taken into account all the guidance stipulated for consideration by the Listing Rule and many of the statements discuss the need for further work to be undertaken.



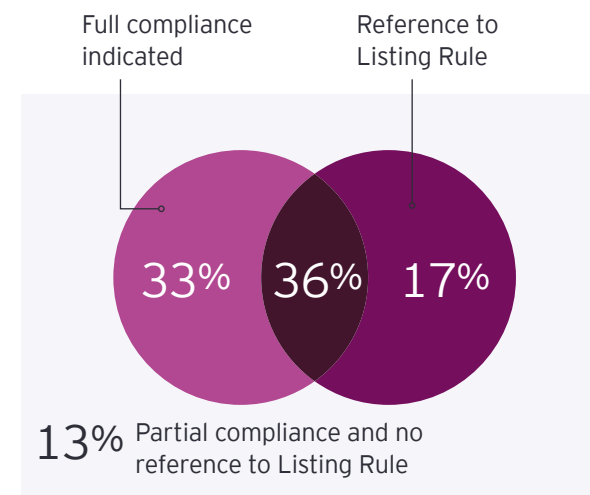
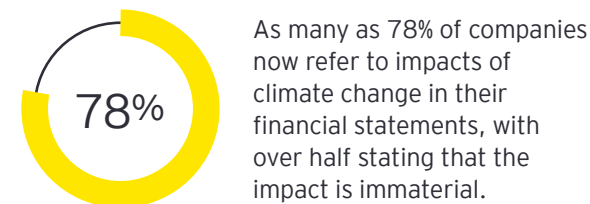
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This is surprising given both the spotlight on these disclosures by investors and regulators, and the fact that they are new. This can also cast doubt over the high levels of stated compliance with the Listing Rule.



6



Introduction



It is clear that the UK **Government's ambition** as announced in November 2020 for the UK to become the first country in the world to make TCFD aligned disclosures fully mandatory across the economy by 2025, going beyond the 'comply or explain' approach is now a reality.

In December 2020, the Financial Conduct Authority (FCA) announced Listing Rule 9.8.6R(8)¹ requiring that for accounting periods beginning on or after 1 January 2021 commercial companies with a UK premium listing include a statement in their annual report which sets out whether they have made disclosures consistent with the recommendations of the TCFD and explain if they have not done so.

The objective of this publication is to share emerging observations on how, based on a sample of over 100 annual reports and accounts (ARAs) of 31 December 2021 FTSE 100 and FTSE 250 reporters, premium listed

companies have complied with LR 9.8.6R(8). We also discuss how disclosures of companies outside of financial services (FS) are likely to need to evolve reporting going forward, in light of the developments set out on the following page.

A publication focussing on FS TCFD reporting trends will be issued separately. Later this year, EY will also publish the *2022 EY Global Climate Risk Disclosure Barometer*, assessing the coverage and quality of climate risk reporting across a global company data set.

Our publication '*Towards TCFD compliance*', issued in May 2021, included hallmarks of leading practice and disclosure, as well as noteworthy examples, aimed at helping companies respond to the new requirements². Much of what we highlighted as leading practice remains so.

¹ Please refer to the appendix for an extract of the Listing Rule and associated Listing Rule Guidance.

² Further examples of good disclosures are included in the October 2021 FRC Lab report "*Taskforce on Climate-related Financial Disclosures (TCFD): ahead of mandatory reporting*"

Since we issued this publication, investor, societal pressures and scrutiny continue at strength, and there have been many notable developments in respect of climate reporting, such as:

- ▶ In October 2021, TCFD **released its fourth status report** and two new guidance documents – updates to the implementation guidance (Annex) initially published in 2017 with the TCFD Recommendations Report and new guidance to disclose plans for a net zero transition and seven categories of cross-industry metrics.
- ▶ Later that same month, the BEIS published the response to its consultation on *Mandatory climate-related financial disclosures by publicly quoted companies, large private companies and LLPs*. The **ensuing regulations** made by Parliament in January 2022 largely reflect the proposals and apply for financial years starting on or after 6 April 2022. In February 2022, BEIS published **non-binding guidance** (to accompany these regulations), which provides answers to commonly asked questions about application and sets out the expectations in respect of each element of the disclosure requirements.
- ▶ In November 2021, at COP26 in Glasgow, the International Financial Reporting Standards (IFRS) Foundation announced the creation of the International Sustainability Standards Board (ISSB)³, with the objective of developing IFRS Sustainability Disclosure Standards for the financial markets. Two prototype standards were published: the general requirements for disclosure of sustainability-related financial information prototype and the climate-related prototype, along with the supplementary technical protocols for disclosure requirements. On 31 March 2022, the ISSB issued the **Exposure Draft IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information** and the Exposure Draft IFRS Sustainability Disclosure Standard 2 (**IFRS S2 / Climate ED**) which supersede the prototypes⁴.
 - ▶ At the same time, the Chancellor, Rishi Sunak announced that by 2023 **UK financial institutions and public listed companies will be obliged to publish “net zero transition plans”** detailing how they will reduce the emissions they respectively finance or are responsible for in order to align their businesses with the UK Government’s commitment on decarbonisation and the economy-wide transition to net zero by 2050.
 - ▶ In December 2021, the FCA announced **a new Listing Rule (LR 14.3.27R)** applicable to standard listed companies for periods beginning on or after 1 January 2022, which not only mirrors the requirements introduced for premium listed companies introduced by LR 9.8.6R(8), but also references the aforementioned updated TCFD guidance materials and introduces additional guidance on transition plans.

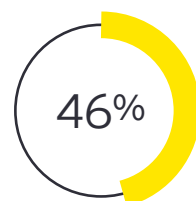
³ The ISSB was formed from the consolidation of: The Value Reporting Foundation (VRF), home to SASB Standards and Integrated Reporting Framework and the Climate Disclosure Standards Board (CDSB)

⁴ For EY’s analysis of the EDs refer to: **ISSB publishes first two EDs on sustainability disclosure requirements | EY – Global**



1 Emerging observations

1.1 Compliance with Listing Rule 9.8.6R(8) and disclosure oversight



did not explicitly reference Listing Rule 9.8.6R(8)

Of the companies in our sample, 46% did not explicitly reference Listing Rule 9.8.6R(8). In such cases, it was often not clear whether the LR Guidance (i.e., LR 9.8.6BG and LR 9.8.6DG) had been taken into account when making the statement required by sub-paragraph (a) of the LR and whether

the disclosure requirements set out in sub-paragraphs (b) and (c) of the LR had been met.

As set out in the FCA's *Primary Market Technical Note TN / 802.1*, sub-paragraph (a) of the Listing Rule 9.8.6R(8) requires companies to make a statement setting out whether they had included climate-related financial disclosures consistent with the TCFD Recommendations and Recommended

Disclosures in their annual financial report. As the wording of the 11 Recommended Disclosures is in fact quite high level, providing a brief qualitative narrative against each could be achieved without great effort. This could suggest that a simple statement confirming that a company has provided such a narrative, regardless of its quality, should suffice to comply with the LR.

The LR Guidance is, however, more prescriptive in setting out how companies should determine whether the disclosures are in fact consistent with the TCFD Recommendations and Recommended Disclosures. The LR Guidance lists out the specific TCFD guidance, documents and technical supplements that should be taken into account in making the assessment. It also states that "a listed company should consider whether those disclosures provide sufficient detail to enable users to assess the listed company's exposure to and approach to addressing climate-related issues," taking into account, amongst other things, levels of its exposure to climate-related risks and opportunities as well as the scope and objectives of its climate-related strategy in the context of its overall nature, size and complexity.

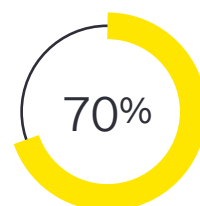
Sub-paragraph (b) of LR 9.8.6R(8) sets out further disclosures that are not governed by the TCFD recommendations:

- ▶ It requires that companies provide reasons for including TCFD disclosures in a document other than the annual financial report.
- ▶ Where companies have not included all TCFD Recommendations and/or TCFD Recommended Disclosures, they need to explain the steps they are taking to make those disclosures in the future, and the related timeframe.

Compliance statements that only state that disclosures consistent with the 11 TCFD Recommended Disclosures have been made, but make no reference to compliance with the broader requirements of the LR, provide readers with less useful information and do not indicate whether the LR Guidance had been properly considered in making the statement.

GSK (Figure 2: 2021 ARA, p49) states both that its disclosures are consistent with the TCFD Recommendations and TCFD Recommended Disclosures, and in compliance with the requirements of LR 9.8.6R. **Direct Line (2021 ARA, p76)** goes a step further and explicitly states that its disclosures are consistent with the supplemental guidance for all sectors and insurance companies, similar to **Melrose (2021 ARA, p60)** which states that in assessing the coverage of TCFD disclosures it took into consideration the guidance documents referred to in the guidance notes to the LR. **Evraz (2021 ARA, pp284-287)** makes clear reference to the LR in its compliance statement, and the cross-reference table provides transparency about the areas of partial compliance and future steps, as

required by sub-paragraphs (b) and (c) in LR 9.8.6R (b) (ii). **Reckitt (Figure 3: 2021 ARA, p66)**, whilst complying with 11 Recommended Disclosures, sets out at a disclosure level the actions required to apply the October 2021 Annex.



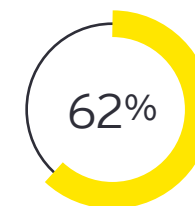
Statements made by around 70% of the companies in our sample indicated full compliance with TCFD Recommended Disclosures

Our **prior year analysis** indicated that only 33% of companies had reported on a voluntary basis against all 11 TCFD Recommended Disclosures. This year, despite the more stringent expectations about the quality of the disclosures introduced through the LR Guidance, 70% of companies indicated that they had.

The manner of disclosing partial compliance varies. **Grafton (2021 ARA, pp82-85)** includes a table to illustrate the timeline for full compliance; **HSBC (2021 ARA, pp19, 63 and 402)** provides a narrative summarising certain areas where climate-related disclosures were not included; **Meggitt (Figure 4: 2021 ARA, p58)** provides both an overview of its compliance status, and further detail in a table that includes status and future priorities for each recommended disclosure.

However, a number of companies within our sample that disclosed partial compliance did not provide (as required by LR 9.8.6(8)R (b) (ii) (C)) the steps needed to reach full compliance, the related timeframe, and in some cases neither. When companies made reference to recognising the need for further improvements and enhancements, it was sometimes not clear whether they considered

progress to date to be nonetheless sufficient to assert full compliance. We also identified vague statements that could question the company's compliance assertion.



Only 62% of companies within our sample were explicit about who had oversight of the TCFD narrative; only five companies directly referred to TCFD disclosures being considered as part of the FBU assessment.

Given this was the first cycle of mandatory TCFD reporting, and the regulatory and investor focus on the disclosures, it is surprising that so many companies remained silent on who had oversight over them. Where this was clearly stated, in the majority of cases this responsibility fell to the audit committee (AC). The AC of **CRH (Figure 5: 2021 ARA, pp5, 66)** oversaw the significant expansion of disclosures in the ARA in line with the expectations of the TCFD, the emerging EU Taxonomy and further disclosures in respect of relevant accounting estimates and judgements. In its assessment of whether the ARA was FBU, the AC of **IHG (2021 ARA, pp96, 99)** oversaw "the proportionate and consistent consideration of climate matters across the Annual Report, including the TCFD statement, and in particular the potential impact on forward-looking assumptions supporting impairment testing, deferred tax assets, going concern and viability assessments." As part of FBU considerations, the AC of **BP (2021 ARA, p108)** reviewed the assurance process in place for non-financial reporting (incorporating TCFD disclosures).



On the other hand, it is the Sustainability Committee at AstraZeneca (2021 ARA, p89) that reviewed its Sustainability Report and TCFD disclosures. In the case of Aviva (2021 ARA, pp2.21 and 2.28) the AC recommended the 2021 climate-related financial disclosures including TCFD to the Board and the Customer, Conduct and Reputation Committee reviewed the content of the TCFD disclosures in preparation for the climate disclosures being voted on (on an advisory basis) at the 2021 Annual General Meeting.

Regulators in the UK are likely to take a more stringent approach once TCFD reporting becomes more embedded, and this will reinforce the need for more robust oversight over the disclosures.

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If a listed company’s disclosures do not appear to meet the requirements of the Listing Rules, the Financial Reporting Council (FRC) is likely, in the first instance, as part of its routine reviews of annual financial reports, to contact the company setting out the issues and asking for further information. Based on this information, the FRC may ask the company to take corrective or clarifying action, such as undertaking to enhance their disclosures in subsequent reports and accounts. We would expect matters to be satisfactorily addressed through this type of engagement without the need for further action regarding the published disclosures. If the FRC is unable to reach a satisfactory conclusion through engagement, the matter will be referred to the FCA to take appropriate action.

In addition, the FRC will refer matters to the FCA which are identified as containing potentially false or misleading information, including the omission of material facts, likely to cause investor harm or which may breach other relevant FCA rules for environmental, social and governance (ESG) matters (see **Technical Note TN 801.1**).

**Financial Conduct Authority,
Primary Market Bulletin 36**

There are limited references to internal or external assurance over TCFD reporting, with only one company within our sample obtaining a limited assurance opinion over this disclosure.

Within our sample, one company – **Polymetal International (2021 ARA, pp261-263)** – included the limited assurance opinion it obtained over its description of activities undertaken in respect of the TCFD Recommendations included in the TCFD disclosure. **Smith+Nephew (2021 ARA, p96)** disclosed that its Sustainability Report, which contains a section about the impact on climate change and cross-references to the TCFD narrative in the ARA, was included in the FBU review undertaken by the internal audit function. **ITV (2021 ARA, p88)** notes that its TCFD report has been subject to review by external advisers. The AC of **LGIM (2021 ARA, p87)** spent time during 2021 considering the scope, focus and quality of the various sources of assurance from which it is able to gain comfort. This included a decision to obtain independent limited assurance over certain elements of the group's climate report.

Our analysis did not indicate that ACs sought comfort over TCFD disclosures as part of the external audit. We identified just a few companies whose auditor stated that, with the involvement of its climate specialists, it had assessed the TCFD disclosures for compliance against the Recommendations of the TCFD framework. In most other cases, audit opinions were either silent; noted that the auditor had considered the consistency of the disclosures in relation to climate change made in the other information within the ARA with the financial statements and its knowledge from the audit; and/or explicitly stated the external auditor had not been engaged to provide assurance over these disclosures.

It will be interesting to observe how this area evolves in the near future in light of increasing demand for assurance over sustainability disclosures. Recent international developments could also influence what happens in the UK with regards to assurance. The **new rules proposed by the Securities and Exchange Commission (SEC)** in the United States (which, amongst other matters, require domestic and foreign registrants to disclose their greenhouse gas (GHG) emissions in a separately captioned section of their registration statements and annual reports) require that disclosures by accelerated and large accelerated filers on Scope 1 and Scope 2 GHG emissions are subject to third-party assurance.

In March 2022, the Legal Affairs (JURI) Committee of the European Parliament (EP) adopted its report on the Corporate Sustainability Reporting Directive (CSRD) proposal of the European Commission (EC). Whilst not yet final⁷, the CSRD will introduce a requirement for limited assurance on sustainability information. Reasonable assurance provisions might come into effect at a later stage.



International Organization of Securities Commissions (IOSCO) will also push forward work to develop assurance standards. IOSCO has identified independent assurance of the quality of corporate reporting of sustainability information as a key element of building trust in sustainability reporting.

IOSCO 2022 work plan to develop sustainable finance

What we are seeing

Rising demand for assurance over TCFD disclosures and GHG emissions

More audit committees and heads of finance have been asking for external assurance over their climate-related financial disclosures.

Although this is predominantly limited assurance under the International Standard on Assurance Engagements (ISAE) 3000, it still provides a degree of comfort that processes to identify climate-related risks and opportunities, governance over these and the approach to scenario analysis are robust and consistent with the relevant TCFD implementation guidance.

There has also been a notable increase in the number of companies seeking assurance over their GHG emissions reporting, including Scope 3 emissions. As performance against net zero targets comes under increased scrutiny, having to adjust for errors in either baselines or more recent data could prove embarrassing and expensive.

This may explain why companies are also asking how they can prepare to obtain reasonable – rather than limited – assurance over their emissions reporting.

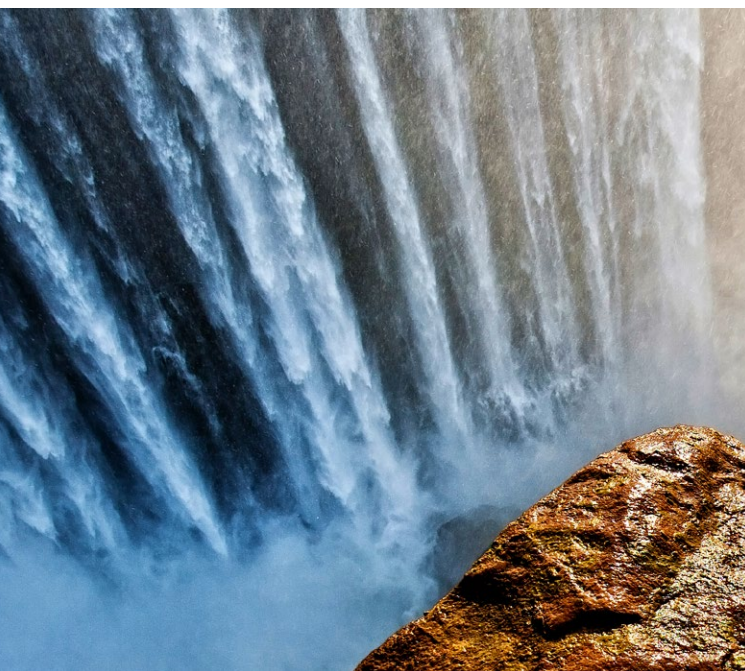
Rebecca Farmer, Partner,
Climate Change and Sustainability Services, EY

⁷ The Council, the EP and EC started negotiations on CSRD under trilogues at the end of March 2022 and could reach an agreement on the text before the summer (end of the French EU presidency).

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Our thematic review of climate reporting found that many large companies have already started to implement the TCFD recommendations. It is important to ensure that the information presented does not appear to be an ‘add-on’ containing boilerplate messages. We found that reporting under the TCFD recommendations was improved where it was better integrated with the company’s strategy with the use of cross-referencing.

FRC: Key matters for 2021/22 reports and accounts



1.2 Location of TCFD disclosures

Around three-quarters of companies provided TCFD disclosures in a discrete section of their ARA – a TCFD insert. Those that integrated TCFD disclosures throughout the annual report seldom did this in respect of all of the Recommendations.

A common theme across the various reporting publications issued by the FRC in the last two years has been a call for better integration of climate reporting across the ARA, especially in respect of strategy, progress against commitments, and the financial statements.

Furthermore, in its **response supporting the ISSB’s prototypes**, one of the suggestions raised by the FRC related to better integration of sustainability considerations into the business model narrative.

However, 76% of companies in our sample chose to group the 11 TCFD Recommended Disclosures within the Strategic Report in the form of a TCFD ‘insert.’ Half of these companies did this within a broader ESG/Sustainability section, and others created a dedicated TCFD section. **AstraZeneca (2021 ARA, pp217-222)** included its TCFD overview within an ‘Additional Information’ section, following the financial statements.

There is benefit in including all TCFD-related disclosures in one place within the ARA, as this approach provides readers with a more holistic view and potentially makes it easier to assimilate than information that is spread out across the ARA. However, when companies also publish a standalone climate or sustainability report (separate from the ARA) with fuller disclosure, we feel there is limited benefit in also having a dedicated TCFD

section/insert in the ARA. In such cases, we would advocate that the TCFD narrative in the ARA is better integrated throughout (with a signpost/cross reference to the standalone climate/sustainability report for further information). This would allow a reader to understand how climate considerations are truly embedded in the business and financial models of the company. Of companies within our sample, 34% published such a report, but very few of these integrated the TCFD information across the annual report. **Rio Tinto (Figure 6: 2021 ARA, p81)** did this fully (whilst, in view of space constraints within the ARA, also referring to other standalone reports), but it was more common for just the governance and risk pillar disclosures to be integrated.

The Recommended Disclosures required under the Strategy Recommendation were integrated least often. **Shell (2021 ARA, pp79-85)** discusses climate-related risks and opportunities identified over the short, medium and long term, taking into consideration different climate-related scenarios. In this context, Shell explains the resilience of its strategy and the ongoing shift from an asset-based to a customer-based business model inherent in its energy transition. **CRH (2021 ARA, p30)** states that based on its initial assessment of the transition and physical risks and opportunities that need to be managed, it does not believe that its business model would need to materially change.

But for the most part, companies do not articulate whether adaptation and transition will require a fundamental shift to the way they do business – which in turn makes it more difficult to ascertain the magnitude of climate change related impacts on the financial statements. As the date for certain companies to publish transition plans approaches (see **section 2.2.2**), it will become imperative that those plans are explicitly reflected within business

model disclosures, as highlighted by the FRC in its ISSB response (noted earlier). Companies also often stay silent on how major divestments, acquisitions or other significant capital allocation decisions take climate considerations into account. **Croda (2021 ARA, p71)** explains how one of the board's major decisions – the divestment of the majority of Croda's Performance Technologies and Industrial Chemicals business operations – impacts the progress of implementing Croda's sustainability strategy. This is noted as a question that was being commonly asked by investors.

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The initial step for a company contemplating the requirements of TCFD for the first time is to ask why it matters. In particular, what it means for the company and its business model.

London Stock Exchange:
Your guide to climate reporting

Furthermore, as new standards are developed based on the same four pillars of TCFD – for example, the Taskforce on Nature-related Financial Disclosures (TNFD), the **beta version** of which was released in March 2022 – companies that continue providing the information in a separate section will risk having multiple, repetitive 'inserts' in their annual reports.

“

I have always been in favour of good roadmap disclosures that provide impactful summaries and direct readers to where they can find more detailed information within the ever-expanding annual report. But I am growing increasingly concerned that the storytelling that, in my mind, is the core strength of the front half in UK annual reports, may be lost. I am not convinced that a multitude of inserts can ever be fair, balanced and understandable.

Maria Kępa, Director,
Governance and Public Policy, EY



2

What does LR 14.3.27R mean for premium listed companies?



The FCA's finalised handbook guidance relating to LR 14.3.27R published in December 2021 incorporated the updated guidance materials issued by the TCFD in October 2021 when it published its fourth status report. As these new and updated materials have been referenced in the LR Guidance as relating to the disclosures required by both LR 9.8.6R(8) and LR 14.3.27R, they will need to be considered by premium listed companies for accounting periods beginning on or after 1 January 2022. Therefore, premium listed companies with years beginning on or after 1 January 2022 will need to consider the following additional items compared to earlier periods.

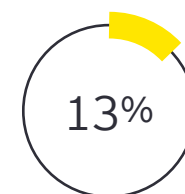
2.1 Implementation Guidance (Annex) updated in October 2021

Some companies have already started to consider the updates to the Annex. **Barclays (2021 ARA, p101)** refers to having considered the **Implementation Guidance (Annex) updated in October 2021** (2021 TCFD Annex) and applying it where possible. Barclays stated, "some recommendations in the 2021 TCFD Annex will require more time for us to fully consider. We will be working to implement the rest of the 2021 TCFD Annex recommendations over the course of 2022 and intend to apply these more fully in our next TCFD Report." **WPP (2021 ARA, p214)** also notes that some of the recommendations published in October 2021 will take more time to fully consider. These relate to detailed time horizon, financial impacts and scenario analysis of climate-related risks and opportunities. WPP will be working to implement the rest of the 2021 TCFD Annex recommendations over the course of 2022 and intends to apply these more fully in the next TCFD Report.

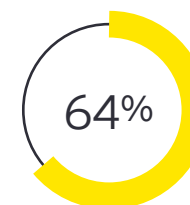
The revised 2021 TCFD Annex updates specific elements of the implementing guidance within the Strategy and Metrics and Targets recommendations. The key revisions applicable to all sectors (excluding those specific to FS) include:

2.1.1 Strategy⁸

Recommended disclosure	Summary of change	Reporting example ⁹
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	<ul style="list-style-type: none"> ▶ Revised to more explicitly address disclosure of actual financial impacts on organisations as well as key information from organisations' plans for transitioning to a low-carbon economy (transition plans) ▶ These impacts may be described in qualitative, quantitative, or a combination of both qualitative and quantitative terms ▶ The Task Force encourages organisations to include quantitative information, where data and methodologies allow 	<p>Refer to section 2.2.2 for examples regarding transition plans.</p> <p>For an example of qualitative impacts of transition and physical risk impacts see Rotork (2021 ARA, pp61-69). An extract is provided in Figure 7.</p>
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario		<p>For an example of quantified financial impacts of scenario analysis see Unilever (Figure 8: 2021 ARA, pp60-62), Mondi (Figure 9: 2021 ARA, p63) and Antofagasta (Figure 10: 2021 ARA, p57).</p> <p>Refer to examples provided in sections 5.1 and 5.2 of financial impacts discussed in financial statements.</p>



13%



64%

Climate-related scenario analysis continues to be an area of challenge, with **13% of companies within our sample not having yet conducted a scenario analysis. Of those that had¹⁰, 64% discussed outcomes in a qualitative manner only**, with many noting that their analysis had not yet been quantified.

Where companies had quantified impacts, 20% limited their disclosures to providing a range that did not disclose values (e.g. high, medium, low) and only 16% provided quantified ranges or more specific quantifications. Quantification was often included in the stand-alone report and not in the ARA.

⁸ Adapted from: Summary of Changes to Guidance, October 2021

⁹ Here and in the tables that follow, we provide examples that to an extent already address the enhanced requirements. However, as these are areas of developing practice, examples will have both good attributes and areas for further refinement.

¹⁰ We excluded from the sample those financial services companies that conducted a Bank Of England Climate Biennial Exploratory Scenario (CBES) analysis only, as individual results cannot be disclosed until the overall official findings have been made public.

2.1.2 Metrics and targets (to be considered in conjunction with **section 2.2.1**)¹¹

Recommended disclosure	Summary of change	Reporting example
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	<ul style="list-style-type: none"> ▶ Revised to more explicitly address disclosure of metrics consistent with cross-industry, climate-related metric categories for current, historical, and future periods, where appropriate ▶ Organisations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management, where relevant and applicable 	<p>For an example of water withdrawal disclosure - one of the key metrics highlighted in the Summary of Changes - refer to example discussed in section 4: Capricorn Energy (Figure 12: Sustainability Report, p25).</p> <p>More holistic examples of metrics are provided in section 2.2.1.</p>
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	<ul style="list-style-type: none"> ▶ Revised disclosure of Scope 1 and Scope 2 GHG emissions to be independent of a materiality assessment ▶ Revised to encourage disclosure of Scope 3 GHG emissions, whilst acknowledging the disclosure is subject to materiality 	<p>AstraZeneca (Figure 11: Sustainability report, p21).</p>
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	<ul style="list-style-type: none"> ▶ Added disclosure of targets consistent with cross-industry, climate-related metric categories, where relevant ▶ Added disclosure of interim targets, where available, for organisations disclosing medium-term or long-term targets 	<p>GSK (Figure 2: 2021 ARA, pp50-51)</p> <p>Refer to Rio Tinto's Climate Change Report 2021 and Unilever's Climate Transition Action Plan (pp47-51) discussed in section 2.2.2.</p>

¹¹ Adapted from: **Summary of Changes: 2017 to 2021 TCFD Annex**, October 2021

What we are seeing

Increasing the rigour in the reporting of climate-related metrics

As companies' climate-related targets and metrics become central to business strategies and decision-making processes, there is heightened focus on the quality of the data underpinning these metrics.

Reporting in line with the cross-industry and recommended industry metrics will require a broader range of non-financial data than just GHG emissions, and the processes and controls underpinning this data are far less mature than those for financial data. Metric definitions and boundaries are also more ambiguous. We see leading companies undertaking end-to-end analyses of their data processes to fully understand data sources and the potential for control weaknesses.

Many companies do not yet have the systems to support timely and accurate reporting, so bolstering the first line of defence will be critical for improved reporting going forwards.

Rebecca Farmer, Partner,
Climate Change and Sustainability Services, EY

2.2 TCFD Guidance on Metrics, Targets and Transition Plans

2.2.1 Metrics and targets

The **TCFD Guidance on Metrics, Targets and Transition Plans** encourages all preparers to begin disclosing metrics across seven metric categories, applicable to all sectors. **Examples of companies** reporting against these metrics are listed below.

Whilst the use of specific metrics is not mandated, the categories provide a useful framework to further assess the financial impacts of climate change on business performance and will drive convergence. For some categories, implementation may take time as data and methodologies evolve. We expect that in the next reporting cycle companies may need to state partial compliance if they are unable to provide metrics against all the categories.

Metric category	Description	Example
GHG emissions	Absolute Scope 1, Scope 2, and Scope 3 emissions (Organisations should refer to the GHG Protocol's the Corporate Value Chain (Scope 3) Accounting and Reporting Standard for guidance on reporting on Scope 3 emissions) Emissions intensity	AstraZeneca (Figure 11: Sustainability report, p21)
Transition risks	Amount and extent of assets or business activities vulnerable to transition risks	Antofagasta (Figure 10: 2021 ARA, pp55-57)
Physical risks	Amount and extent of assets or business activities vulnerable to physical risk	Segro (Figure 13: 2021 ARA, p95)
Climate-related opportunities	Proportion of revenue, assets or other business activities aligned with climate-related opportunities	Segro (Figure 13: 2021 ARA, p95)
Capital deployment	Amount of capital expenditure, financing or investment deployed toward climate-related risks and opportunities	Segro (Figure 13: 2021 ARA, p95)
Internal carbon prices	Price on each ton of GHG emissions used internally by an organisation	Rio Tinto (Figure 6: 2021 ARA, p80)
Remuneration	Proportion of executive management remuneration linked to climate considerations	National Express (Figure 14: 2021 ARA, pp98-99)

What we are seeing

Understanding Scope 3 emissions

Understanding and reliably measuring Scope 3 emissions is becoming an area of increasing focus for investors and companies.

Some of the key challenges when measuring, monitoring and managing Scope 3 emissions include limitations to data availability, as well as the need to engage with a wide range of stakeholders internally, in supply chains and the whole lifecycle of the product. Given the global nature and complexity of many supply chains, gathering the required data and fully understanding Scope 3 emissions in line with various established and emerging methodologies can be difficult.

Nonetheless, understanding Scope 3 emissions is not only an important element of TCFD reporting, but also fundamental to decarbonisation strategies across most industries given the largest proportion of emissions often constitute Scope 3. This is where the most meaningful changes can be made to reduce emissions and make progress against net zero targets.

Rebecca Farmer, Partner,
Climate Change and Sustainability Services, EY

Tyman (2021 ARA, p68) notes that it reports metrics and targets that align with several of the newly launched TCFD 'cross-industry, climate-related metric categories'. As its knowledge of climate risks and opportunities improves in 2022, Tyman expects to be in a better position to consider additional metrics and targets, such as risk exposure and capital deployment.

The guidance also explains that climate-related targets should: be linked to defined metrics to allow measurement and progress tracking; be periodically reviewed and updated; be quantified and measurable; have a clearly defined time horizon and baseline; and be reported on at least annually in an understandable and contextualised manner. This is similar to observations raised in the FRC's thematic review – *Streamlined Energy and Carbon Reporting (SECR)*, which points out that more needs to be done to make SECR disclosures understandable and relevant for users. **National Express (Figure 14: 2021 ARA, pp38-39)** includes a table that shows the overall group targets through to 2025 and progress to date from the baseline year. More detail on these targets and on performance against them is set out in the detailed environmental data disclosures at the end of the ARA.

When setting targets, companies may want to consider the sectoral decarbonisation pathways set out by the Transition Pathway Initiative (TPI). TPI aligns with the recommendations of the TCFD and its pathways are used by investors to assess how far companies in their portfolios are aligned with the goals of the Paris Agreement.

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As an example, TPI's decarbonisation pathway for aviation states that if an individual company wants to be aligned with a 1.5°C path, then its emissions intensity by 2030 must be below 616 tonnes of CO₂/RTK (revenue tonne kilometre). This level of granular detail allows investors to judge companies' target-setting, and to hold companies to account as their real-world emissions are reported year-on-year.

TPI Sectoral Decarbonisation Pathways



2.2.2 Transition plans

As they are a key component of a company's strategy to address its climate-related risks and opportunities, the guidance also covers the characteristics of effective transition plans. This guidance is especially important in the context of the **UK Government's announcement in November 2021** that it will be making climate transition plans for listed organisations and financial institutions mandatory by 2023. To advance this, HM Treasury launched in April 2022, the **UK Transition Plan Taskforce** bringing together British industry experts and academia with regulators and the third sector.

Key outputs over its two-year mandate will include recommendations for a disclosure framework for standardised and meaningful transition plans; developing guidance and a set of templates setting

out both generic and sector-specific disclosures and metrics; creating guidance on the role of governance and assurance; and building relationships with international organisations overseeing relevant international standards (including the ISSB, TCFD, etc).

Companies are encouraged to disclose key information from their transition plans and report on progress. Information should include the following:

- ▶ Current GHG emissions performance
- ▶ Impact on businesses, strategy and financial planning from a low-carbon transition
- ▶ Actions and activities to support transition, including GHG emissions reduction targets (including target dates, scope and coverage) and planned changes to businesses and strategy

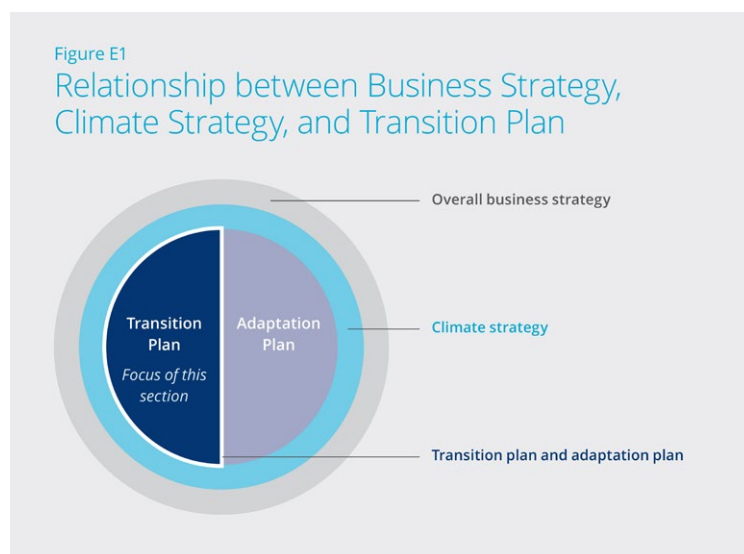
Organisations should also consider describing the assumptions, uncertainties and key methodologies associated with their transition plans.

Part 2 of **Rio Tinto's Climate Change Report 2021** is dedicated to its Climate Action Plan. This covers GHG emissions across all three scopes and sets out the commitment to reach net zero emissions by 2050 and interim targets to reduce emissions by 15% by 2025; and by 50% by 2030, relative to a 2018 emissions baseline. The report also explains how capital allocation will align with the 1.5°C decarbonisation strategy, including the aim to phase out the purchase of diesel haulage trucks and locomotives by 2030.

Unilever's Climate Transition Action Plan (Figure 16: Climate Transition action plan, pp47, 51)

sets out a range of targets and actions designed to deliver an emissions reduction pathway consistent with the 1.5° ambition of the Paris Agreement. Unilever discloses both its targets and interim targets, explaining that whilst it has set interim emissions reduction targets, it has not set interim 'net zero' targets as it believes that such targets would create tension between investing in offset purchases and investing in GHG reductions in the value chain, which would be counterproductive.

In relation to this, the FCA introduced additional guidance (LR 9.8.6FG) setting out that a listed company that is headquartered in, or operates in, a country that has made a commitment to a net zero economy is encouraged to assess the extent to which it has considered that commitment in developing and disclosing its transition plan. Where it has not done so, it is encouraged to explain why.



A transition plan is an aspect of an organisation's overall business strategy that lays out a set of targets and actions supporting its transition toward a low-carbon economy.

An adaptation plan lays out how an organisation aims to minimise risks and capture opportunities associated with physical climate changes.

What we are seeing

Climate transition plans

Going forwards, we anticipate that companies will be measured not just on the level of ambition in their climate goals, but on the delivery and improvement in their carbon performance.

We know that whilst many companies have set net zero targets, only a few have true clarity around how these targets will be achieved, both in the interim and longer term. Setting a robust transition plan requires a clear carbon inventory, together with associated carbon reduction plans and measures. In reality, there is typically a gap between identified emissions abatement and publicly expressed targets, so further work will be needed to identify and estimate the potential costs and resource needs for new abatement projects.

In order to deliver real carbon reduction across the value chain, investment strategies will need to be driven with appropriate tools, such as shadow carbon pricing, and marginal abatement cost curves used to prioritise investment opportunities.

The transition to net zero is likely to be complicated, and those who can articulate a clear decarbonisation strategy will find it easier to access the capital needed to achieve their plans.

Rebecca Farmer, Partner,
Climate Change and Sustainability Services, EY

A report released by Climate Disclosure Project (CDP) in February 2022 analysed the current state of climate transition plan relevant information disclosed through CDP's 2021 Climate Change Questionnaire by over 13,000 corporates in 13 industries and 117 countries. CDP's disclosure platform translates the TCFD recommendations and pillars into disclosure questions and a standardised annual format, providing a mechanism for reporting in line with the TCFD recommendations.

The analysis found that only one-third reported developing a low-carbon transition plan, and less than 1% reported on all 24 key indicators set out in the CDP Climate Change questionnaire. Disclosure rates for targets were significantly lower than any other climate transition plan element.

According to the report, in 2021, 17% of all UK organisations disclosed at least 80% of the key indicators. Of these 188 organisations, 16 disclosed all key indicators (making the UK one of the geographic leaders, alongside Japan). Most UK organisations (82%) disclosed some (<80% threshold) of the key indicators.

However, 68% of companies in our sample did not make any reference to a transition plan.

Those that did were at times not clear whether one is being developed or already in place and approved by the Board. In some cases, it was also unclear whether the plan being referred to had the requisite CDP indicators of a transition plan as opposed to being an articulation of commitment.

Aviva (2021 ARA, p2.28) states clearly that the Board and the Customer, Conduct and Reputation Committee provided oversight of the Aviva Climate Transition Plan. Centrica (Figure 15: 2021 ARA pp32, 57 and 81) provides this clarity by including the development and publication of its Climate Transition Plan as a principal decision within its section 172(1) statement. It also notes that it will put the plan to a shareholder vote at the 2022 AGM, and the factors its Remuneration Committee will consider when making the 2022 remuneration awards include progress against its Climate Transition Plan.

Around 10% of companies in our sample made reference to a Say on Climate vote – either referencing a vote that had already taken place and its outcomes or stating that one is scheduled to take place.



3

What do the Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022 mean for premium listed companies?



The **Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022** (the Regulations¹¹) amend sections 414C, 414 CA and 414CB of Companies Act 2006 and require ‘in-scope’ companies with financial years beginning on or after 6 April 2022, to report certain climate-related financial disclosures in the non-financial and sustainability information statement (‘NFSI statement’) – renamed from the non-financial information statement – which forms part of the Strategic Report (SR).

Premium listed companies commonly provide the non-financial information in an index table to meet the requirement of including it in a discrete section of the strategic report; going forward, they will need to expand such tables to incorporate TCFD disclosures. No companies within our sample had done so yet, although some included a standalone

TCFD cross-reference table within the SR, and some at the end of the ARA. For example, **Polymetal International (2021 ARA, p264)** included its TCFD Content Index in one of the appendices following the financial statements, as did **Vivo Energy (2021 ARA, p188)**.

In February 2022, BEIS published **non-binding guidance** alongside these Regulations (‘BEIS non-binding guidance’) to explain and clarify the scope, content and interaction with other regulatory requirements and signal future developments. The BEIS non-binding guidance makes clear that information material to an understanding of the business must be provided within the ARA or the company must provide a clear and reasoned explanation for the directors’ belief where information has been omitted on the basis it is not material.

¹¹ The Regulations may impact premium listed groups which have a UK incorporated parent company and 500 employees or more.

It is therefore not appropriate for in-scope companies to cross reference to a report outside the ARA (such as a sustainability report located on the company website, even though this would be permitted for TCFD disclosures by the Listing Rules). Consequently, whilst companies can ‘signpost’ more detailed information available elsewhere, premium listed companies that have referred to ‘TCFD reports’ outside the annual report to meet the requirements of LR 9.8.6R(8) will in the future need to include sufficient information in the ARA to meet the statutory requirements.

Many companies that had included reference to other reports in their TCFD statement this year, such as **Anglo American (Figure 17: 2021 ARA, pp102-103)**, did so to provide detail in addition to the disclosures included in the ARA. **Barclays (2021 ARA, p101)**, however chose to include no more than a paragraph per TCFD pillar within its ARA, explaining that, “for ease of review, and given the detailed and technical content of the TCFD Report, we have once again published this as a standalone report.” **LGIM (2021 ARA, pp44-45)** also took a similar approach, different to **HSBC (2021 ARA, p44)** which changed the way it presents TCFD disclosures, noting that, “Our overall approach

to TCFD can be found on page 19 and additional information is included on page 63. Further details, which last year were presented in a separate supplement, have been embedded in this section [Our approach to ESG] and the Risk review section on pages 131 to 135.” For financial years beginning on or after 6 April 2022 (when the Regulations become effective), companies that present information mainly in standalone reports will need to follow HSBC’s example.

The BEIS non-binding guidance sets a high bar for disclosure expectations, and, unlike the LR, there is no allowance for companies to explain why they have been unable to meet any of these expectations, where the disclosure would be material. This is especially relevant to those that are less progressed on their TCFD journey and whose timeline for full compliance with the LR extends beyond the next two years.

In particular, the BEIS non-binding guidance emphasises the requirement under the Regulations to consider scenarios (in the plural) rather than a single scenario. It adds that the scenario analysis can be qualitative in approach rather than quantitative and also clarifies that it need not be undertaken annually but must be renewed at least every three years and/or when there is a significant change in assumptions for example, due to developments in climate science or a change in the business. Not conducting multiple scenario analysis does not seem allowable under the Regulations and the BEIS non-binding guidance, albeit a qualitative assessment is acceptable. Companies might find the research commissioned by the FRC from Alliance Manchester Business School – *Climate Scenario Analysis: Current Practice and Disclosure*

Trends – useful in understanding the practical processes and approaches used by UK companies in conducting climate scenario analysis. The FRC Lab’s September 2021 publication – ***Reporting on risks, uncertainties, opportunities and scenarios*** – also provides useful insights about investor needs regarding scenario reporting more broadly.

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This report provides insight into how climate scenario analysis is being used and reported on by FTSE 100 and FTSE 250 (FTSE 350) companies. It highlights the various approaches companies have adopted, instances of good practice, typical challenges faced, and the common steps taken to conduct the analysis. It also explains how certain governance arrangements, such as a senior and cross-functional climate change working group, enrich analytical insights and drive effective action on outcomes. Whilst other forms of scenario analysis were also studied as part of this research, its climate-related applications form the focus of this report.

**Climate Scenario Analysis:
Current Practice and Disclosure Trends
FRC, Alliance Manchester Business School**

4

What does the ISSB's Climate Exposure Draft mean for premium listed companies?

On 31 March 2022, the ISSB issued an Exposure Draft of **IFRS S2** (which supersedes the prototype published in November 2021 by its Technical Readiness Working Group) along with a comparison of substantive changes. Most notable is the update associated with the financial impacts of climate-related risks and opportunities on an entity's financial position, financial performance and cash flows. The entity should provide quantitative information, which may be expressed as a single amount or a range, unless it is unable to do so, in which case it would provide qualitative information. This reflects the aforementioned changes in the 2021 TCFD Annex set out in **section 2.1.1**.

The ISSB's consultation period is set to close on 29 July 2022, after which the ISSB will review feedback on the proposals in the second half of 2022 and aim to issue both standards by the end of the year, subject to the feedback.

"As with the adoption of International Accounting Standards (IAS/IFRS), it will be for individual jurisdictions to determine whether these standards

are mandated for use, the scope of companies affected and the timeframe over which this might take place.¹²" The precise timeframe for these ISSB reporting standards to be endorsed and adopted in the UK is unknown. However, the BEIS non-binding guidance already signals that BEIS is working on measures which will allow the Government to adopt the ISSB international disclosure standards for use in the UK and to require certain companies to report against them. Similarly, in its **Policy Statement PS21/23**, the FCA was clear that it expects that its climate-related disclosure rules will be updated in due course to reference the ISSB's reporting standards, once endorsed for use in the UK.

Unlike the **TCFD Guidance on Metrics, Targets and Transition Plans**, which does not mandate the use of specific metrics, the ED requires companies to report on the cross-industry climate metrics proposed by TCFD (subject to materiality). Additionally, in Appendix B, the ED sets out additional industry-specific climate metrics. Industry definitions and technical protocols for each metric are included in the ISSB's Technical Protocols for Disclosure

Requirements Supplement. These metrics, derived from Sustainability Accounting Standards Board (SASB) Standards, extend beyond those related to GHG emissions and include concepts such as water withdrawn and consumed in water stress regions or metrics related to supply chain management¹³. The FRC has been encouraging UK companies to report in line with SASB standards and, according to its **SASB snapshot**, there are already over 40 UK listed companies that do so. For example, **Capricorn Energy** in its sustainability report provides disclosures aligned with SASB Oil & Gas – Exploration & Production Standard and ISAE 3000/3410, and includes a metric for Total Water Withdrawal (m³) (**Figure 12: Sustainability Report, p25**).

In preparation for the adoption of the ISSB's reporting standards in the UK, premium listed companies may want to start analysing the differences between their current TCFD reporting and ED IFRS S2 to understand what the incremental requirements in the ED IFRS S2 may be, including, for example, misalignment with the bases of calculation and presentation and the mandatory use of cross-industry and industry-specific metrics.

¹² **FRC: Frequently Asked Questions: International Sustainability Standard Setting**

¹³ Refer to the IFRS Foundation's **Comparison [Draft] IFRS S2 Climate-related Disclosures with the TCFD Recommendations** for a detailed analysis of differences

5 Climate in the financial statements, going concern and viability statement



- ▶ There is an increased focus on the measurement and disclosure of climate-related matters in an entity's financial statements.
- ▶ The determination of the effects of climate change on an entity's financial statements may require significant effort and judgement.
- ▶ Entities are required, at a minimum, to follow the specific disclosure requirements in each IFRS standard. Entities may need to provide additional disclosures in their financial statements in order to meet the standards' disclosure objectives. Hence, in determining the extent of disclosure, entities are required to carefully evaluate what information is required for users to be able to assess the effects of climate change on their financial position, financial performance and cash flows.
- ▶ This publication is intended to support entities in assessing and reporting on the effects of climate change by providing helpful observations and illustrations.

Applying IFRS – Accounting for Climate Change, EY, Updated May 2022

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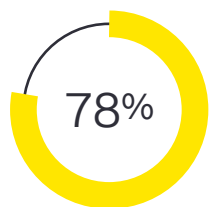
It is easy to produce TCFD reporting that 'ticks the box' without being insightful or 'decision-useful'. If it does not flow through to the financial statements, the objective has not been achieved.

Freddie Woolf
Global Sustainable Equities Analyst,
Jupiter Asset Management

Last year, Carbon Tracker and the Climate Accounting Project published **a study** which examined whether publicly listed carbon-intensive firms (and their auditors) considered material climate-related risks in financial reporting.

Of the 107 global companies that were reviewed, the study concluded that over 70% did not indicate that they had considered climate matters when preparing their 2020 financial statements. Additionally, 80% of auditors provided no indication of whether or how they had considered material climate-related matters, such as the impact of emissions reduction targets, changes to regulations, or declining demand for company products, in their audits.

In our cross-industry sample this year:



explicitly referenced climate change in the financial statements

- ▶ 78% of companies explicitly referenced climate change considerations in basis of preparation, judgement and estimates or impairment/valuation notes in the financial statements; in some cases, companies

have explained how climate was considered in the financial statements in a separate note.

- ▶ Just under half referenced such considerations in the viability statement.
- ▶ 54% included explicit statements that the impact of climate change is not material to the financial statements, whilst 13% indicated that the impact could be material. In either case, very few disclose the quantification that led to the conclusion.

At the same time, references to climate considerations in UK external audit opinions are now the norm, reflected in 95% of them. However, only 37% of ACs called out explicitly that their work had included a consideration of the impact of climate change on financial statements.

The AC of **Rentokil (Figure 18: 2021 ARA, pp106-109, 155)** reports that it reviewed management's analysis undertaken to link the expected levels

of climate risk and climate change impacts to accounting standards and recommended to the board a paper on climate change reporting in the 2021 financial statements. This analysis is also referenced in the basis of preparation note. The AC of **Shell (2021 ARA, p160)** includes climate change and energy transition as a significant accounting and reporting consideration. Unlike these examples, references made by ACs were often purely cursory.

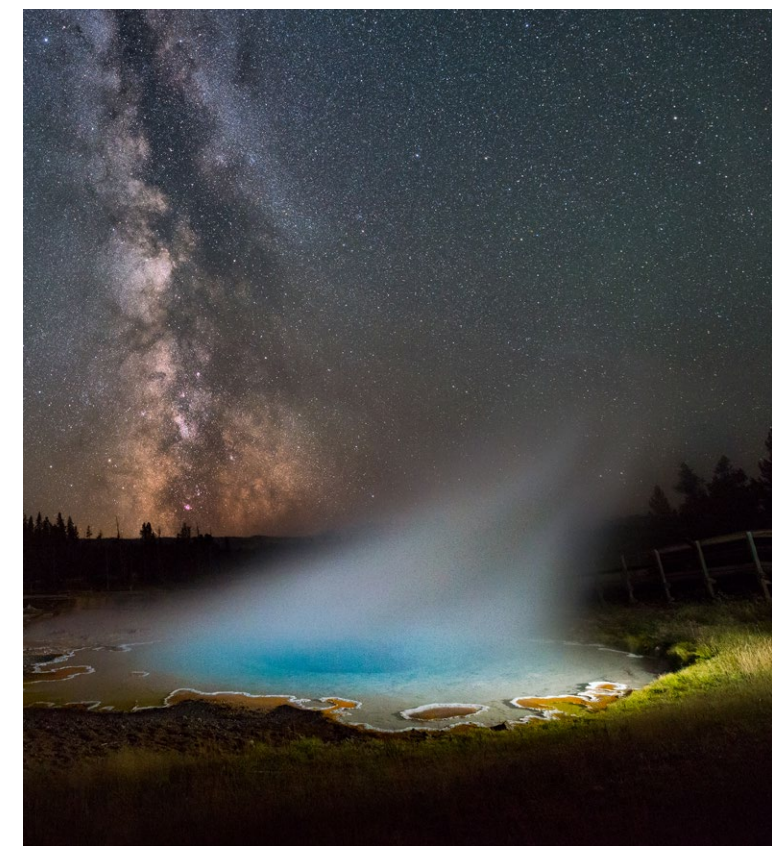
Whilst in many cases, the references in financial statements may also come across as being somewhat superficial, this is clearly a positive step change from the prior year and an increasing number of companies did report on the impact of climate change on their financial statements in a meaningful way.

5.1 Basis of preparation and judgements and estimates

Some companies provide an overview of the impact of climate on the financials in the basis of preparation / accounting policies note.

Smith+Nephew (2021 ARA, p152) explains that the impact of climate change was considered in respect of the going concern and viability assessments, cash flow forecasts used in the impairment assessments of non-current assets including goodwill and carrying value and useful economic lives of property,

plant and equipment and notes that, "the climate change scenario analyses undertaken this year in line with TCFD recommendations did not identify any material financial impact." **Unilever (2021 ARA, p118)** makes a similar statement: "In preparing these consolidated financial statements we have considered the impact of both physical and transition climate change risks on the current valuation of our assets and liabilities. We do not believe that there is a material impact on the financial reporting judgements and estimates arising from our considerations and as a result the valuations of our assets or liabilities have not been significantly impacted by these risks as at 31 December 2021."



Rio Tinto (Figure 6: 2021 ARA, pp219-220) explains that its analysis of climate impacts, and therefore commodity price assumptions, is based on a blend of three scenarios, only one of which represents the Group's view of the goals of the Paris Agreement. For this reason, the impairment outcome cannot be described as Paris-aligned. Rio Tinto also explains that for internal approval purposes it uses a notional carbon price of US\$75/t CO₂e. **Anglo American (2021 ARA, p186)** on the other hand states that its specific TCFD scenarios "are not used as an input to asset valuations for financial reporting purposes as no single scenario is representative of management's best estimate of the likely assumptions that would be used by a market participant when valuing the Group's assets."

In the accounting judgements and estimates note, **ITV (2021 ARA, p180)** states that: "Climate related risks have been identified as an emerging business risk, however the Directors do not view them as a source of material estimation uncertainty for the Group." A similar sentiment is expressed by **Bodycote (2021 ARA, p99)**. **Meggitt (2021 ARA, p191)** on the other hand explains that its critical accounting judgement regarding the capitalisation of development costs reflects the extent to which the impacts of climate change may impact the future original equipment and aftermarket revenues the group will derive from the aerospace programme. **Mondi (Figure 9: 2021 ARA, pp62-63, 183)**, when discussing climate change as one of the significant accounting estimates within its basis of preparation

What we are seeing

Move towards quantification of financial impacts

As TCFD-aligned disclosures are maturing, companies are increasingly conducting scenario analysis, to gauge the potential future financial impact different climate scenarios may have. This requires a deep understanding of the climate-related risks and opportunities that could affect a company now and in the future. Companies are updating their corporate risk registers and risk management processes to reflect this more adequately.

Quantifying the financial impacts of these climate-related risks and opportunities can vary in complexity depending on the nature of the risk or opportunity, as well as on the financial modelling approach. We are already starting to see companies re-engage on this for their next financial year-end. They are bringing a combination of operational, sustainability and finance teams together to ensure that financial implications are properly understood and modelled accordingly.

Rebecca Farmer, Partner,
Climate Change and Sustainability Services, EY



Many companies talk about being 'Paris-aligned', but there is significant uncertainty surrounding the ways in which society, government policy, technological advancement and the world economy will change over the next 30 years; the extent to which such changes will meet the aspirations of the Paris Agreement and whether and how these will affect an individual company. Whilst companies can commit to these aspirations, financial reporting under IFRS is based on reasonable and supportable assumptions that represent management's current best estimate of the range of economic conditions that will exist in the foreseeable future. There are no accounting and reporting standards that govern the application of 'Paris-aligned' accounting within the financial statements.

Gary Donald, Partner, Assurance, EY

note, concludes there was no material impact. Its TCFD scenario disclosure includes estimated EBITDA impacts and their expected time horizon. Additionally, the fact that climate change related risks are reflected in accounting policies and financial reporting is referenced as part of Mondi's discussion of the strategy pillar within its TCFD disclosure.

5.2 References in balance sheet notes

Most commonly, companies included climate considerations in respect of goodwill and intangible impairment considerations, and slightly less often in respect of property, plant and equipment. When discussing impairment testing within its intangible assets note, **BAT (2021 ARA, p207)** explicitly states that: "The impact of climate change on the future cash flows has been considered for scenarios analysed in terms of future access to tobacco and nicotine. The climate change scenario analyses – conducted in line with TCFD recommendations – undertaken this year did not identify any material financial impact." A similar sentiment is expressed by **IHG (2021 ARA, p176)** which states in its goodwill and other intangible assets note that the potential downside risk of physical and transitional climate risks has been considered when testing goodwill and brands and could be absorbed within existing headroom, without taking account of opportunities or mitigating actions. **Drax (Figure 19: 2021 ARA, p209)** discusses a significant estimation uncertainty in respect of the useful economic life estimates of its Drax Power Station's biomass assets and quantifies the potential impacts on depreciation.

In financial services, valuation considerations also included financial instruments. **abrdrn (2021 ARA, p214)** concludes that having considered implications of climate-related risk for the 2021 financial statements, there are no impacts on the valuation of the Group's assets and liabilities including the valuation of financial instruments held at fair value through profit or loss (in particular, in relation to level 3 investments) or at amortised cost (in particular in relation to expected credit losses).

Many companies within extractive industries (e.g., **Glencore**) also discuss climate considerations in respect of restoration/decommissioning provisions. Other less common examples include references to deferred tax (e.g., **IHG**), contract loss provisions (e.g., **Rolls Royce**), allocation of transaction price in variable revenue considerations (e.g., **Serco**), impact on the valuation of investments underlying post-employment benefit obligations (e.g., **BAE Systems**) and biological assets (e.g., **Smurfit Kappa**).

Tullow Oil (2021 ARA, p146) summarises the impacts of climate change and energy transition in note 26, which covers financial planning assumptions and potential impacts on specific balance sheet line items. In respect of both intangible exploration and evaluation assets and property, plant and equipment, Tullow Oil quantifies the potential write-off to intangible exploration and evaluation assets under its "Net Zero Emission by 2050 Scenario." In respect of decommissioning provision, Tullow explains that the energy transition could result in decommissioning taking place earlier than anticipated and sets out how production assumptions would accelerate. **IAG (Figure 20: 2021 ARA, pp212-213)** also brings together the various considerations into one note – Note 4 Impact of climate change on financial reporting – which

is split into two sections: Significant transactions and critical accounting estimates, assumptions and judgements in the determination of the impact of climate change, and Critical accounting estimates, assumptions and judgements – cash flow forecast estimation.

5.3 Going concern and viability statements

Given that most companies consider climate change not to be a risk likely to materialise in the short term, it is not surprising that only around a quarter of companies in our sample made reference to climate change considerations in respect of going concern assessments, whereas just less than half referenced it in the viability statement. In many cases, these references were, however, very high level and did not provide much insight into exactly what had been considered in the assessments or how climate change was incorporated into scenarios. **Rolls Royce (Figure 21: 2021 ARA, pp58-60)** on the other hand sets out that whilst it is unlikely that physical and transition risks will arise during the 18-month period being assessed for going concern, both physical and transition risks have been considered. The viability statement includes reference to the TCFD scenario in which climate change increases costs, reduces sales volumes and disrupts supply chains. A number of banks (e.g., **NatWest, Standard Chartered**) referred to the CBES stress test for banks.

6 Conclusion



It is clear from our analysis that there has been a positive step change in both the extent of TCFD reporting and how climate considerations are reflected in the financial statements. However, equally clear is that the quality of the reporting varies. We had expected more companies to take advantage of the 'comply or explain' basis of LR9.8.6R(8) in the first reporting cycle and set out those aspects of the recommendations, where the analysis and related disclosures are not yet fully developed to meet the high standard set out in the various TCFD guidance documents. On the contrary, the vast majority of companies asserted full compliance, and many did so on the basis of simply having provided commentary against each of the 11 recommended disclosures.

It will be interesting to see how these companies evolve their disclosures in the next reporting cycle, to reflect the changes introduced by the 2021 TCFD Annex and **TCFD Guidance on Metrics, Targets and Transition Plans, the BEIS Regulations and non-binding guidance** and how they discuss their progress towards establishing transition plans.

We also hope that in the next reporting cycle there will be better integration of the TCFD disclosures into the strategic narrative.

A company we spoke to in the energy sector about their transition plan stated that their entire strategy was, in fact, their transition plan. Granted, this won't be the case for all companies, but for many, climate considerations will need to be much better embedded into everyday decision making and this in turn reflected in the flow of the related narrative.

Undoubtedly, even those companies that provided high-quality disclosures this year cannot stand still. Numerous changes have already been effected and, as indicated in *Greening Finance: A Roadmap to Sustainable Investing*, more is yet to come. ACs will also need to keep a close watch on international developments, especially CSRD. Whilst not yet final at the date of writing, it could impact large EU subsidiaries of UK companies and UK companies which have transferable securities listed on EU-regulated markets.

7 Examples



Figure 1

Template statement of compliance with Listing Rule 9.8.6R(8). Annotations provided in red boxes are mandatory to meet the LR requirements; annotations in green boxes are recommendations of good practice.

Consider for each TCFD element/pillar – providing a high-level overview of the degree of progress made, emphasising any major changes implemented during the year	TCFD elements	TCFD recommended disclosures	Cross-reference or explanation of non-compliance	Next steps and other comments	Set out key focus areas for next year Consider explaining readiness to comply with any changes to requirements applicable for the next reporting cycle
	Governance	a. Board oversight b. Management's role			
	Strategy	a. Climate-related risks and opportunities b. Impact on the organization's businesses, strategy, and financial planning c. Resilience of the organization's strategy			
Consider commenting on progress in preparing a climate transition plan	Risk Management	a. Risk identification and assessment processes b. Risk management process c. Integration into overall risk management			
Consider commenting on progress in being able to report scope 3 GHG emissions	Metrics and Targets	a. Climate-related metrics in line with strategy and risk management process b. Scope 1, 2, (and 3) GHG metrics and the related risks c. Climate-related targets and performance against targets			Consider explaining any scope differences to the SECR disclosure

Cross-reference to where the disclosure can be found. If cross-referencing to another document, explain why the information is not included in the annual report, or that you consider the information in the other document to be supplementary / superfluous to meeting the disclosure requirement

For any partial or non-compliance – explicitly state the reason

In the case of partial or non-compliance set out the steps needed to address the gap and the expected timeframe for doing so

In meeting the requirements of Listing Rule 9.8.6R(8), we have concluded that

- ▶ We comply with TCFD Recommended Disclosures X, Y, Z
- ▶ We partially comply with TCFD Recommended Disclosures A, B, C
- ▶ We do not comply with Recommended Disclosures I, J, K

In assessing compliance we took into consideration the documents referred to in the guidance notes to the Listing Rule. In the table above we cross-refer to where the disclosures are located or provide reason for non-compliance.

Figure 2

GSK (2021 ARA, pp49-51) states both that its disclosures are consistent with the TCFD Recommendations and TCFD Recommended Disclosures, and in compliance with the requirements of LR 9.8.6R. It also provides targets for metrics relating to water use and non-circular waste, amongst others.

Risk management continued

Climate-related financial disclosure

GSK climate-related disclosures are consistent with the recommendations and recommended disclosures of the Task Force on Climate-related Financial Disclosures (TCFD), and in compliance with the requirements of LR 9.8.6R (UK listing rules).

GSK has been reporting on climate-related financial disclosures in accordance with the TCFD recommendations since 2019, with the purpose of building trust and connecting both our strategic and financial disclosures to climate change. In 2021, we have expanded disclosure by undertaking a more detailed review of GSK's manufacturing operations and our inhaler portfolio, which is the largest contributor to GSK's current carbon footprint within our portfolio of medicines, vaccines and consumer products. GSK's carbon reduction pathway to become net zero by 2030 can be found here¹ on gsk.com. We will continue to evolve our future climate-related disclosures by building further climate risk assessments into our external supply chain.

Summary of GSK's risks and opportunities

Physical risk/ description	Scenario	Risk management	Potential profit impact/ timeframe	Metrics	Targets
Increasing levels of water stress which reduces the availability of water for our operations.	BAU and low carbon	We have performed water stewardship risk assessments for all our manufacturing sites and we have identified ten sites in our current network that are currently in areas of high-water risk.	Low: <£100m/ Long: 3-10 years	Sites that have achieved water stewardship*	Achieve good water stewardship at 100% of our sites by 2025
		GSK uses freshwater as the main source of water to manufacture medicines, vaccines, and consumer health products. If water availability was restricted at a factory then production operations would be interrupted.		We are developing plans for these sites to become water neutral by 2030 and will partner with other organisations to address shared water challenges. We are currently piloting this approach in our Cape Town site working with partners including WWF and the Water Resilience Coalition. The TCFD process has helped us develop a watch list of additional sites potentially under long-term threat and we will monitor changes to the risk levels and update our site water risk assessments appropriately.	Water use in our operations Sites and supplier sites that have achieved water neutrality
Opportunities	Scenario	How the opportunity is managed	Potential profit impact/ timeframe	Metrics	Targets
At COP26 in November 2021, more than 50 countries around the world committed to provide low carbon healthcare systems.	BAU and low carbon	We are reducing our own scope 1 & 2 carbon emissions which in turn reduces the scope 3 footprint of our customers and suppliers.	Low: <£100m/ Long: 3-10 years	Scope 1, 2 and 3 carbon emissions	Net zero emissions across our full value chain by 2030
		We have started a new Eco-design programme to reduce the impacts of all our products and packaging. GSK have certified and published the carbon footprints of our portfolio of respiratory inhalers and have launched our first carbon neutral inhaler in the UK. This enables healthcare providers and patients make informed choices. We have started an R&D programme to find a lower-impact propellant that could reduce emissions from our metered dose inhalers by about 90%.		Total waste and non-circular waste	Zero operational waste, including eliminating single-use plastics by 2030 25% environmental impact reduction for our products and packaging by 2030 10% waste reduction from supply chain by 2030

Figure 3

Reckitt (2021 ARA, p66), whilst complying with 11 Recommended Disclosures, sets out at a disclosure level the actions required to apply the October 2021 Annex.

Compliance Statement

We are pleased to confirm that we have included in this TCFD Statement for Reckitt the material climate-related financial disclosures consistent with the four recommendations and the eleven recommended disclosures set. However, as we try and align our approach to the updated TCFD additional guidance (Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (2021 TCFD Annex) which was released in October 2021, there are some recommendations in the 2021 TCFD Annex: All Sector Guide that we are continuing to work on and will require more time for us to fully consider. In line with the current Listing Rules requirements (as referred to in Listing Rule 9.8.6R(8)), these areas are detailed below with reference to the TCFD recommendations:

- Development of more detailed disclosures by geography or sector, in addition to the current considerations for the overall business. Our current analysis often considers specific geographies for supply chain risks and sectors for market-level risks and opportunities, and we will develop these for future reporting (TCFD Strategy (a)).
- Assessment of climate related issues in terms of acquisitions or divestments, where we are developing processes to strengthen our existing compliance agenda. We will report on these in the future (TCFD Strategy (b)).
- Assessment of climate related issues in terms of the response of consumers, to products in different ways, both in terms of risk and opportunity, and in different geographies. We have begun to assess these, considering both internal and external data and will report more on these in the next two years. Our sustainable product innovation programme does, however, already take such issues into account alongside transitions risks, within our product innovation activity (TCFD Strategy (b)).

- Assessment of climate related issues in terms of access to capital where there is apparently limited initial impact (TCFD Strategy (b)).
- Further development of our decarbonisation roadmap alongside the initial interim milestones noted for our 2025, 2030 and 2040 targets and ambitions (TCFD Strategy (b)).
- The development, during 2022, of our internal carbon pricing approach and modelling which will inform future programmes (TCFD Strategy (b)).
- With ongoing activity, we continue to build resilience against the impacts of climate change (TCFD Strategy (c)).

We are working to implement the 2021 TCFD Annex recommendations in full over the course of 2022 and will report further on these in our next TCFD report.

Figure 4

Meggitt (2021 ARA, p58) provides both an overview of its compliance status, and further detail in a table that provides status and future priorities for each recommendation.

Taskforce on Climate-related Financial Disclosures (TCFD)

We adopted TCFD reporting early in 2020 and have developed our reporting process during 2021 towards compliance with the disclosure requirements from 2021 onwards.

Many of the TCFD requirements were already integrated into our strategy, operations and culture and we have strengthened our reporting in this Annual Report to provide additional disclosures in key areas.

As per Listing Rule 9.8.6(8)R, Meggitt has adopted climate-related financial disclosures consistent with the TCFD recommendations and recommended disclosures with the exception of Scope 3 data disclosure and improvements planned for 2022 as detailed below.

Recommendation	Recommended disclosure	Further detail available	Current status	Future priorities
1) Governance	a) Describe the Board's oversight of climate related risks and opportunities	Section 1 below	<ul style="list-style-type: none"> Climate change and environmental sustainability is a major consideration of our business at all levels. 	<ul style="list-style-type: none"> Sustainability strategy will continue to be reviewed by the Board on an annual basis.
	b) Describe management's role in assessing and managing climate related risks and opportunities	Section 1 below	<ul style="list-style-type: none"> Climate related risks and opportunities are integrated into our strategy and business model. All Board and management committees review risks and opportunities as part of their areas of responsibility. 	<ul style="list-style-type: none"> Any future Board appointments will take into consideration climate change/sustainability skills and experience. Increased linkages between sustainability performance and LTIP/Remuneration Committee considerations.
2) Strategy	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term	Section 2 below	<ul style="list-style-type: none"> Climate related risk and opportunities have been considered in the overall strategic plan over three timeframes, <3 years, 3-10 years and >10 years. 	<ul style="list-style-type: none"> Greater level of scenario modelling within the review cycle.
	b) Describe the impact of climate related risks and opportunities on the organisation's businesses, strategy and financial planning	Section 2 below	<ul style="list-style-type: none"> Strategic planning is integrated into financial planning. 	<ul style="list-style-type: none"> Continued commitments on research and technology investment into sustainable technologies.
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2C or lower scenario	Section 2 below		<ul style="list-style-type: none"> Setting of science-based targets and confirming a clearly defined path to reduce emissions.
3) Risk Management	a) Describe the organisation's processes for identifying and assessing climate related risks	Principal Risks section and section 3 below	<ul style="list-style-type: none"> ISO 31000 aligned risk management framework incorporating climate-related risk. 	<ul style="list-style-type: none"> Continued development of risk assessment processes to better identify emerging climate related risks.
	b) Describe the organisation's processes for managing climate related risks	Principal Risks section and section 3 below	<ul style="list-style-type: none"> Climate change is viewed as a principal strategic risk which is continually reviewed across the business. 	<ul style="list-style-type: none"> Greater scenario planning incorporating climate related risks.
	c) Describe how processes for identifying, assessing and managing climate related risks are integrated into the organisation's overall risk management	Principal Risks section and section 3 below	<ul style="list-style-type: none"> Transition and physical risks are evaluated through demand side and supply side scenario planning. 	
4) Metrics & 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	Section 4 below	<ul style="list-style-type: none"> GHG emissions have been reported since 2017 against a target to reduce GHG by 50% (relative to revenue) against the 2016 baseline. 	<ul style="list-style-type: none"> Complete and disclose material scope 3 categories.
	b) Disclose Scope 1, Scope 2 and if appropriate Scope 3 greenhouse gas (GHG) emissions, and the related risks	Section 4 below and Planet section of CR report (page 82)	<ul style="list-style-type: none"> Market and location based reporting is including in the reporting regime. 	<ul style="list-style-type: none"> Implement an internal carbon price to ensure cost of climate impact (all scopes) is embedded in business decisions – e.g. capital expenditure within our facilities.
	c) Describe the targets used by the organisation to manage climate related risks and opportunities and performance against these targets	Section 4 below	<ul style="list-style-type: none"> Disclosure of Scope 3 emissions are in the planning and initial screening phase. Set internal site targets to drive a reduction in emissions. Scope 1 & 2 reduction measures incorporated into LTIP. 	<ul style="list-style-type: none"> Lay out a roadmap to achieve science based targets, e.g. through substitution of fossil-fuel fired processes and facilities and procurement of renewable energy.

Figure 5

CRH (2021 ARA, pp5, 66) notes that its AC oversaw the significant expansion of disclosures in the ARA in line with the expectations of the TCFD, the emerging EU Taxonomy and further disclosures in respect of relevant accounting estimates and judgements.

Audit Committee Report - continued

Key Areas of Focus in 2021

Table 1

In addition to the Committee's responsibilities under section 167(7) of the Companies Act 2014, the key areas of focus for the Committee in 2021 included the following:

Climate Change

A particular area of focus for the Committee in its review of the 2021 Annual Report and Form 20-F was the Group's reporting on climate-related risks, including the impact on the Group's accounting judgements, disclosures and financial statements, including their alignment with CRH's carbon reduction targets, and its approach with regard to compliance with the recommendations of various regulatory bodies (International Accounting Standards Board, International Audit and Assurance Standards Board, Financial Reporting Council, European Securities and Markets Authority), the Task Force on Climate-related Financial Disclosures (TCFD) and the emerging EU Taxonomy requirements. In conjunction with the SESR Committee, which took a lead role in analysing the TCFD recommendations and EU Taxonomy regulations and the Company's response thereto, the Committee reviewed the climate disclosures including the TCFD disclosures on pages 28 to 31 and agreed that these are appropriate and that the assumptions used in the financial statements were consistent with these disclosures.

Delivering Against Challenging ESG Targets

CRH is, and will continue to be, a leader in providing solutions in the built environment for the challenges and opportunities arising from mitigating and managing the impact of climate change and supporting environmentally sustainable economic growth.

Our 2020 Sustainability Report set out challenging targets for mitigating our environmental impact, enhancing the contributions our products and customer-solutions make to the circular economy and sustainable economic growth, ensuring the safety of our people and progressing our inclusion and diversity (I&D) agenda.

During 2021 we made positive progress against these targets and I am pleased to advise that we expect to deliver on our decarbonisation target ahead of schedule. As a result, the SESR Committee has agreed with management and the Group has adopted an updated 2030 Group-wide carbon reduction target as set out on page 21.

In addition, to support our ongoing transparency on these matters, the Audit Committee oversaw the significant expansion of our disclosures in this document in line with the expectations of the Task Force on Climate-Related Financial Disclosure (TCFD), the emerging EU Taxonomy and further disclosures in respect of relevant accounting estimates and judgements.

In relation to diversity, as we develop our future leaders, we are focused on ensuring that CRH benefits from people with diverse backgrounds and experiences and has the structures in place to support them as they develop during their careers in the Group.

Figure 6

Rio Tinto (2021 ARA, pp80-81, 219-220) integrates disclosures across its ARA. However, in view of space constraints within the ARA, it also refers to other standalone reports like its Climate Change Report and Sustainability Fact Book. In its financial statements, it explains that its analysis of climate impacts, and therefore commodity price assumptions, is based on a blend of three scenarios, only one of which represents the Group's view of the goals of the Paris Agreement. It also discloses its internal carbon price.

Decarbonising our operations

In the lead up to the UN Climate Change Summit in Glasgow, we announced that we will accelerate actions to decarbonise our assets in the short term and aim for a 15% reduction in emissions by 2025 – five years earlier than originally planned. We increased our 2030 target to a 50% reduction in our Scope 1 and 2 emissions and remain committed to reaching net zero by 2050.

To achieve this, we aim to:

- Develop renewable power in the Pilbara. The 34MW solar plant at Gudai-Darri and the 45MW battery system at Tom Price that we approved in 2020 are expected to come online in 2022. We are now targeting the rapid deployment of one gigawatt of wind and solar power. This will replace gas power and meet demand from our fixed plants and infrastructure, as well as support the early electrification and decarbonisation of our mobile fleet.
- Work with state and federal governments, power companies and renewable developers to dramatically increase the availability of renewables in eastern Australia, and aim to develop green repowering solutions for the Boyne Island and Tomago smelters.
- Advance the projects in our Marginal Abatement Cost Curve such as the deployment of zero-emission trucks and the use of hydrogen at our alumina refineries.
- Use a \$75/t CO₂e internal carbon price to incentivise energy-efficiency investments and identify new mitigation projects.
- Scale up the ELYSIS™ technology with the goal to have it available for installation from 2024. Construction of the first commercial-scale prototype cells of the inert anode technology has begun at our Alma smelter in Saguenay–Lac-Saint-Jean, Quebec.

We estimate that we will invest approximately \$7.5 billion in capital between 2022 and 2030 to deliver our decarbonisation strategy (approximately \$1.5 billion over the period 2022 to 2024). There will also be incremental operating expenditure on building new capabilities, energy efficiency initiatives, and research and development of approximately \$200 million per year to 2030.

Disclosures consistent with the TCFD recommendations

Climate-related disclosures on governance, strategy, risk management, as well as metrics and targets, are integrated into this Annual Report in the following sections: Strategic Context, Key Performance Indicators, Innovation, Risk Management, Principal risks and Uncertainties, Governance, the Sustainability Committee report, the Remuneration Committee report and in the notes to the accounts.

Given space constraints in the Annual Report, other reports supplement the disclosures on climate-related governance, strategy, risk management and metrics and targets that are made in this report. These are available at riotinto.com/reports. Our 2021 Climate Change Report provides further detail on our approach including our Climate Action Plan, the way we evaluate and manage climate-related risks, progress towards our targets and our value chain partnerships. Our 2021 Sustainability Fact Book provides a full list of the 11 main TCFD recommendations alongside references to our disclosure against them. Our 2020 Climate Change Report includes further detail on our approach to scenario analysis, including our consideration of 1.5°C scenarios. These disclosures together meet all of the disclosures required under the TCFD Recommendations and Recommended Disclosures.

Climate change

We have put the net zero transition at the heart of our business strategy: combining investments in commodities that enable the energy transition with actions to decarbonise our operations and value chains. As a result of this, our strategy and approach to climate change are supported by strong governance, processes and capabilities. In 2021, we updated our Scope 1 and 2 emissions targets and now aim to reduce emissions by 15% in 2025, by 50% in 2030 (relative to our 2018 equity baseline) and to achieve net zero emissions by 2050. These targets are aligned with efforts to limit global warming to 1.5°C, which is aligned with the stretch goal of the Paris Agreement. The goals of the Paris Agreement are set out in Article 2, which includes holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C.

We frame the strategic context for the Group through the lens of three scenarios, developed by the Strategy and Economics teams, structured around our analysis of the interplay of three global forces: geopolitics, society and technology.

- In a geopolitics-led scenario, strong nationalistic tendencies hold back global action on climate change, carbon prices remain low (in the range US\$0-30/t CO₂e) and warming exceeds 3°C by 2100.
- In a society-led scenario, strong global co-ordination of climate policies, supported by high and rising carbon prices (reaching US\$130/t CO₂e in 2050), accelerates the energy transition and we believe achieves the goal of the Paris Agreement by limiting warming to well below 2°C by 2100.
- In a technology-led scenario, innovation boosts economic productivity and decarbonisation efforts; however, carbon prices remain modest (ranging US\$10 to US\$75/t CO₂e by 2030) and action to limit emissions is insufficient, so warming exceeds 2°C by 2100.

We recognise that the pace of decarbonisation across the global economy is uncertain and that current climate policies in many countries are not yet aligned with stated ambitions. These policy uncertainties are captured in our scenario analysis, which in turn informs the central case carbon price assumptions. We continue to monitor alternative scenarios including ones that limit warming to 1.5°C. For example, the IEA NZE50 assumes higher carbon prices and a much faster energy transition than our scenarios; they also require a higher level of co-ordination in climate policies across sectors and countries. The IEA's scenario also assumes stronger demand for commodities such as copper or battery minerals that are critical to the accelerated deployment of solar and wind renewables or electric vehicles.

Portfolio strategy

Our scenarios above inform our portfolio strategy, the internal commodity price setting process and strongly influence our critical accounting judgements and estimates. Through our strategy process we test the resilience of our portfolio against each of these three scenarios and conclude that overall, our portfolio is expected to perform more strongly in scenarios with proactive climate action, particularly in relation to aluminium and copper. Our strategy to focus our growth capital expenditure on materials that enable the energy transition is informed by these scenarios. Our ambition is to increase our growth capital expenditure to up to US\$3 billion per year in 2023 and 2024, developing new options and finding innovative ways of bringing projects on-stream faster. This includes investment in lithium production at Rincon and Jadar, copper at Oyu Tolgoi and Winu, as well as high-grade iron ore from Simandou.

Accounting judgements

The forecast commodity prices (including carbon prices) are informed by a blend of our three scenarios and are used pervasively in our financial processes from budgeting, forecasting, capital allocation and project evaluation to the determination of ore reserves. In turn, these prices are used to derive critical accounting estimates including as inputs to impairment testing, estimation of remaining economic life for units of production depreciation and discounting closure and rehabilitation provisions. As only one of our scenarios represents the Group's view of the goals of the Paris Agreement, and because of the policy uncertainties described above, our commodity price assumptions are not consistent with the expectation of climate policies required to accelerate the global transition to meet these goals.

In addition to prices, given the significant investment we are making to abate our carbon emissions, we have also considered the potential for asset obsolescence, with a particular focus on our Pilbara operations where we are prioritising investment in renewables to switch away from natural gas power generation, but no material changes to accounting estimates have been necessary. The closure date and cost of closure is also sensitive to climate assumptions but no material changes have been made in the year specific to climate change.

Figure 7
Rotork (2021 ARA, pp61-69) provides qualitative financial impacts of scenario analysis as part of its TCFD disclosure.

Phase 1

(completed in 2021):

Qualitative Climate Scenario Analysis

The focus over the past year has been to complete a non-financial assessment, scoring and ranking of the identified risks and opportunities. The methodology is shown on page 71 and the assessment results are set out on pages 64-68.

Process described

- Risk & Opportunity identification:** Initial research on sectoral and climate scenario impacts has been supplemented with extensive internal engagement across numerous business functions to identify risks and opportunities and understand those that are relevant for different functions. Interviews and workshops were held with teams in engineering, commercial, strategy, finance, property, energy, supply chain and sourcing. This extensive engagement has ensured that climate risks, opportunities, and potential impacts have been considered in the context of Rotork's operations.
- Qualitative Risks & Opportunities Assessment:** Identified risks and opportunities have been scored and prioritised using three assessment criteria: vulnerability, magnitude and likelihood. Each physical and transition risk or opportunity has been considered across time horizons and climate scenarios using indicators from IPCC and NGFS databases (specifically, IPCC WGI Interactive Atlas, and NGFS IIASA Scenario Explorer and CA Climate Impact Explorer). This analysis will enable Rotork to prioritise the most material risks and opportunities and their value drivers, from which possible financial impacts can be modelled in 2022.

Phase 2

To be completed in 2022: Quantification of financial impact from material risks and opportunities

During 2022, we will continue to advance our climate scenario analysis by modelling the potential financial impacts across forward-looking business and climate scenarios from some of our most material risk and opportunities. The results will be integrated into our financial planning process and considered in our business strategy development.

- Integrate outcomes:** The results of the assessment will form future climate-related metrics related to risk and opportunity impact. They will also be used in processes relating to risk management, capital allocation, business strategy development and financial planning.

In addition, there are considerable opportunities to assist our oil and gas customers in delivering against their ambitious net-zero commitments, including through providing products and services that deliver reliable, energy efficient solutions that minimise environmental impacts (for example, through lower emissions, energy consumption and water usage).

Similar opportunities present themselves in the power, water and industrial markets. For example, our products have applications in the roll-out and modernisation of critical infrastructure. Water scarcity is resulting in a greater need for recycling and desalination and rising sea levels are necessitating flood defence investment. Climate-related opportunities and case studies feature highly throughout this report. Case studies illustrating the role we can play are set out on pages 2-7 and 52-54.

Process described

- Define impact pathways and select value drivers for quantification:** Our initial assessment has identified climate value drivers that will be considered for financial impact quantification.
- Model financial impact:** For each value driver, cashflow impacts will be calculated across a range of climate and business scenarios (climate scenarios described on page 62). In this way, Rotork's strategy can be stress tested against different possible climate futures.

Climate opportunity

The role Rotork can play in a green economy and a cleaner, more sustainable future featured highly in our materiality assessment in 2021.

Our products will enable the move to a low carbon world, with applications in transition fuels such as LNG, natural gas and biofuel. In the medium term there are also opportunities to participate in fast developing new sectors such as hydrogen and carbon capture, usage and storage.

Transition Risk Assessment



Physical Risk Assessment continued

Acute physical risks



Risk & Opportunity Scores:

Not assessed against the scenario Low Medium-low Medium-high High Very high

Figure 8

Unilever (2021 ARA, pp60-62) details the assumptions it has used to undertake high level quantitative scenario analysis. It discloses the potential gross financial impact (i.e., before taking account of any actions it may take to mitigate the risk) as a range to reflect the uncertainty inherent in their quantitative assessment.

1.5°C scenario analysis financial quantification in current money

Financial quantification of the assessed regulatory and market risks				
Risk	Potential financial impact on profit in the year if no actions to mitigate risks are taken ^(a)			Key assumptions
	2030	2039	2050	
Carbon tax and voluntary carbon removal costs We quantified how high prices from carbon regulations and voluntary offset markets for our upstream Scope 3 emissions might impact our raw and packaging materials costs, our distribution costs and the neutralisation of our residual emissions post 2039.	-€3.2bn to -€2.4bn	-€5.2bn to -€4.8bn	-€6.1bn	<ul style="list-style-type: none"> Absolute zero Scope 1 and 2 emissions by 2030 Scope 3 emissions exclude consumer use emissions Carbon price would reach 245 USD/tonne by 2050, rising more aggressively in early years in a proactive scenario The price of carbon offsetting would reach 65 USD/tonne by 2050 Offsetting 100% of emissions on and after 2039
Land use regulation impact on food crop outputs We quantified how changing land use regulation to promote the conversion of current and future food crops to forests could drive reduced crop output and lead to increased raw material prices, impacting sourcing costs.	-€0.8bn to -€0.3bn	-€2.1bn to -€0.7bn	-€5.1bn to -€1.7bn	<ul style="list-style-type: none"> By 2050, in a proactive scenario, land use regulation would increase prices by: <ul style="list-style-type: none"> Palm: -28% Commodities and food ingredients: -33% By 2050, in a reactive scenario, land use regulation would increase prices by: <ul style="list-style-type: none"> Palm: -10% Commodities and food ingredients: -11%
Impact of rising energy prices for suppliers and in manufacturing We quantified how electricity and gas price increases could impact both total energy annual spend as well as indirect cost increases passed through from raw material suppliers.	-€0.6bn	-€1.5bn	-€3.4bn	<ul style="list-style-type: none"> High uncertainty surrounds possible shifts to energy prices during a transition to 1.5°C world Analysis assumes that by 2050 average electricity prices would: <ul style="list-style-type: none"> Rise -16% in The Americas Rise -18% in Europe Decline -1% in ASIA/AMET/RUB^(b) By 2050 average global gas prices would rise by -141%

Financial quantification of the assessed physical environment risks				
Risk	Potential financial impact on profit in the year if no actions to mitigate risks are taken ^(a)			Key assumptions
	2030	2039	2050	
Water scarcity impact on crop yields We quantified how increased water-stressed areas and prolonged droughts would reduce crop outputs due to water scarcity in agricultural regions, decreasing crop viability, and impacting raw material prices.	-€0.3bn to -€0.2bn	-€0.7bn to -€0.5bn	-€1.7bn to -€1.2bn	<ul style="list-style-type: none"> By 2050, in a proactive scenario, water scarcity would increase prices by: <ul style="list-style-type: none"> Palm: -10% Commodities and food ingredients: -11% By 2050, in a reactive scenario, water scarcity would increase prices by: <ul style="list-style-type: none"> Palm: -14% Commodities and food ingredients: -16%
Extreme weather (temperature) impact on crop yields We quantified how extreme weather events such as sustained high temperatures could impact crop output and therefore sourcing costs across key commodities.	-€0.4bn to -€0.3bn	-€1.1bn to -€0.8bn	-€2.8bn to -€1.9bn	<ul style="list-style-type: none"> By 2050, in a proactive scenario, extreme weather would increase prices by: <ul style="list-style-type: none"> Palm: -12% Commodities and food ingredients: -14% By 2050, in a reactive scenario, extreme weather would increase prices by: <ul style="list-style-type: none"> Palm: -18% Commodities and food ingredients: -21%

Summary of high-level quantitative assessment

For those risks and opportunities where we have undertaken high-level quantitative assessments, the results are shown in the tables below. These assessments show the gross impact before any action which Unilever might take to respond. The ranges reflect the different results from the reactive and proactive pathways assessed.

We first undertook scenario analysis in 2017 on 2°C and 4°C scenarios. This year we have completed a 1.5°C scenario analysis. The results of this work on the way to 1.5°C is consistent with this previous work. The key differences are due to: the more extreme measures that would need to be taken to achieve a 1.5°C outcome; the evolution of the scientific assumptions contained within the IPCC's AR6 report; and a more detailed approach to the scenario analysis. The financial impact in 2030 is more significant in the 1.5°C scenario. However, the scenario avoids the greater negative impacts from the physical risks associated with higher temperature rise scenarios in 2050 and beyond.

Financial quantification of the assessed opportunities				
Opportunity	Potential financial impact in the year if actions to capitalise on opportunities are taken ^(a)			Key assumptions
	2030	2039	2050	
Growth in plant-based foods category We quantified the potential revenue opportunity from anticipated growth in the global plant-based foods market and possible market share in 2025.	+€0.5bn	+€1.7bn	+€6.4bn	<ul style="list-style-type: none"> By 2050, the total global market for plant based products would rise to -USD 1.6 trillion Maintain a constant market share Product mix and product margins would remain constant

(a) These potential financial impacts are based on high-level quantitative assessments of certain risk and opportunity areas which could impact us in 2030, 2039 and 2050.
 (b) Refers to Asia, Africa, Middle East, Turkey, Russia, Ukraine and Belarus.

Figure 9

Mondi (2021 ARA, pp62-63, 183) when discussing climate change as one of the significant accounting estimates within its basis of preparation note concludes there was no material impact. Its TCFD scenario disclosure includes estimated EBITDA impacts and their expected time horizon. Additionally, the fact that climate change related risks and are reflected in accounting policies and financial reporting is referenced as part of Mondi's discussion of the strategy pillar within its TCFD disclosure.

The TCFD recommends applying widely used reference scenarios that are publicly available and peer reviewed. For the year ended 2021 our assessment of the financial implications of our climate change-related risks was prepared considering a 2DS and BAU scenario in line with our commitments published in 2019.

Going forward we will further our understanding of the financial implications of our commitment to transition to Net-Zero by 2050, in line with the SBTi new Net-Zero standard, and the impact of assessing our climate change-related risks in line with a 1.5°C scenario.

During the year we assessed our climate change-related risks and opportunities and have specified the estimated EBITDA impact in the tables below and on pages 64-66, taking into consideration mitigation measures implemented by the Group. These risks and opportunities only reflect our climate change-related risks and opportunities and reflect an update of the risks and opportunities presented in our 2020 Sustainable Development report and our 2021 CDP submission. For an overview of all our Group principal risks please refer to page 88.



Strategy

TCFD Recommended disclosures	Further information
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	Principal risks Page 92
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	Strategic performance Page 32-41 Taking Action on Climate Page 55-59
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Our strategy Page 30-34

Sustainability is at the core of Mondi's strategy and we have a long-standing focus on becoming less carbon intensive. Since 2014, we have reduced our GHG emissions (per tonne of saleable production) by 25%. This has been achieved through targeted investments to reduce our reliance on fossil fuels and increase energy efficiency across our operations as described in the case study below. We believe that we have the right strategy, including our commitment to Net-Zero by 2050, to address the challenges and opportunities arising from climate change-related risks. There are many uncertainties around the impacts of a business-as-usual scenario¹ (BAU). While we continue to enhance the quality of our scenario modelling and further understand the impact under a 2°C scenario² (2DS) and a BAU scenario, we consider that based on our current understanding our strategy is resilient.

The Group's climate change-related risks and opportunities are routinely considered in our strategic and financial planning, our capital allocation decisions and in operational management. Climate change-related risks have been identified as one of our strategic principal risks and are reflected in our accounting policies and financial reporting.

The impact of climate change is considered in the estimates of future cash flows used in the impairment assessment of goodwill, as detailed on page 196. Climate change is, as detailed on page 198, included as a factor that impacts the conversion factor used in the assumptions for valuation of the Group's forestry assets and as a factor incorporated into the risk premium applied to mature and immature timber. Climate change was considered in the assessment of fair value of assets and liabilities acquired in business combinations as detailed on page 212. The Group accounting policies reflect the impact of climate change considerations in relation to the assessment of the residual values and estimated useful economic lives of property, plant and equipment, as detailed on page 226, and in relation to the accounting policy applied for the valuation of forestry assets and the assessment of goodwill for impairment.

1 The Representative Concentration Pathway's 8.5 (RCP8.5) scenario is a business-as-usual (BAU) scenario, which projects the global mean temperature to rise by 2.6 to 4.8°C and the global mean sea level to rise by 0.45 to 0.82 metres by the late-21st century
 2 The International Energy Agency's 2°C scenario (2DS) is based on limiting global temperature rise to below 2°C above pre-industrial levels under an emissions trajectory that allows CO₂ emissions to be reduced by almost 60% by 2050 compared with 2013. Under this scenario emissions are projected to decline from 2020 and they continue their decline after 2050 to reach carbon neutrality

Significant accounting estimates

Climate change

Management has considered the impact of climate change in preparing the consolidated financial statements, in particular in the context of the disclosures included in the Strategic report, including the Group's Mondi Action Plan 2030 (MAP2030) science-based targets as detailed in the taking action on climate section on pages 55-67. These considerations, which are integral to the Group's strategy, did not have a material impact on the key accounting estimates and judgements, including the following areas:

- the estimates of future cash flows used in the impairment assessment of goodwill – refer to note 12
- the assumptions used in the fair value measurement of forestry assets – refer to note 14
- the assessment of residual values and estimated useful economic lives of property, plant and equipment – refer to note 33
- the fair value of assets acquired and liabilities assumed in business combinations – refer to note 25

While these considerations did not have a material impact on the areas set out above, this may change in future periods as management evolves its understanding of climate change related impacts on the Group.

Figure 10

Antofagasta (2021 ARA, pp 55, 57) sets out both its adaptation and mitigation response and provides quantified financial impacts of scenario analysis as part of its TCFD disclosure. It also provides a table describing the climate-related metrics it is developing in accordance with the revised guidance provided by the TCFD in October 2021.

STRATEGY IN ACTION	
ADAPTATION RESPONSE Actions taken by the Company to adapt to climate change	MITIGATION RESPONSE Actions taken by the Company to mitigate the impact of climate change
LOS PELAMBRES DESALINATION PLANT	SWITCH TO RENEWABLE ENERGY
Trigger	Trigger
<ul style="list-style-type: none"> Prolonged drought with deteriorating conditions year-on-year Climate models showing continuing downward trends in precipitation 	<ul style="list-style-type: none"> 2015 Paris Accord on climate change signed
Action	Action
<ul style="list-style-type: none"> Decision to build 400 l/s desalination plant which is expected to come online in H2 2022 Increase capacity of plant to 800 l/s by 2025 	<ul style="list-style-type: none"> Set carbon emissions reduction target of 300,000 tCO₂e Renegotiated each mining operation's energy contract to be solely from renewable sources
Result	Result
<ul style="list-style-type: none"> Decoupling water supply from continental sources Ensuring our ability to deliver value throughout the life of the mine 	<ul style="list-style-type: none"> Carbon emissions target achieved in 2021, and new medium- and long-term targets set Renewable energy contracts reduced total operating costs by 2%

We are developing our climate-related metrics in accordance with the revised guidance provided by the TCFD in October 2021. The table below describes these metrics in more detail.

Cross-industry, climate related metric categories	
GHG emissions	We report our performance against Scope 1 and 2, and our emissions intensity (page 49). We will report our Scope 3 emissions for the first time in 2023.
Transition risks	We report the potential financial impact over the Life-of-Mine for five transition value drivers including the change in diesel price and carbon tax, as well as the impact arising from the implementation of mitigation measures (page 57).
Physical risks	We report the potential financial impact over the Life-of-Mine for five physical hazards including the change in water supply, rainfall, temperature and particulate matter, as well as the disruption to logistics (page 57).
Climate-related opportunities	The positive impact of climate change on copper demand or the copper price has been assessed internally. We are undertaking further analysis to better understand the correlation of increasing demand as a result of worldwide climate policy action and the positive implication for the copper price.
Capital deployment	We report the impact of investment in mitigation and adaption in the results of the Climate Scenario Analysis. This is based on estimations and projections for the implementation of proposed measures in our Long-term Energy Reduction Plan. Since 2020 we have been investing in the development of a desalination plant at Los Pelambres. We intend to monitor these investments closely in the future.
Internal carbon prices	Antofagasta is using an internal carbon price in the economic evaluation of bids from suppliers, capital allocation decisions, and project evaluation, as well as incorporating it into our financial planning cycles.
Remuneration	Short-term incentive for Executives includes a proportion associated with carbon emissions.

Reported externally
 Monitored internally

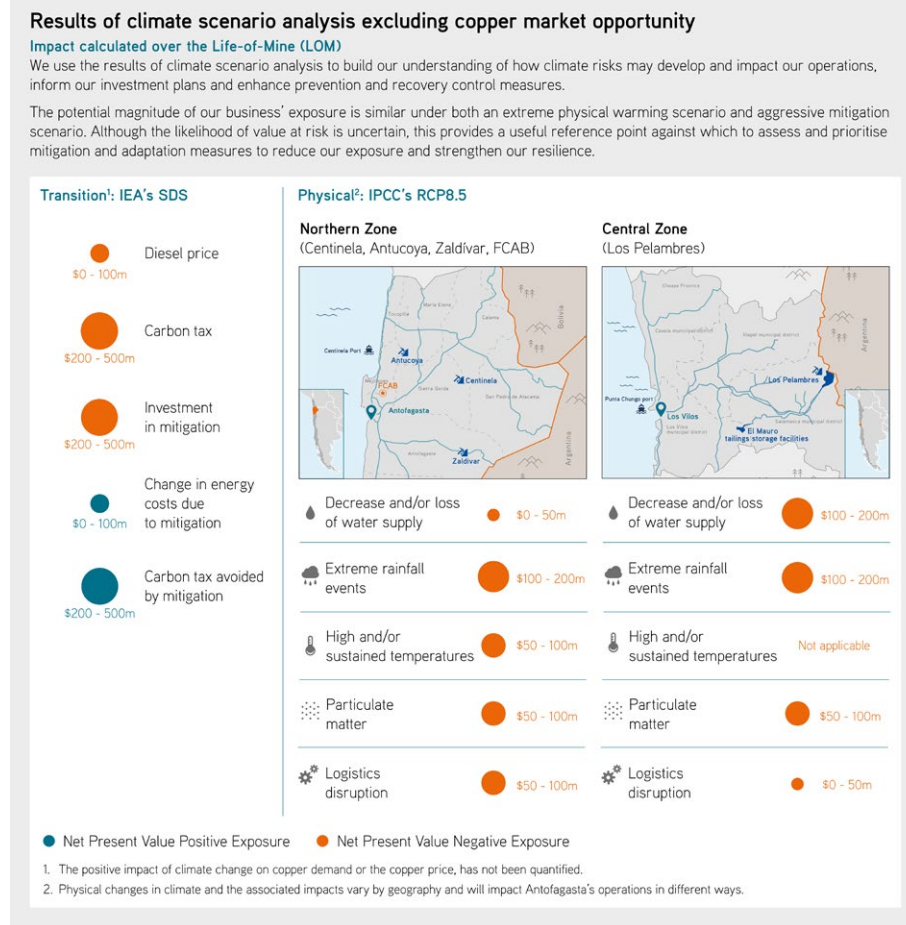


Figure 11

AstraZeneca (Sustainability report, p21) illustrates how it will follow the science and deliver absolute reductions in all direct and indirect sources, Scopes 1, 2 and 3, of GHG emissions across its value chain.

Ambition Zero Carbon

We will follow the science and deliver absolute reductions in all our direct and indirect sources, Scopes 1, 2 and 3, of greenhouse gas (GHG) emissions across our value chain, doing our part to limit the impacts of climate change while unlocking opportunities to deliver improved patient centric healthcare in a low carbon economy.

We follow a hierarchy to achieve our ambitions

- Eliminate
- Reduce
- Substitute
- Compensate

SBTi Verified
 Scope 1&2 reduction targets are measured from a 2015 base year. Scope 3 reduction targets measured from 2019 base year

See Sustainability Data Summary for full metrics and methodology

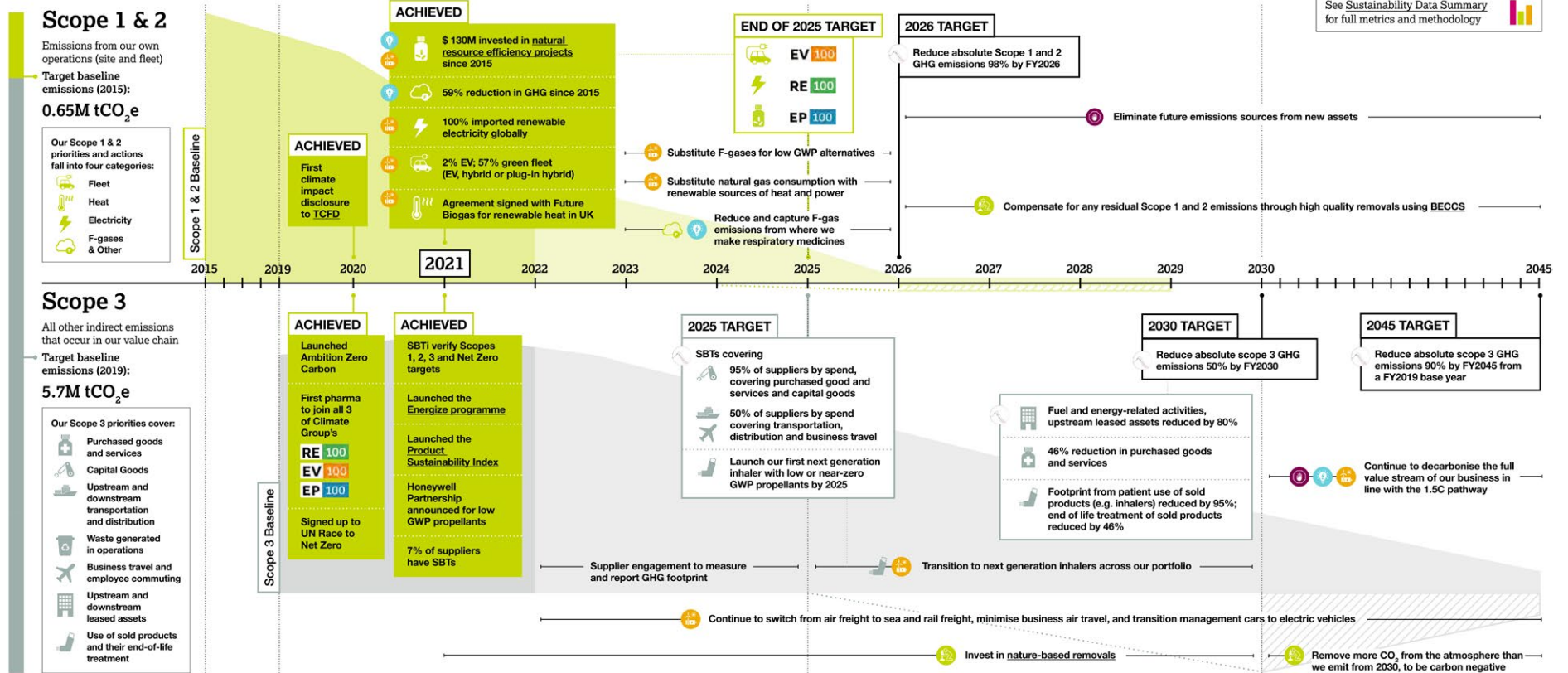


Figure 12

Capricorn Energy (Sustainability Report, p25) provides disclosures aligned with the SASB Oil & Gas – Exploration & Production Standard and ISAE 3000/3410 and includes a metric for Total Water Withdrawal (m³).

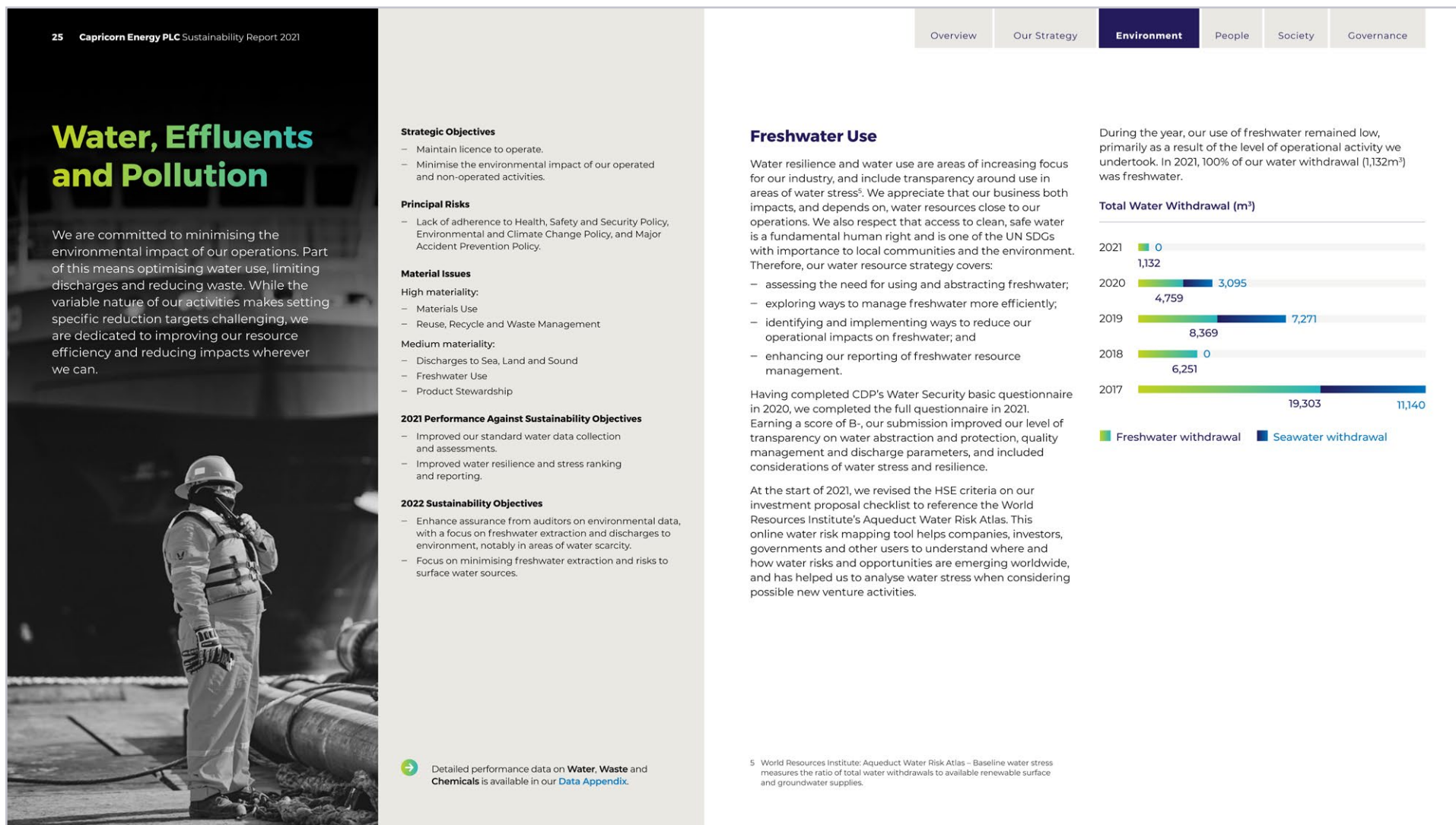


Figure 13

Segro (2021 ARA, pp55, 98) discloses a variety of climate metrics as part of its TCFD disclosure and provides detail on the physical climate change risk exposure at the asset level.

Following on from the physical risk materiality analysis opposite, in 2021, we have conducted scenario analysis to assess more precisely the physical risk to our assets of a 4.5C increase in global temperatures (the 'business as usual' outcome and in line with RCP 8.5, 2040). We prioritised analysis based on this scenario as it is the most appropriate current 'worst case' scenario. In 2022, we intend to carry out a 'best case' scenario analysis in line with RCP 2.5, equivalent to a 1.5C increase in global temperatures.

The table below shows the potential Physical Climate Risk Exposure metrics and outcomes based on percentage floor area and percentage rental value at risk.

PHYSICAL CLIMATE CHANGE RISK EXPOSURE AT ASSET LEVEL

Risk	Metric	Floorspace (at 100%)	ERV (at share)
Flooding	1 in 100 year flood risk > 0	15%	14%
Water Stress	'Very High' Water Stress Risk	8%	5%
Sea Level Rise	Coastal flood frequency > 0	0%	0%
Wildfires	Days with high wildfire score > 10	5%	4%
Heat Stress	Energy Demand Score > 50	2%	1%

The data above does not take into account the mitigation measures that have already been carried out in the development or refurbishment cycles. As part of our sustainable development objectives, assessments are carried out prior to development and adaptation measures, including but not limited to those listed below, are carried out accordingly.

Risk	Adaptation Techniques
Flooding	<ul style="list-style-type: none"> Flood risk assessment to be carried out on development or retrospectively. Sustainable urban drainage systems. Retention schemes – ponds/basins.
Water Stress	<ul style="list-style-type: none"> Rainwater harvesting systems for internal building use and landscaping. Water efficient fixtures in line with BREEAM.
Wildfires	<ul style="list-style-type: none"> Sprinkler systems/warnings designed to deal with wildfires. Demonstrate good vegetation/habitat management.
Heat Stress	<ul style="list-style-type: none"> Thermal modelling undertaken and orientation/window positioning of the building reviewed. Onsite renewable energy generation installed to manage additional cooling requirements. External planting shading, brise soleil, louvres, window tinting.

APPLYING THE ANALYSIS TO STRATEGIC PLANNING

In terms of decision-making, we consider climate-related issues within the following time horizons:



CLIMATE-RELATED FINANCIAL DISCLOSURES CONTINUED

ITEMS ARE DIRECTLY CAPTURED IN SEGRO'S INCENTIVE SCHEMES

METRICS AND TARGETS

To enable our stakeholders to consider and compare our reporting, we contribute to a number of externally-recognised initiatives including GRESB, CDP, DJSI Sustainability Index and the FTSE4Good Index. We also disclose metrics in line with

externally-recognised frameworks including Sustainability Accounting Standards Board (SASB), Global Reporting Initiative (GRI) and the EPRA Best Practices Recommendations on Sustainability Reporting.

In order to ensure that we also report on those issues that we can have a direct impact

upon, we use our materiality assessment to identify the key metrics that are material to the business. Below are the climate-related metrics and targets which we monitor. Those in bold will be incorporated into the Responsible SEGRO elements of the annual bonus of all employees from 2022.

Financial	Climate-Related	Metric	2021	2020	Narrative
Assets	Location	Portfolio at risk of 1 in 100 year flood (% of ERV at share)	14%	nr	New metric for 2021.
Assets	Policy and Legal	EPCs rated below E (based on floorspace)	1.1%	0.5%	New acquisitions are often un-rated or of low quality.
		EPCs un-rated (based on floorspace)	17.2%	21.2%	Un-rated space tends to be space subject to refurbishment so will be rated over time.
		EPCs rated B or better (based on floorspace)	54.6%	49.3%	
Assets	Risk Adaptation and Mitigation	Portfolio with high environmental certification (BREEAM Very Good or better (or equivalent) and/or EPC certificate of B or better (% of value at share) (Green portfolio)	£8.3 billion (50%)	nr	New metric for 2021, comprising wholly-owned assets of £6.3 billion and assets held in joint ventures of £2.0 billion at share.
Liabilities	Risk Adaptation and Mitigation	Percentage of net borrowings (incl JVs at share) classed as Green Finance Instruments under the Green Finance Framework	15%	nr	New metric for 2021. SEGRO and SELP each issued one €500 million green bond under the Green Finance Framework during the year.
		Green Finance Instruments as % of Green Portfolio (including joint venture assets and debt at share)	8%	nr	New metric for 2021. Green Finance Instruments should not exceed the total of the Green Portfolio.
Expenditures	GHG Emissions	Visibility: % of portfolio space (sq m of AUM) for which we have energy data	54%	41%	New metric for 2021. Many customers are not obliged to disclose energy use data to us. Without it, however, we cannot accurately measure our Scope 3 Downstream Leased Assets GHG emissions. The increase during 2021 reflects negotiation with customers across our portfolio.
		Tonnes CO₂e emissions	280,575	312,115	Verified Science Based Target.
		2030 Science Based Target – 42% reduction vs 2020 baseline (312,115 tonnes)			Incorporates Scope 1, 2 (market-based) and 3 (Downstream Leased Assets) emissions from the portfolio. 10% reduction in emissions achieved through switching Poland portfolio energy provision to a certified green energy tariff as well as wider energy saving measures in existing buildings through development and refurbishment.
		Visibility: % of completed developments (sq m of delivered floorspace) with Life Cycle Assessment Target: 100% of all developments over 5,000 sq m	53%	35%	Covers 444,000 sq m of completed developments in 2021. Growing use of Building Information Modelling (BIM) and Life Cycle Assessment within the business ensure that we have good visibility of embodied carbon in development and we can target areas for reduction.
		Embodied carbon intensity (kgCO₂e per sq m of completed space)	391	400	Based on completed developments for which we have Life Cycle Assessments.
Revenues	Energy/ Fuel	Onsite solar power capacity (based on AUM)	35.4 MW	26.8 MW	9 MW capacity added during the calendar year primarily as part of new development completions.
		Solar power generated on-site during the year (based on AUM)	24,781 MWh	20,976 MWh	18 per cent increase in on-site renewable energy generated mainly due to increase in capacity over the past two years.
		% of visible Scope 3 Downstream Leased Assets energy use from certified renewable sources	53%	11%	Based on the portfolio for which we have visibility. Where we have not provided with the source of energy, we assume a non-renewable tariff. The increase during the year was primarily due to providing a certified green tariff for our Poland customers.
		Revenue from sale of on-site renewable energy to customers (€m)	£2.4m	nr	New metric for 2021. This revenue reflects cases where SEGRO owns PV panels. This metric reflects cases where SEGRO owns PV panels and sells the energy to the customer at a discounted rate compared to the grid. In other cases, PV-generated energy is provided to customers as part of their rent. This revenue is not recorded here as it is not possible to disaggregate it from underlying rent.

nr (not reported)

Figure 14

National Express (2021 ARA, pp38-39, 98-99) includes a table that shows the overall group targets through to 2025 and progress to date from the baseline year. More detail on these targets and on performance against them is set out in the detailed environmental data disclosures at the end of the ARA. The disclosure cross refers to the remuneration committee report which explains that the committee revisited the ESG measures to ensure they were appropriate.

F Metrics and targets used to assess climate-related risks and opportunities

To limit the effects of climate change, the Group will focus on reducing its carbon footprint by monitoring metrics and setting emissions reduction targets.

In 2019, the Group adopted a set of intensity base metrics which are measured year-on-year and are used as the basis for three absolute science-based targets on GHG emissions, using the Sectoral Decarbonisation Approach (SDA) methodology. These targets have not yet been registered with the SBTi as the Group is first required to complete its Scope 3 footprint. These metrics or key performance indicators (KPIs) measure the level of carbon emissions from our vehicles and our sites. Our KPIs were chosen to meet the, then-prevailing, IPCC goal of controlling the increase in global warming to below 2°C. We aim to achieve these SDA KPIs over an initial seven-year performance period, 2019 to 2025, with 2018 being the baseline year. The three science-based targets sit alongside more traditional targets for onsite (Scope 1 & 2) emissions, landfilled waste disposal and water usage.

The performance against KPI intensity targets for 2020 and 2021 has been materially impacted by the significant reduction in passenger numbers and mandatory requirements limiting occupancy, both of which reduce the environmental efficiency relative to normalised operation. While absolute emissions have materially improved as we travelled significantly fewer miles and sites have been closed for long periods, our intensity metrics have worsened (i.e. emissions per passenger km have increased), driven by lower occupancy across the business and a mix away from long distance coach businesses and into urban bus businesses.

Please see page 98 to 99 for information on how our GHG reduction metrics and increase in zero emission vehicles are used as a remuneration metric in relation to the Executive Directors' and senior managers' LTIP scheme.

The table below shows the overall Group targets through to 2025 and our progress to date from our baseline year of 2018. More detail on these targets and on performance against them is set out in the detailed environmental data disclosures on pages 221 to 223.

Reduction target description (metric)	Base year (2018)	2025 target	Required % reduction from 2018	2021	% change from base year	% change YOY (2020-2021)	Required % reduction to meet target
Traction Energy: (vehicle fuel and electricity) <i>MWh/mpkm</i>	66.92	58.72	(12.25)%	86.19	28.8%	20.7%	(31.9)%
Traction Carbon Emissions (Scope 1 & 2) <i>tCO₂e/mpkm</i>	17.67	15.45	(12.53)%	24.15	36.7%	8.4%	(36.0)%
Total Scope 1 & 2 Emissions <i>tCO₂e/mpkm</i>	19.26	16.45	(14.59)%	25.34	31.2%	5.9%	(34.9)%
Site Scope 1 & 2 Emissions (building use only) <i>tCO₂e</i>	41,656	38,199	(8.30)%	31,683	(23.9)%	(13.3)%	Met

As an early adopter of decarbonisation targets, the Group initially set KPIs designed to meet the IPCC goal of controlling the increase in global warming to below 2°C. These new targets introduce Net Zero targets for the Group for the first time, as well as new targets for fleet decarbonisation at the divisional level, where our vehicles currently contribute around 95% of the Group's Scope 1 and 2 emissions.

At the Group level, we have launched a new target to achieve net zero (Scope 1 & 2) by 2040. Delivery of our Group-wide targets will be achieved through our ambition to replace all carbon emitting vehicles – see page 32 for full details of our zero emission targets, and for details of ZEVs we are currently operating. Going forward we will report externally in our annual report on the number of ZEVs that the Group is operating.

(c) Executive Directors' 2022 Long-Term Incentive Plan (LTIP) awards

Executive Directors' LTIP grants for the 2022 financial year will provide a maximum opportunity of 200% of salary for the CEO and 150% of salary for the CFO. For the CFO, this is a reduction from the 200% of salary grant level in 2021.

Performance will be assessed against the following measures:

Performance condition	Weighting	Threshold (25% vesting for TSR and EPS, 0% for others)	Target (50% vesting)	Maximum (100% vesting)
TSR ¹ vs. FTSE 250 Index	25%	Median	–	Upper quintile
EPS ^{2,3}	25%	21.7p	24.9p	26.5p
ROCE ^{2,4}	25%	9%	10.5%	12%
tCO ₂ e/million passenger km – reduction in tCO ₂ e/million passenger km by 2024 relative to 2019 base year ⁵	12.5%	8.4%	9%	9.6%
Fleet transition – number of additional zero emission vehicles in service or on order by 31 December 2024	12.5%	400	600	1,000

Recognising the 'Environmental leader' outcome of Evolve, the Committee revisited the ESG measures to ensure they are appropriate. During consultation with shareholders, many highlighted their desire for ESG measures to remain a key part of Executive Directors' overall remuneration but also emphasised a desire that any metrics remain objective, measurable and stretching. The Committee concluded that although the overall weighting of the ESG element, 25% of the total award, was appropriate, it should also measure fleet transition rather than solely tCO₂ per million passenger km (as had been the case before 2021). This will provide additional focus on fleet transition, which is an area that is a particular long-term focus for both shareholders and many of our wider stakeholders.

The Committee will continue to review best practice in this area and evolve the incorporation of ESG measures into variable remuneration arrangements.

Figure 15

Centrica (2021 ARA pp32, 57 and 81) discloses the development and publication of its Climate Transition Plan as a principal decision within its section 172(1) statement. Centrica notes that it will put the plan to a shareholder vote at the 2022 AGM and among the factors its Remuneration Committee will consider when making the 2022 remuneration awards includes progress against its Climate Transition Plan.

**CENTRICA
STORIES**

Launching our Climate Transition Plan

In 2021, we set out how we plan to deliver our net zero targets whilst ensuring a fair and affordable transition for all.

- For customers, we'll accelerate the delivery of energy efficiency and optimisation services, low carbon technologies and cleaner energy. This includes 2025 aspirations to double the number of Hive customers to 2.5 million, achieve annual installs of up to 100,000 EV charge points and 20,000 heat pumps, whilst remaining a leader in the supply of zero carbon electricity for homes and investing up to £100 million in low carbon and transition assets each year.

- Within our business, our ambition is to build a zero emission fleet in the UK by 2025 and cut our UK property emissions by a further 50% by 2030. At the same time, we plan to progress our strategic transformation to exit our remaining activities in oil and gas exploration and production and redirect investment into assets that drive the transition forward – from securing up to 800MW of low carbon and transition assets including solar and battery storage by 2025, to exploring the conversion of our Rough gas storage facility to store hydrogen.

These aspirations provide great opportunities for us and our customers, but they will be challenging and require customers, government and others to play their part as we play ours.

And for it to be a success, we'll also need to ensure we don't leave anyone behind. So we'll endeavour to champion the needs of our customers and support those who struggle with their energy bills, create thousands of high quality inclusive green jobs, back sustainable initiatives in communities and collaborate for a low carbon supply chain.

The Climate Transition Plan will go for shareholder advisory vote at the AGM in 2022.

Read more at
centrica.com/climatetransition

Implementation in the next financial year

For the 2022 award, the factors that the Committee will consider include, but are not limited to the following:

- a review of overall financial performance over the three-year vesting period;
- whether there have been any sanctions or fines issued by a Regulatory Body (participant responsibility may be allocated collectively or individually);
- whether a major safety incident has occurred which may or may not have consequences for shareholders;
- whether there has been material damage to the reputation of the Company (participant responsibility may be allocated collectively or individually);
- whether there has been failure to make appropriate progress against our Climate Transition Plan which sets out our ambition to be a net zero business by 2045 and help our customers be net zero by 2050;
- return on capital with reference to the cost of capital;
- TSR performance over the vesting period, including with reference to the wider energy sector;
- management of customer numbers over the vesting period; and
- progress against broader ESG commitments.

The Remuneration Report has been approved by the Board of Directors and signed on its behalf by:

Stated below are some examples of the decision-making of the Board during the year demonstrating key stakeholders and their interests, and how our Section 172 duties influenced the matters considered by, and the decision-making of, the Board during the year.

Consideration of stakeholders and outcomes:

Decisions considered by the Board	Key stakeholder interests considered	Outcomes
<p>Centrica developed and published its Climate Transition Plan setting out the key steps we plan to take to help our business, our customers and the wider energy system decarbonise</p>	<p>Ongoing dialogue with key stakeholders confirms a growing desire to understand more about how companies are strategically responding to climate change, including how they'll mitigate climate impact whilst enhancing long-term commercial resilience. For example:</p> <p>Investors: Institutional investors requested that Centrica develop and publish a Climate Transition Plan.</p> <p>Customers: Our goal is to help our customers be net zero by 2050.</p> <p>Colleagues: Taking a lead role in the growth of green jobs whilst continuing to embrace a diverse mix of people and skills needed for a greener future.</p> <p>Suppliers: Part of future-proofing our business against climate change is to ensure we have a reliable and responsible supply chain for customers.</p>	<p>Centrica's strategy and purpose are rooted in providing energy services and solutions that'll help our customers live sustainably, simply and affordably. In support of this, our People & Planet Plan sets out our net zero targets, and how we'll continue to develop the diverse and inclusive team that'll help us get there. Our Climate Transition Plan is the next step, explaining how we intend to achieve these goals to become a net zero business by 2045 and help our customers be net zero by 2050, while ensuring a fair and affordable transition for all.</p>

Government and Regulators: We want and need governments, regulators and policymakers to work with us to deliver the necessary changes that'll be needed to achieve our climate change goals, and specifically help us get our customers to net zero in a way that's affordable and fair. We engage responsibly with key decision makers on issues we believe are critical for shaping the energy landscape our customers need.

Communities and NGOs: Community action and engagement is essential for ensuring a successful transition.

Figure 16

Unilever (Climate Transition action plan, pp47, 51) sets out a range of targets and actions designed to deliver an emissions reduction pathway consistent with the 1.5° ambition of the Paris Agreement.

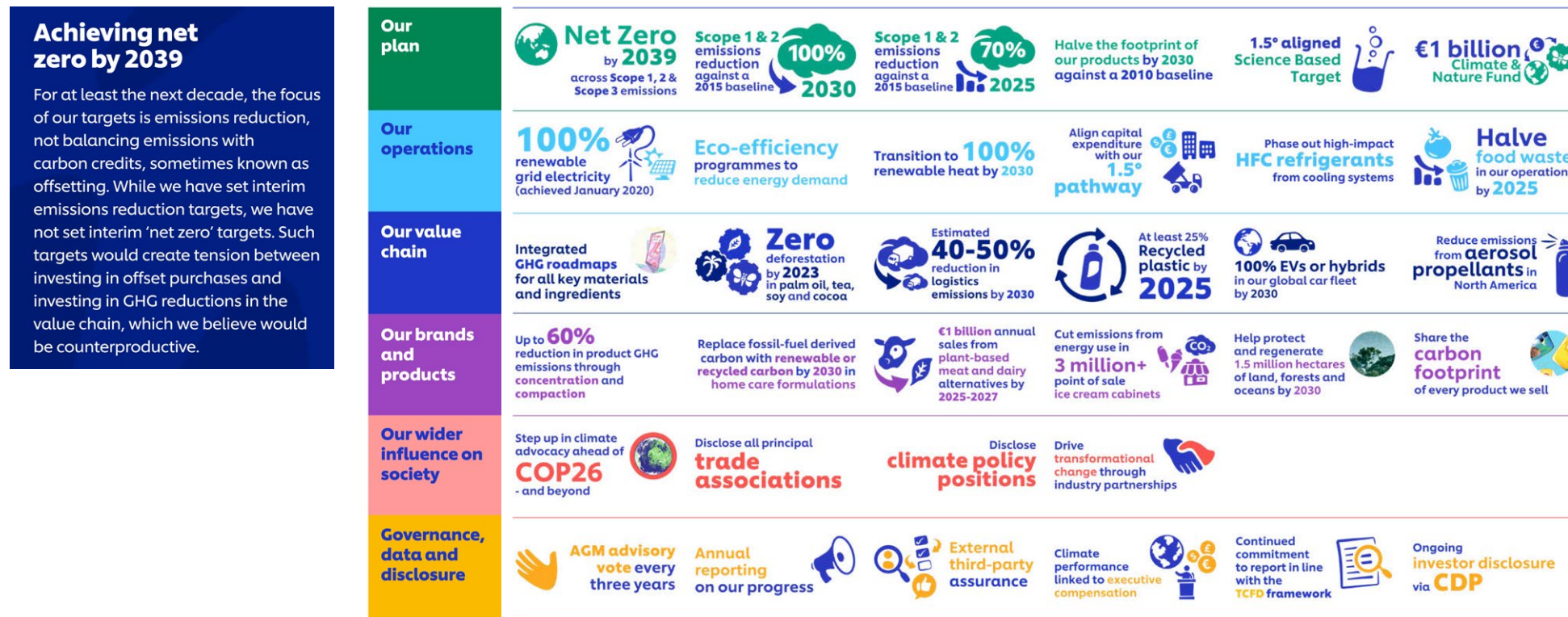


Figure 17

Anglo American (2021 ARA, pp102-103) includes reference to its Climate Change Report and CDP Climate Response 2020, where it provides detail in addition to the TCFD disclosures included in the ARA.

Disclosures related to the recommendations of the TCFD

Anglo American's response to the risks posed by climate change is multi-disciplinary and is covered throughout our reporting suite – including the Integrated Annual Report, the Sustainability Report, our Climate Change Report, published in October 2021, and our 2020 CDP Climate Change response. In line with the UK Listing Rules, we confirm that the disclosures included in the Integrated Annual Report 2021 are consistent with the TCFD Recommendations and Recommended Disclosures.

While we endeavour to include as much information as possible on our approach to climate change in the Integrated Annual Report, the Climate Change Report offers more comprehensive disclosure, including detail on the assumptions behind our scenario analysis and approach to achieving our GHG emission reduction ambitions.

Our 2020 CDP Climate Change response provides more detail pertaining to risk, opportunity and technical data. References in the table below, therefore, include the Integrated Annual Report, Climate Change Report and our 2020 CDP Climate Change response, all of which are available on our website.

→ [For more on our Climate Change Report 2021, see www.angloamerican.com/climate-change](https://www.angloamerican.com/climate-change)

→ [For more on our 2020 CDP Climate Change response, see www.angloamerican.com/cdp-response](https://www.angloamerican.com/cdp-response)

The table below offers guidance on where to find information relating to each of the TCFD's recommendations.

Governance

Disclose the organisation's governance around climate-related risks and opportunities.

Recommended disclosures	References
a) Describe the Board's oversight of climate-related risks and opportunities.	<i>Integrated Annual Report:</i> Page 14 describes the insights the Board takes into account when reviewing and endorsing the Group's long term strategy and related decisions. Climate change considerations are included within the material matters (pages 16-17), our analysis of global trends (pages 18-19), our capital allocation decisions (page 58-59) and within our principal risks – specifically risks 7, 12 and 13 (pages 60-67). Page 21 shows the key decisions made by the Board in relation to our climate change targets and ambitions. Pages 43-44 describe our policies and governance processes related to climate change. Page 125 describes the discussions and decisions taken by the both the Board and its Sustainability Committee in the year. <i>Climate Change Report:</i> Page 35 gives further details on the Group's climate change policy approach, including references to our industry association memberships. Page 37 describes the Board's climate change capability.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	<i>Integrated Annual Report:</i> Page 14 describes the insights the chief executive and senior management take into account when formulating the Group's long term strategy. Climate change considerations are included within the material matters (pages 16-17), our analysis of global trends (pages 18-19), our capital allocation decisions (pages 58-59) and within our principal risks (pages 60-67). Pages 43-44 describe our policies and governance processes related to climate change, including climate-related targets within executive remuneration. Pages 146-150 of the Remuneration Report detail progress against climate-related targets and the impact on executive remuneration in the year. <i>Climate Change Report:</i> Page 35 gives further details on the Group's climate change policy approach, including references to our industry association memberships, as well as an overview of governance and management systems related to climate change. Page 37 identifies management responsible for the oversight and delivery of the Group's climate change goals and ambitions and details the role of the Group's Climate Change Steering Committee.

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.

Recommended disclosures	References
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	<i>Integrated Annual Report:</i> Page 18 describes the potential impacts of climate change on both Anglo American and the mining industry, as well as the opportunities the Group believes it can realise through its strategic choices. Pages 24-29 describe the Group's portfolio strategy and how that has been influenced by the threat of climate change. Pages 36-37 describe the technological innovations being delivered across the Group to reduce energy and water consumption and page 40 describes the efforts of our Marketing business to deliver products that help enable our customers to achieve their climate change ambitions. The principal risks related to climate change and water are described on pages 60-67. <i>Climate Change Report:</i> Pages 15-19 describe the transitional and physical impacts we believe climate change will have on our business. <i>2020 CDP Climate Response:</i> Further detailed analysis of our risks and opportunities is available in our 2020 CDP responses to questions C 2 risks and opportunities.

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	<i>Integrated Annual Report:</i> Pages 24-29 describe the Group's portfolio evolution and how that has been influenced by the threat of climate change. Pages 36-37 describe the technological innovations being delivered across the Group to reduce energy and water consumption and page 40 describes the efforts of our Marketing business to deliver products that help enable our customers to achieve their climate change ambitions. Pages 58-59 describe how climate change considerations are embedded in our capital allocation decisions. <i>Climate Change Report:</i> Pages 20-21 give further details on the role we believe our products have to play in a low carbon future. Pages 22-30 describe our strategy to deliver our Scope 1, 2 and 3 GHG emission reduction ambitions. <i>2020 CDP Climate Response:</i> Further detailed analysis of our risks and opportunities is available in our 2020 CDP responses to questions C 2 risks and opportunities.
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<i>Integrated Annual Report:</i> Page 43 gives an overview of the range of scenarios we have used to assess Anglo American's strategic and financial resilience, as well as an assessment of our resilience. <i>Climate Change Report:</i> Pages 15-19 give a detailed overview of Anglo American's strategic and financial resilience to a 3°C, 2°C and 1.5°C scenario, including potential impacts on cash flow (upside and downside).

Risk management

Disclose how the organisation identifies, assesses, and manages climate-related risks.

Recommended disclosures	References
a) Describe the organisation's processes for identifying and assessing climate-related risks.	<i>Integrated Annual Report:</i> Page 43 describes our approach to climate-related risk. Pages 60-67 describe the Group's risk identification process and has more detail on climate change and water, both considered principal risks. <i>Climate Change Report:</i> Pages 13-14 describe our understanding, assessment and management of climate-related risks. <i>CDP Climate Response 2020:</i> Question C2.2, processes for identifying and assessing climate-related risks.
b) Describe the organisation's processes for managing climate-related risks.	<i>Integrated Annual Report:</i> Page 43 describes our approach to climate-related risk. Pages 60-67 describe the Group's principal risks and have more detail on climate change and water, and how we manage and mitigate those risks. Our Portfolio (pages 22-29) and Innovation (pages 30-49) sections of this report provide detail on the strategic portfolio choices we have made and the technological innovations we are delivering across the Group to reduce energy and water consumption. <i>Climate Change Report:</i> Pages 13-14 describe our understanding, assessment and management of climate-related risks. Page 37 identifies management responsible for the oversight and delivery of the Group's climate change goals and ambitions and details the role of the Group's Climate Change Steering Committee. <i>CDP Climate Response 2020:</i> Questions C2.1, C2.2 and C2.3.
c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	<i>Integrated Annual Report:</i> Pages 60-67 describe the Group's principal risks and have more detail on climate change and water, and how we manage and mitigate those risks. <i>Climate Change Report:</i> Pages 13-14 describe our understanding, assessment and management of climate-related risks. Page 35 gives an overview of governance and management systems related to climate change. P37 details the role of the Group's Climate Change Steering Committee. <i>CDP Climate Response 2020:</i> Questions C2.1, C2.2 and C2.3.

Metrics and targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Recommended disclosures	References
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	<i>Integrated Annual Report:</i> Pages 22-29 describe the Group's portfolio strategy and how that has been influenced by the threat of climate change. Pages 43-45 show the metrics used by the Group when assessing climate-related risks and opportunities. <i>Climate Change Report:</i> Pages 20-21 describe the strategic fit of the Group's portfolio of products in a low carbon world. Pages 22-30 describe the metrics used by the Group when assessing climate-related risks and opportunities. <i>CDP Climate Response 2020:</i> Questions C2.2a, C2.3a, C2.4a and C11.3a.
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3, greenhouse gas (GHG) emissions and the related risks.	<i>Integrated Annual Report:</i> Page 45 shows our Scopes 1, 2 and 3 GHG emissions. Page 282 shows current and historical Scopes 1 and 2 emissions by business unit. <i>Climate Change Report:</i> Pages 22-25 show our Scopes 1 and 2 GHG emissions and detail the ways in which we believe we will meet our GHG reduction targets. Pages 26-30 show our Scope 3 GHG emissions and detail the ways we believe we can meet our reduction ambition.
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	<i>Integrated Annual Report:</i> Pages 38 and 43 describe our climate-related goals and ambitions. <i>Climate Change Report:</i> Pages 22-25 show our Scopes 1 and 2 GHG emissions targets. Pages 26-30 show our Scope 3 GHG emissions reduction ambitions.

Figure 18

Rentokil (2021 ARA, pp106-109, 155) reports that its AC reviewed management's analysis undertaken to link the expected levels of climate risk and climate change impacts to accounting standards and recommended to the board a paper on climate change reporting in the 2021 financial statements. The outcomes of management's analysis are set out in the basis of preparation note.

Climate change reporting

As previously described, the Audit Committee considered climate change risk and its inclusion in the year-end audit report during the year. The Company's 2020 Annual Report was included in the sample for the FRC's thematic review of entities' reporting on streamlined energy and carbon reporting (SECR) disclosures. The FRC carried out a limited scope review with no queries or questions being raised and the Company was featured as an example of better disclosure in the review when it was published in September 2021. However, it is increasingly understood that climate change can affect a number of areas of financial statements and the FRC included as one of its key disclosure expectations in its annual review of corporate reporting for 2020/21 that material climate change policies, risks and uncertainties discussed in narrative reporting should also be appropriately considered and disclosed in the financial statements.

Management, therefore, undertook a full review taking into account the current understanding of the impact of climate change on our business as a whole (see page 62), the dynamic of our business models and their impact on the risk, and any applicable Accounting Standards. Analysis was undertaken to link the expected risk levels and climate change impacts to these Accounting Standards and a review of the balance sheet, key revenue streams and impacts of the Group's 2040 net zero commitment was completed. As detailed on page 155, overall the analysis demonstrated that the Group is not materially exposed to climate change events due to its disaggregated nature and it was, therefore, proposed that only two areas should disclose climate change impacts in the Financial Statements, with additional disclosure in the basis of preparation section in the Notes to the Financial Statements and the intangible asset impairment review process (see pages 155 and 176). The Audit Committee considered the review and approach proposed and recommended these to the Board of Directors, which approved them at its meeting in December 2021.

Climate change

The Group operates across many markets around the world and is impacted by physical events caused by climate change and also contributes to climate change through its carbon emissions. The Group also has a net zero commitment for 2040 and this plan will require operational changes in how we service our customers and deal with the effects of climate change.

As part of its discussion of the audit strategy for 2021, the Audit Committee considered climate change risk and its inclusion in the year-end audit report at its meeting in July 2021. Climate change risk was also considered as part of the review of Group risks in November and, in December 2021, the Audit Committee received a presentation from the Chief Financial Officer and the Group Financial Controller outlining the accounting considerations and climate change reporting in the Company's Financial Statements (see also page 107 on climate change reporting).

Spotlight

Considering risk in detail

Our Group Risk Committee meets four times a year and, at the meeting in October 2021, Julie Southern, Non-Executive Director and Chair of the Audit Committee, joined the meeting to engage with colleagues on the current and emerging risks being considered. Items on the agenda for the two hour meeting included a deep dive on IT risk presented by the Global Head of Information Security and the Chief Information Officer, a thematic review of litigation risk and mitigation by the Group General Counsel & Company Secretary, and a detailed discussion on climate change risk and reporting, including how this should be presented in the Financial Statements of our 2021 Annual Report. The meeting provided Julie with the opportunity to observe the management process when considering key risk areas, with sufficient time to ask questions and debate approach. The discussion on climate change was reflected in the final paper on climate change reporting in the 2021 Financial Statements that was submitted to the Audit Committee and Board for its consideration and approval in December 2021.

General accounting policies

Basis of preparation

The Group has engaged in a detailed review of expected climate change impacts on the business and its assets and liabilities to establish any adjustments required and what reporting is necessary in its Financial Statements for 2021 under a 1.5-2.0 degree pathway. The explanation below of how this has been included in the Financial Statements should be read in conjunction with the climate change evaluation and risk assessment on page 62 of the Responsible Business section.

This process has been completed to ensure material accuracy of the financial reporting and that disclosure of relevant information complies with the requirements of IAS 1.

The process has involved a detailed review of material revenue segments, all balance sheet line items and each element of the Group's commitment to reach net zero by 2040, to identify if any of these items is expected to be materially impacted in a negative or positive way by weather, legislative, societal or revenue/cost changes. The conclusions of this process have been reviewed and agreed by the Audit Committee and Board on 9 December 2021.

The conclusion of the review was that, while there will undoubtedly be impacts on the Company, the highly disaggregated nature of the operations of the Group significantly reduces the risk profile of the Group to impacts from weather-related changes. The changes necessary to achieve net zero will not have a materially adverse impact on the cash flows of the Group and indeed, warmer climates may present some opportunities as disclosed on page 58 to 65 of this report. Societal and legislative impacts are not considered to have a material impact on any one segment such that we need to break out reporting in a different way to previous years. Judgements are not considered to be significant, although clearly understanding of climate change is developing with time. The area with the most judgement is goodwill impairment testing and a description is given in Note B2 of the incremental processes undertaken to assess the climate change impact on the valuations. Management review has concluded that there is no material impact and that no further disclosure is required.

Figure 19

Drax (2021 ARA, p209) discusses a significant estimation uncertainty in respect of useful economic life estimates and quantifies the potential impacts on depreciation.

Significant estimation uncertainty

Asset lives are reviewed annually at each balance sheet date, taking into consideration the impact of climate and environmental change. See note 2.4 for further details.

As disclosed on page 208, the Group has made an estimate regarding UELs. Given the continued focus on climate change, greener sources of energy and transitioning to a net zero economy, the power generation industry is going through a period of transformation, which can impact on the UELs of assets. As the Government's net zero strategy continues to evolve and become clearer, particularly in relation to BECCS, the Group will continue to assess any potential impact of these developments and whether UELs would be required to be updated, particularly in relation to Drax Power Station. Accordingly, given the continued rate of change in these areas, this increases the risk that UELs will be updated in the near future as new information becomes available, and as such a change in UELs, particularly in relation to Drax Power Station's biomass assets, has been disclosed as a key source of estimation uncertainty. If BECCS is deployed at Drax Power Station this could result in an extension of the end of station life. If the useful economic life of Drax Power Station was to increase by ten years, the impact on the depreciation charge for the year would be a decrease of approximately £19.4 million.

Figure 20

IAG (2021 ARA, pp212-213) brings together the various considerations into Note 4 *Impact of climate change on financial reporting*, which is split into two sections: Significant transactions and critical accounting estimates, assumptions and judgements in the determination of the impact of climate change and critical accounting estimates, assumptions and judgements – cash flow forecast estimation.

4 Impact of climate change on financial reporting

Significant transactions and critical accounting estimates, assumptions and judgements in the determination of the impact of climate change

As a result of climate change the Group has designed and approved its Flightpath Net Zero climate strategy, which commits the Group to net zero emissions by 2050. While approved business plans currently have a duration of three years, the Flightpath Net Zero climate strategy impacts both the short, medium and long-term operations of the Group.

The details regarding the inputs and assumptions used in the determination of the Flightpath Net Zero climate strategy include, but are not limited to, the following that are within the control of the Group:

- The additional cost of the Group's commitment to increasing the level of Sustainable Aviation Fuels to ten per cent by 2030 and to fifty per cent by 2050;
- The cost of incurring an increase in the level of carbon offsetting and carbon capture schemes; and
- The impact of introducing more fuel-efficient aircraft and being able to operate these more efficiently.

In addition to these inputs and measures within the control of management, Flightpath Net Zero includes assumptions pertaining to consumers, governments and regulators regarding the following:

- The impact on passenger demand for air travel as a result of both passenger trends regarding climate change and government policies;
- Investment and policy regarding the development of Sustainable Aviation Fuel production facilities;
- Investment and improvements in air traffic management;
- The price of carbon through the EU and UK Emissions Trading Schemes (ETS) and the UN Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA); and
- Effective market-based policy measures in addition to the EU and UK ETS and CORSIA.

The level of uncertainty regarding the impact of these factors increases over time. Accordingly, the Group has applied critical estimation and judgement in the evaluation of the impact of climate change regarding the recognition and measurement of assets and liabilities within the financial statements.

Critical accounting estimates, assumptions and judgements – cash flow forecast estimation

With the Flightpath Net Zero climate strategy assessing the impact over a long-term horizon to 2050, the level of estimation uncertainty in the determination of cash flow forecasts increases over time. For those assets and liabilities, where their recoverability is dependent on long-term cash flows, the following critical accounting estimates, assumptions and judgements, to the extent they can be reliably measured, have been applied:

a Long-term fleet plans and useful economic lives

The Group's Flightpath Net Zero climate strategy has been developed in conjunction with the long-term fleet plans of each operating company. This includes the annual assessment of useful lives and the residual values of each aircraft type.

During the course of 2020 as a result of the impact of COVID-19, the Group permanently stood down 82 aircraft, their associated engines and rotatable inventories. These permanently stood-down aircraft were older-generation aircraft, that were less fuel efficient, more carbon intensive and more expensive to operate than more modern models.

With the permanent standing down of these aircraft, coupled with the future delivery of 110 fuel-efficient aircraft as detailed in note 15, the Group considers the existing fleet assets align with the long-term fleet plans to achieve its Flightpath Net Zero strategy. All aircraft in the fleet, and those due to be delivered in the future, have the capability to utilise SAF in their operations without impediment. Accordingly, no impairment has arisen in the current or prior year as a result of the Group's decarbonisation plans.

b Impairment testing of the Group's cash generating units

The Group applies discounted cash flow models, for each cash generating unit, derived from the cash flow forecasts from the approved three-year business plans. The Group's Flightpath Net Zero climate strategy is long-term in nature and includes commitments that will occur at differing points over this time horizon. To the extent that certain of those commitments occur over the short-term, then they have been incorporated into the three-year business plans.

The Group adjusts the final year of the three-year business plan to incorporate the impacts of climate change that the Group can reliably estimate at the reporting date. However, given the long-term nature of the Group's sustainability commitments, there are other aspects of these commitments that cannot be reliably estimated at the reporting date and have been excluded from these adjustments. These adjustments incorporate the increased utilisation of sustainable aviation fuel as well as price assumptions relating to sustainable aviation fuels and the price of carbon (both ETS and CORSIA), which are derived from externally sourced prices. Where the Group considers such costs will be recovered through increased passenger ticket fares, then a corresponding adjustment is made to increase passenger revenue.

As detailed in note 17, the Group applies a long-term growth rate to this adjusted three-year business plan, per CGU, and each of the long-term growth rates include a specific adjustment to reduce the rate to reflect the Group's assumptions regarding the reduced demand impact arising from climate change. This demand impact is derived with reference to external market data.

Further, in preparing the impairment models, the Group cash flow projections are prepared on the basis of using the current fleet in its current condition. The Group excludes the estimated cash flows expected to arise from future restructuring, assets not currently in use by the Group and expected technological advancements in aircraft and other technologies not available at the reporting date. The Group excludes potential future legislation/regulation regarding carbon pricing and/or alternative schemes not currently enacted, such as the implementation of kerosene taxes.

Given the inherent uncertainty associated with the impact of climate change, the Group has applied additional sensitivities in note 17 to reflect a more adverse impact of climate change than currently expected. This has been captured through both the downward sensitivities of the long-term growth rates, ASKs, operating margins and the increased fuel price sensitivity.

c Valuation of employee benefit scheme assets

The Group's employee benefit schemes are principally represented by the British Airways APS and NAPS schemes in the UK. The schemes are structured to make post-employment payments to members over the long term, with the Trustees having established both return-seeking assets and liability-matching assets that mature over the long-term to align with the forecast benefit payments.

The assets of these schemes are invested predominantly in a diversified range of equities, bonds and property. The valuation of these assets ranges from those with quoted prices in active markets, where prices are readily and regularly available, through to those where the valuations are not based on observable market data, often requiring complex valuation models. The trustees of the schemes have integrated climate change considerations into their long-term decision-making and reporting processes across all classes of assets, actively engaging with all fund and portfolio managers to ensure that where unobservable inputs are required into valuation models, that such valuation models incorporate long-term expectations regarding the impact of climate change.

d Recoverability of deferred tax assets

In determining the recoverable amounts of the Group's deferred tax assets, the Group applies the future cash flow projections for a period of up to ten years derived from the approved three-year business plans. The Group applies a medium-term growth rate subsequent to the three-year business plans, specific to each operating company. In considering the impact of the Group's Flightpath Net Zero climate strategy, management adjusts this medium-term growth rate, where applicable, to incorporate the impacts on both revenue and costs to the Group.

Figure 21

Rolls Royce (2021 ARA, pp58-60) explains that whilst it is unlikely that physical and transition risks will arise during the 18-month period being assessed for going concern, both physical and transition risks have been considered. The viability statement includes reference to the TCFD scenario in which climate change increases costs, reduces sales volumes and disrupts supply chains.

GOING CONCERN AND VIABILITY STATEMENTS

GOING CONCERN STATEMENT

Overview

The Group operates an annual planning process. The Group's plans, and risks to their achievement are reviewed by the Board and, once approved are used as the basis for monitoring the Group's performance, incentivising employees, and providing external guidance to shareholders.

The processes for identifying and managing risk are described on pages 52 to 57. As described on these pages, the risk management process, and the going concern and viability statements, are designed to provide reasonable but not absolute assurance.

In accordance with the requirements of the UK Corporate Governance Code 2018, the Directors have undertaken a comprehensive going concern review over an 18-month period to August 2023, considering the forecast cash flows and the available liquidity of the Group over that 18-month period, taking into account the Group's principal risks and uncertainties.

Impact of COVID-19

The COVID-19 pandemic continues to have an impact on the Group, primarily within Civil Aerospace, due to continued travel restrictions and varied quarantine requirements imposed by governments across the globe. The speed of vaccination programmes, efficacy of vaccines and differing governmental testing and quarantine requirements means that uncertainty remains in the short term over the timing of recovery of demand, in particular in relation to the civil aviation industry. This has been considered by the Directors in assessing the adoption of the going concern basis in the Consolidated Financial Statements. Recognising the challenges of reliably estimating and forecasting the timing of recovery of demand, the Group has modelled two forecasts in its assessment of going concern which have been considered by the Directors, along with a likelihood assessment of these forecasts, being:

- base case, which reflects the Directors current expectations of future trading; and
- severe but plausible downside forecast, which envisages a 'stress' or 'downside' situation.

Since the start of the pandemic, the Group has taken action to reduce cash expenditure and maintain liquidity. The Group raised £7.3bn of additional funding during 2020 through a combination of equity and debt. In March 2021, the Group secured a further £1bn term-loan facility, 80% of which is guaranteed by UK Export Finance (UKEF), repayable in March 2026, and in August 2021 extended its £1bn undrawn bank loan facility from a maturity date of 15 October 2022 to a maturity date of 15 January 2024.

A major restructuring programme was launched in 2020 to reshape and resize the Group to deliver forecast annualised savings of at least £1.3bn by the end of 2022, with a plan to remove at least 9,000 roles across the Group. At 31 December 2021, over 9,000 roles had been removed from continuing operations and annualised savings exceeded the £1.3bn target 12 months ahead of schedule.

Impact of climate change

The Directors believe there are significant business growth opportunities to come from the Group playing a leading role in the transition to net zero, whilst at the same time climate change poses potentially significant risks to the Group. Whilst it is unlikely that physical and transition risks will arise during the 18-month period being assessed for going concern, both physical and transition risks have been considered as part of the Group's risk assessment. The investment required to achieve net zero scope 1 + 2 GHG emissions, together with that required to ensure our new products will be compatible with net zero operation by 2030, has been included in the Group's forecasts, including those periods used in the assessment of going concern. Over the next 18 months, 64% of the Group's R&D investment will be directed to the delivery of our decarbonisation strategy.

Liquidity and borrowings

At 31 December 2021, the Group had liquidity of £7.1bn, including cash and cash equivalents of £2.6bn and undrawn facilities of £4.5bn.

The Group's committed borrowing facilities at 31 December 2021 and 31 August 2023 are set out below. None of the facilities are subject to any financial covenants or rating triggers which could accelerate repayment.

(£m)	31 Dec 2021	31 Aug 2023
Issued Bond Notes ¹	3,995	3,995
Other Loans	63	-
UKEF £2bn loan (drawn) ² and UKEF £1bn loan (undrawn) ³	3,000	3,000
Revolving Credit Facility (undrawn) ⁴	2,500	2,500
Bank Loan Facility (undrawn) ⁵	1,000	1,000
Total committed borrowing facilities	10,558	10,495

¹ The value of Issued Bond Notes reflects the impact of derivatives on repayments of the principal amount of debt. The bonds mature by May 2025.

² The £2,000m UKEF loan matures in August 2025.

³ The £1,000m UKEF loan matures in March 2026 (currently undrawn).

⁴ The £2,500m Revolving Credit Facility matures in April 2025 (currently undrawn).

⁵ The £1,000m Bank Loan Facility matures in January 2024 (currently undrawn).

Taking into account the maturity of borrowing facilities, the Group has committed facilities of at least £10.5bn available throughout the period to 31 August 2023.

Forecasts

The Group has modelled a base case, reflecting a best estimate of future trading. The base case forecast assumes the continuation of a steady recovery in customer confidence in the aftermath of the COVID-19 pandemic. Vaccination programmes continue to be rolled out but the efficacy of vaccines over different variants and differing governmental testing and quarantine requirements means that the recovery of demand is hindered in the short term, in particular in relation to the civil aviation industry.

In August 2020, the Group announced it would deliver proceeds of around £2bn from planned disposals. Some of these disposals were completed by 24 February 2022. For the remaining planned disposals, as these are due to complete within the 18-month period being considered, the proceeds have been included in the base case forecast, together with a corresponding decrease in debt facilities.

The downside forecast assumes Civil widebody EFHs remain at average Q4 2021 levels over the 18-month period to August 2023, with recovery subdued due to ongoing infection rates and a continuation of new variants of the virus, resulting in ongoing caution in opening borders to international travel and no upward trend in EFH until September 2023, resulting in a much slower recovery in demand compared with the base case. The downside forecast also reflects risks in relation to load reduction through our factories, and possible supply chain challenges.

Conclusion

After reviewing the current liquidity position, the cash flow forecasts modelled under both the base case and downside, the Directors consider that the Group has sufficient liquidity to continue in operational existence for a period of at least 18 months from the date of this report and are therefore satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the financial statements.

VIABILITY STATEMENT

Viability

The viability assessment considers liquidity over a longer period than the going concern assessment. Our downside scenario uses the same assumptions as the going concern statement and in 2024 to 2026 assumes a slower recovery back to 2019 level than assumed in our base case.

Consistent with previous years, we have assessed our viability over a five-year period which is in line with our five-year forecasting process. We continue to believe that this is the most appropriate time period to consider as, inevitably, the degree of certainty reduces over any longer period.

In making the assessment, we have used the same base case, the same severe but plausible downside scenario and have then extended our assessment over five years. We have created severe but plausible scenarios that estimate the potential impact of our principal risks arising over the assessment period (descriptions of our principal risks and the controls in place to mitigate them can be found on pages 52 to 57). We have selected those principal risks that could have the most material impact to liquidity in the next five years in a severe but plausible scenario. In addition to the downside (market shock) scenario, the risks chosen and scenarios used are as follows: business continuity, the loss of a key element of our supply chain resulting in an inability to fulfil civil widebody orders for 12 months. Compliance, a compliance breach resulting in fines (greater than those agreed as part of our DPA) and loss of new business with governments and state owned companies. Political risk, a trade war between major trading blocs resulting in supply chain disruption and a loss of sales into impacted markets for six months. Climate change, the impact of climate change increasing our costs, reducing sales volumes and disrupting our supply chains (this scenario is discussed in more detail in our TCFD section); and safety, a significant Civil Aerospace product safety event resulting in additional costs, penalties and lower service revenues.

The cash flow impacts of these scenarios were overlaid on the five-year forecast to assess how the Group's liquidity would be affected.

The scenarios assume an appropriate management response to the specific event which could be undertaken and also consider specific activities to improve liquidity such as raising additional funds, reducing expenditure and divesting parts of our business.

Reverse stress testing has also been performed to assess the severity of scenarios that would have to occur to exceed liquidity headroom, the assumptions used in these stress tests were not considered plausible.

On the basis described above, the Board confirms that it has a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the next five years. In making this statement, the Directors have made the following key assumptions:

- the Group is able to refinance maturing debt facilities and drawdown existing available facilities as required. Debt maturities over the assessment period are as follows:
 - The £1,000m Bank Loan Facility maturing 2024
 - The £550m Bond maturing in 2024
 - The £2,500m Revolving Credit Facility maturing in 2025
 - The \$1,000m Bond maturing in 2025
 - The £2,000m UKEF loan (currently drawn) maturing in 2025
 - The £1,000m UKEF loan (currently undrawn) maturing in 2026
 - The £750m Bond maturing in 2026
 - The £375m Bond maturing in 2026

- the Group has access to global debt markets and expects to be able to refinance these debt facilities on commercially acceptable terms;
- the Group's medium and long-term financing plans are designed to allow for periods of adverse conditions in world capital markets but not a prolonged period (e.g. 12 months) where debt markets were effectively closed to the Group;
- that implausible scenarios do not occur. Implausible scenarios include either multiple risks impacting at the same time or where management actions do not mitigate an individual risk to the degree assumed, and;
- that in the event of one or more risks occurring (which has a particularly severe effect on the Group) all potential actions (such as but not limited to restricting capital and other expenditure to only committed and essential levels, reducing or eliminating discretionary spend, reinstating pay deferrals, raising additional funds through debt or equity raises, executing disposals and undertaking further restructuring) would be taken on a timely basis.

The Group believes it has the early warning mechanisms to identify the need for such actions and, as demonstrated by our decisive actions over the course of the pandemic, has the ability to implement them on a timely basis if necessary.

Appendix: Listing Rule and associated Listing Rule Guidance

Listing Rule LR 9.8.6R (8)

In the case of a listed company incorporated in the *United Kingdom*, the following additional items must be included in its annual financial report:

A statement setting out:

- (a) whether the *listed company* has included in its annual financial report climate-related financial disclosures consistent with the *TCFD Recommendations and Recommended Disclosures*;
- (b) in cases where the *listed company* has:
- (i) made climate-related financial disclosures consistent with the *TCFD Recommendations and Recommended Disclosures*, but has included some or all of these disclosures in a document other than the annual financial report:
 - (A) the recommendations and/or recommended disclosures for which it has included disclosures in that other document;
 - (B) a description of that document and where it can be found; and
 - (C) the reasons for including the relevant disclosures in that document and not in the annual financial report;
 - (ii) not included climate-related financial disclosures consistent with all of the *TCFD Recommendations and Recommended Disclosures* in either its annual financial report or other document as referred to in (i):
 - (A) the recommendations and/or recommended disclosures for which it has not included such disclosures;
 - (B) the reasons for not including such disclosures; and
 - (C) any steps it is taking or plans to take in

order to be able to make those disclosures in the future, and the timeframe within which it expects to be able to make those disclosures; and

(c) where in its annual financial report or (where appropriate) other document the climate-related financial disclosures referred to in (a) can be found.

FCA guidance to Listing Rule LR 9.8.6R (8) (“LR Guidance”)⁵

LR 9.8.6BG 21/12/2020⁶

For the purposes of LR 9.8.6R(8), in determining whether climate-related financial disclosures are consistent with the *TCFD Recommendations and Recommended Disclosures*, a listed company should **undertake a detailed assessment of those disclosures which takes into account:**

- (1) Section C of the *TCFD Annex* entitled “Guidance for All Sectors”;
- (2) (where appropriate) Section D of the *TCFD Annex* entitled “Supplemental Guidance for the Financial Sector”; and
- (3) (where appropriate) Section E of the *TCFD Annex* entitled “Supplemental Guidance for Non-Financial Groups”.

LR 9.8.6CG 01/01/2022

For the purposes of LR 9.8.6R(8), in determining whether a listed company’s climate-related financial disclosures are consistent with the *TCFD Recommendations and Recommended Disclosures*, the FCA considers that **the following documents are relevant:**

- (1) the *TCFD Final Report* and the *TCFD Annex*, to the extent not already referred to in LR 9.8.6R(8) and LR 9.8.6BG;
- (2) the *TCFD Technical Supplement on the Use of Scenario Analysis*;
- (3) the *TCFD Guidance on Risk Management Integration and Disclosure*;

(4) (where appropriate) the *TCFD Guidance on Scenario Analysis for Non-Financial Companies*; and

(5) the *TCFD Guidance on Metrics, Targets and Transition Plans*⁷.

LR 9.8.6DG 21/12/2020

For the purposes of LR 9.8.6R(8), in determining whether climate-related financial disclosures are consistent with the *TCFD Recommendations and Recommended Disclosures*, a listed company should consider whether those disclosures provide sufficient detail to enable users to assess the listed company’s exposure to and approach to addressing climate-related issues.

A listed company should carry out its own assessment to ascertain the appropriate level of detail to be included in its climate-related financial disclosures, taking into account factors such as:

- (1) the level of its exposure to climate-related risks and opportunities; and
- (2) the scope and objectives of its climate-related strategy,

noting that these factors may relate to the nature, size and complexity of the listed company’s business.

LR 9.8.6FG 01/01/2022

Where making disclosures on transition plans as part of its disclosures on strategy under the *TCFD Recommendations and Recommended Disclosures*, a listed company that is headquartered in, or operates in, a country that has made a commitment to a net zero economy, such as the UK’s commitment in the Climate Change Act 2008 (2050 Target Amendment) Order 2019, is encouraged to assess the extent to which it has considered that commitment in developing and disclosing its transition plan. Where it has not considered this commitment in developing and disclosing its transition plan, the FCA encourages a listed company to explain why it has not done so.

⁵ Some of the changes take effect for periods beginning on or after 1 January 2022; transitional rules are set out in **LR TR 17 Transitional Provisions in relation to climate-related financial disclosures under LR 14.3.27R and LR 9.8.6R(8) – FCA Handbook**

⁶ See section 2.1

⁷ See section 2.2

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