



Surrey Pension Fund

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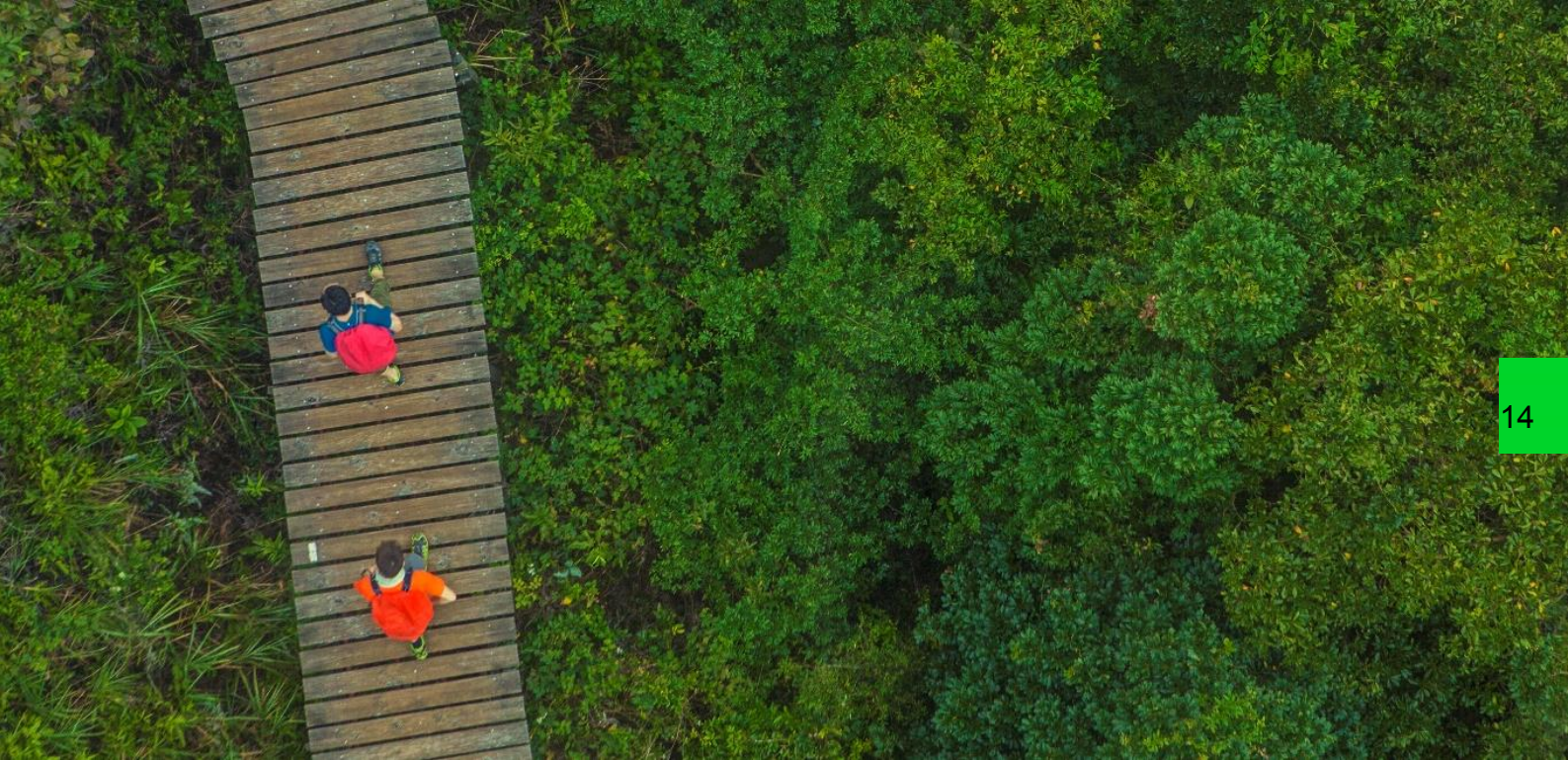
Task Force on Climate-Related Financial Disclosure Report

September 2023



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INTRODUCTION

The Pension Fund Committee (“the Committee”) of the Surrey Pension Fund (“the Fund”) supports the recommendations of the Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD) as a framework to help manage and report on the actions being taken to identify climate change related risks and opportunities in the Fund’s investment strategy.

The report explains how the Committee has established and maintains oversight and processes to satisfy itself that the Fund’s relevant climate-related risks and opportunities are considered appropriately by all stakeholders involved in the day-to-day management of the Fund.

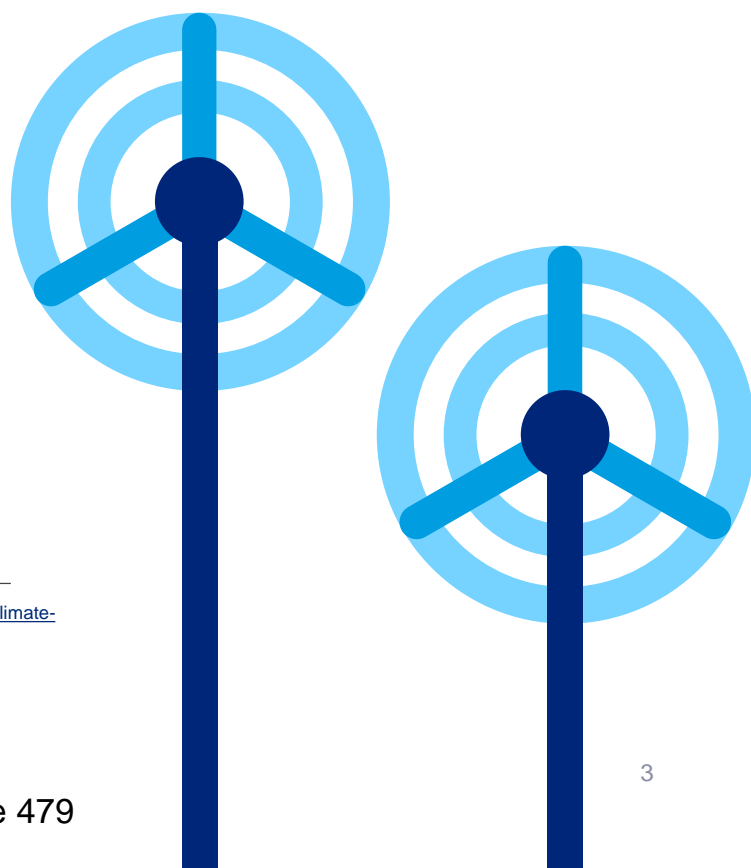
This report should be read in conjunction with the Border to Coast Pensions Partnership Ltd (BCPP)’s Climate Change Report and BCPP’s Climate Change Policy¹.

The Committee looks to fully integrate climate change and wider Environmental, Social and Governance (“ESG”) issues into all decisions regarding the investment strategy of the Fund. This is done with the overriding objective of achieving the long-term investment returns required to help in the provision of paying pensions.

The Committee expects the Fund’s approach to evolve over time, recognising a rapidly changing regulatory, societal, technological and macroeconomic backdrop.

The Committee recognises that climate issues can be more relevant and readily implementable for some parts of the portfolio than others. This statement outlines where governance of climate risk and opportunities has been applied. For example, the carbon footprinting analysis currently covers the Listed Equity holdings of the Fund, which represented c.63% of the Fund’s total asset exposure as at 31 March 2023.

The Committee will seek to expand the remit of this reporting to cover the entirety of its portfolio as and when the ability to monitor these risks becomes more achievable via improved availability of data and on a cost effective basis.



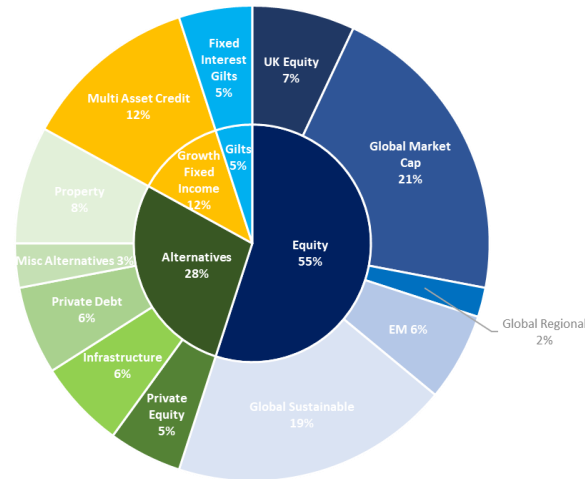
¹ <https://www.bordertocoast.org.uk/wp-content/uploads/2023/01/Border-to-Coast-Climate-Change-Policy-2023-1.pdf>



Summary

The Committee is pleased to note the following key highlights from this report:

- The Fund’s triennial actuarial valuation was conducted as at 31 March 2022. For the first time the actuary considered climate related risks with the actuarial valuation process.
- The Committee reviewed the Fund’s Responsible Investment policies, which are holistic, covering wide ranging aspects of Environment, Social and Governance (ESG) considerations.
- The Committee, at the June 2023 meeting, agreed to target Net Zero for the Fund’s investments by 2050 or sooner. This followed rigorous analysis that looked to balance setting a Net Zero target date, at the same of being able to achieve the required investment returns in an appropriately diversified way, consistent with the Committee’s fiduciary duty. The target date will be kept under regular review.
- The Committee reviewed the Fund’s investment strategy over the year to 31 March 2023. A key part of this review consider appropriate ways of addressing the risks and opportunities from climate change. This helped to confirm the Fund’s commitment to investing in climate solution opportunities.
- The Fund has in excess of 17% (as a percentage of total fund benchmark assets) invested in strategies dedicated to addressing the risks associated with climate change and wider ESG issues. This is achieved primarily by investing in LGIM’s Future World index strategy and through a £235m commitment to the BCPP Climate Opportunities Fund. Over the year to 31 March 2023, BCPP called c.£42m for investment into climate opportunities.
- The above illustrates the Fund’s overarching approach to climate related risks; firstly aiming to reduce the carbon footprint of its investments over time thus managing risks associated with climate change and, secondly, to invest in the opportunity that decarbonising the global economy provides. This two pronged approach of risk management and investing the opportunities is key for the Fund.
- Over the summer of 2023 the fund transitioned its passive Emerging Market Equity investments into BCPP’s active Emerging Market fund. These assets will now fall under BCPP 2050 Net Zero or sooner target.



Source: ISS, Strategic Asset Allocation 31 March 2023

- The Fund first undertook carbon footprinting analysis of its listed equity holdings in June 2018, which included analysis of the Weighted Average Carbon Intensity. Weighted Average Carbon Intensity (“WACI”) – measures the carbon emissions (in Metric tons) divided by sales (per \$million of sales). As at June 2018, the listed equity assets of the Fund had an estimated WACI of c.285.0 tCO₂e per \$million revenue compared to MSCI ACWI benchmark of c.318.2 tCO₂e per \$million revenue.
- As at 31 March 2023, within the listed equity assets (c.63% of Fund assets) the Fund had an estimated Weighted Average Carbon Intensity of c.119.3 tCO₂e per \$million revenue, this is c. 19% below the MSCI ACWI benchmark of c.146.8 tCO₂e per \$million revenue.
- Since 2018, the WACI of the listed equity portfolio has fallen by over 58%. This rate of decarbonisation was higher than the benchmark over the period.



THE TCFD FRAMEWORK

The Financial Stability Board, an international body established by the G20 that monitors and makes recommendations about the global financial system, created the Task Force on Climate-related Financial Disclosures (TCFD) in 2017. TCFD was created to improve and increase reporting of climate-related financial information that can promote more climate-informed investments. This TCFD statement is prompted by that drive for transparency. Our aim is that members and stakeholders can better understand the climate-related risks and opportunities from ownership of companies and other investments.

Figure 1: TCFD Framework

TCFD recommendations are categorised under four pillars: Governance, Strategy, Risk Management, Metrics and Targets:



Governance

The organisation’s governance around climate-related risks and opportunities.

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organisation’s business strategy, and financial planning.

Risk Management

The processes used by the organisation to identify, assess, and manage climate-related risks.

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

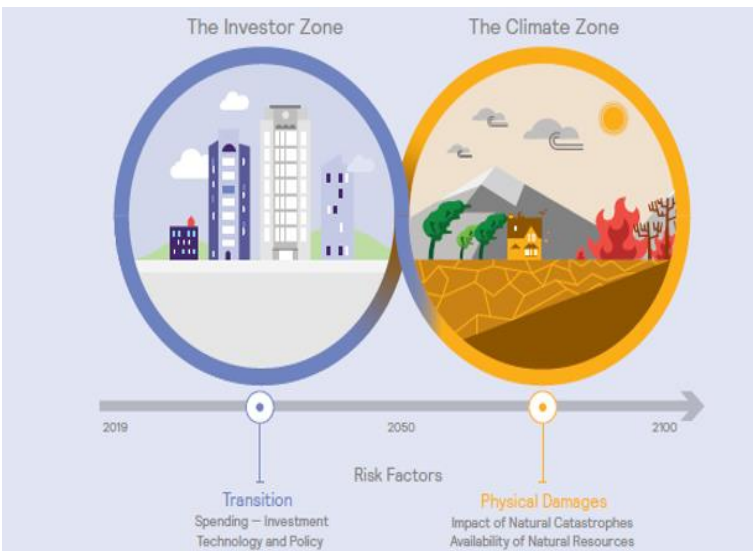
Asset owners, like the Fund, sit at the top of the investment chain and therefore have an important role to play in influencing the organisations through which they invest and companies in which they ultimately invest to provide better climate-related financial disclosures. Disclosure of climate-related risks and opportunities by asset owners allows beneficiaries and other audiences to assess the asset owner’s investment considerations and approach to climate change.

For the Fund this means an assessment of our integration. Integration is the way we incorporate all material and relevant climate-related financial and non-financial information into our investment activities and decision making. How we think about climate change when we set our investment strategy, when we make new investment decisions, and when we manage our existing portfolio are all examples of integration. We hope and believe that our climate-related financial disclosures encourage better disclosures across the investment chain — from asset owners to asset managers to underlying companies.

CLIMATE-RELATED RISKS

We are already experiencing climate change and its associated physical impacts today. The average global temperature in 2021 was about 1.1°C above pre-industrial levels. Most of this warming has occurred in the past 35 years, with the seven “warmest” years on record taking place since the start of 2015. The overwhelming scientific consensus is that the observed climatic changes are primarily the result of human activities including electricity and heat production, agriculture and land use change, industry, and transport.

Figure 1.



Physical risks are expected to be felt more as the century progresses although the extent of the risks is highly dependent on whether global Net Zero greenhouse gas emissions targets are achieved by 2050. There are investment opportunities, for example, in newly constructed infrastructure and real estate that are designed to be resilient to the physical impacts of climate change, as well as being constructed and operated in a way that has low or no net carbon emissions. There are also opportunities for investment in those companies or industries that focus on energy conservation and resource efficiency.

Source: Mercer

In order to mitigate the worst economic impacts of climate change, there must be a large, swift, and globally co-ordinated policy response. Despite this, the majority of climate scientists anticipate that given the current level of climate action, by 2100 the world is estimated to be between 2°C and 4°C warmer, with significant regional variations. This is substantially higher than the Paris Climate Change Agreement, which reflects a collective goal to hold the increase in the climate’s mean global surface temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C.

Given its contribution to global Green House Gas (GHG) emissions, the energy sector is expected to play a significant role in the long-term decarbonisation of the economy. It is important to recognise however that not only is the supply of energy expected to be a factor in global decarbonisation, but the demand for energy plays a crucial role too. In addition, the behaviour of private and state-owned energy companies is as important as their publicly traded counterparts. The issue faced by diversified investors (such as pension funds) is not limited to the oil and gas and power generation sectors, but also to downstream sectors. Investors focusing exclusively on primary energy suppliers could fail to identify material climate risks in other sectors.

Research suggests that the oil and gas sector is not homogeneous with regards to climate risk: were climate policies to affect the oil price, those companies with assets lower down the cost curve are less likely to be financially compromised than those companies with higher cost assets. Investors that assume each fossil fuel company bears an equal magnitude of climate-related risk could be led towards sub-optimal decision-making. The Fund recognises that climate-related risks can be financially material and that the due consideration of climate risk falls within the scope of the Fund’s fiduciary duty.

Given the Fund’s long-dated liabilities and the timeframe in which climate risks could materialise, a holistic approach to risk management covering all sectors and all relevant asset classes is warranted.

GOVERNANCE

Describe the Committee's oversight of climate change-related risks and opportunities

The Fund is administered by Surrey County Council, ("the Administering Authority"). The Administering Authority has delegated all its functions as administering authority to the Pension Fund Committee ("the Committee").

The Committee maintains an Investment Strategy Statement, which outlines how the Committee will invest the Fund's assets. The Committee is also responsible for approving and monitoring the Fund's approach to responsible investment and climate change, input into BCPP's Responsible Investment Policy¹ and Climate Change Policy².

The Committee meets at least four times a year and more frequently, as deemed required. The Committee takes independent investment advice to help assess climate risks and opportunities, and looks to ensure that any decisions are integrated into a coherent investment strategy that supports the Fund's ability to provide pensions over the long-term in an affordable way.

The Committee undertakes training on a regular basis, including training and information sessions on environmental, social and corporate governance (ESG) matters.

A focused sub Committee has been established to specifically consider the Fund's Responsible Investment Policy. The Responsible Investment Sub-Committee also reviewed the Fund's Net Zero target, which was ultimately agreed by the Committee in June 2023. This group is convened on a regular basis, as deemed required, to work with Officers, the Fund's consultants and independent advisor to progress the Responsible Investment Policy.

¹ https://www.bordertocoast.org.uk/wp-content/uploads/2023/07/Border-to-Coast-Climate-Change-Report-22_23.pdf

² <https://www.bordertocoast.org.uk/wp-content/uploads/2023/01/Border-to-Coast-Climate-Change-Policy-2023-1.pdf>

Describe management's role in assessing and managing climate change-related risks and opportunities

The implementation of the management of climate change-related risks with respect to specific securities is delegated to the Fund's appointed investment managers (this includes BCPP and other managers). The Committee monitors the Fund's investment managers on an ongoing basis, including with respect to stewardship activities. Each manager's approach to climate change risks and opportunities and how these are integrated into their investment process is assessed as part of the manager selection and monitoring process.

The Committee reviews how its managers assess, manage and integrate climate risks into their portfolio construction and security selection decisions. The Committee will engage with managers where they are perceived to be lagging their peers in terms of ESG integration and climate risk management or active ownership.

BCPP is an FCA-authorized investment fund manager. It operates investment funds for its eleven shareholders which are Local Government Pension Scheme ("LGPS") funds, known as Partner Funds. BCPP takes a long-term approach to investing and believes that businesses that are governed well and run in a sustainable way are more resilient, able to survive shocks and have the potential to provide better financial returns for investors.

The commitment to responsible investment is communicated in the BCPP UK Stewardship Code compliance statement. BCPP takes a holistic approach to sustainability and as such it is at the core of its corporate and investment thinking. Sustainability, which includes Responsible Investment, is considered and overseen by the Board and Executive Committees. Specific policies and procedures are in place to demonstrate the commitment to Responsible Investment, which include the Responsible Investment Policy and Corporate Governance & Voting Guidelines. BCPP has a dedicated staff resource for managing Responsible Investment within the organisational structure.



STRATEGY

Describe the climate-related risks and opportunities the Fund has identified over the short, medium and long term

The Fund became a supporter of TCFD in June 2019, as it recognises the importance of understanding climate risks and opportunities relative to its role as an institutional investor.

The Fund aims to deliver a first-class service through strong partnerships with members, employers, BCPP and the wider LGPS community. Environmental, Social and Governance factors are fundamental to this approach which is underpinned by risk management, informed decision making and the highest standards of corporate governance.

The integrated nature of climate change and its ability to impact most industries, means that the Fund chooses not to take a sector wide exclusion approach to its investments. Undoubtedly in every sector there will be best in class and worst in class companies, representing both investment risks and opportunities. It chooses therefore to engage with its fund managers, companies and where possible, policy makers, to influence them directly to move towards a sustainable financial strategy that ultimately provides long term value for its shareholders. Engagement not only covers the Fund's investments but engagement is equally vital with governments, regulators and policy makers to enable those companies to transition to a carbon neutral economy. Similar to the Fund's investment approach, engagement is also a long-term approach with the goal for companies and economies globally to be carbon neutral by 2050 to limit global warming to within the 2 Degree Scenario.

In terms of the impact of climate-related risks and opportunities on the Fund's strategy, the approach chosen can vary considerably between different asset classes. Within the Fund's current assets, it applies mainly to its listed and unlisted equity investments. From a listed equity perspective, the Fund currently holds a c.17% allocation to a sustainable equity fund, including a tilt to companies less reliant on carbon in their business operations. From a Private Market perspective, the Fund also seeks environmentally sustainable investments, which is where the majority of climate-related investment opportunities currently exist. In this regard, the Fund has invested in a Renewable Energy Infrastructure strategy, and committed to a Climate Opportunities fund.

From the perspective of BCPP, climate risk is factored into the selection and appointment of external managers and ongoing monitoring of these mandates. This will therefore inform future engagement initiatives, and collaboration opportunities.

The Committee has chosen to use the United Nations Sustainable Development Goals (SDGs) as a reference to help guide its approach to Responsible Investment.

The Committee is working with its Officers, consultants and advisor, together with BCPP to understand what future opportunities might be available and how these would fit with the overall Responsible Investment Policy and investment strategy.

As a long-term investor, the Committee recognises that the risks and opportunities arising from climate change are diverse and continuously evolving. The Committee believes that climate change presents risks over the short, medium and long-term that the Fund should better understand and mitigate where possible. The Committee has considered the following short, medium and long term drivers of risk:

Over the short term (0 to 10 years), risks may present themselves through rapid market repricing relating to climate transition as:

- Scenario pathways become clearer. For example, a change, in the likelihood of a below 2°C scenario occurring becoming higher and driving the transition risk to occur.
- Market awareness grows. For example, the implications of the physical impacts of climate change become clearer to markets and impact asset valuations.
- Increases in the energy/heat efficiency of buildings and infrastructure the Fund holds.
- Perceived or real increased pricing of greenhouse gas emissions/carbon.
- Substitution of existing products and services with lower emission alternatives may impact part of the portfolio.
- Litigation risk relating to dangerous warming becoming more prevalent.

The Fund's ability to understand these short-term changes can position it favourably, for example taking advantage of the climate transition by avoiding and reducing investment in high-emitting carbon sensitive sectors, etc.



Over the medium term (10 to 30 years), risks associated with the transition to a low carbon economy are still likely to dominate. This includes the development of technology and low carbon solutions. Policy, legislation and regulation are likely to also play a key role at the international, national and subnational level. Technology and policy changes are likely to produce winners and losers both between and within sectors. Advancement of transition is likely to have started to crystallise stranded asset risks over the medium term. The Fund’s ability to understand these changes may position it favourably, for example by allocating investments into new technologies or by avoiding and reducing portfolio reliance on high-emitting carbon sensitive sectors, etc.

Over the long term (30 to 80 years), physical risks are expected to come to the fore. This includes the impact of natural catastrophes leading to physical damages through extreme weather events. Availability of resources is expected to become more important if changes in weather patterns such as temperature or precipitation affect the availability of natural resources such as water. The Fund’s ability to understand these changes may position it favourably, for example by allocating investments to infrastructure projects that display high levels of climate resilience, etc. A changing climate may directly impact the viability of some assets or business models (for example, flood risk for real estate, or drought / fire risk for timberland assets).

Figure 3: Climate-related risk and opportunities.



Source: TCFD annex report



Describe the impact of climate change related risks and opportunities on the Fund’s business, strategy and planning

The Committee considers exposure to carbon risk in the context of its role in setting investment strategy. The Committee has been on a journey to lower the Fund’s carbon footprint since 2018 by regularly monitoring the Fund’s decarbonisation progress and analysing how the Fund is performing in terms of its carbon footprint. This analysis has led to the implementation of more carbon-aware strategies.

In 2021, the Fund made changes to invest in the LGIM Future World Global Fund. The Committee believes that this fund is well positioned from an ESG perspective and is expected to help reduce exposure to companies with poor ESG practices. The Committee views this as both an attractive return opportunity and an important way of positively contributing to the transition to a lower carbon world.

In June 2023 the Committee formally agreed a Net Zero target of 2050 or sooner. This target will be kept under regular review. The next steps for the Committee will be to set interim targets in order for the Fund to achieve its long-term Net Zero ambitions.

Over the summer of 2023 the fund transitioned its passive Emerging Market Equity investments into BCPP’s active Emerging Market fund. These assets will now fall under BCPP 2050 Net Zero or sooner target, where previously no such targets for the passive fund had been set.

Describe the resilience of the Fund’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

As part of the work undertaken by the Responsible Investment Sub-Committee over the year considering an appropriate Net Zero target for the Fund, scenario analysis on a range of strategic portfolios was undertaken. The analysis – a combination of bottom up/top down and quantitative/qualitative – considered portfolios with Net Zero target dates as at 2030, 2035, 2040, 2045 and 2050. The analysis considered inclusion of asset classes with low/no/net negative GHG emissions, including an allocation to forestry.

Whilst modelled outcomes are relatively similar for all portfolios under a traditional financial analysis a wider assessment highlights the pros and cons of the different target dates. Based on this analysis and taking into account the Fund’s wider investment objectives, the Committee agreed to a Net Zero 2050 or sooner target, as it was assessed that this achieved a sweet spot between balancing portfolio decarbonisation and meeting fiduciary duty for the Committee at this time. The Fund is cognisant that this may change in the future, for example, should more companies adopt earlier Net Zero targets with credible implementation plans, so the Committee have agreed to review its position again in future.

The analysis suggests that from a long-term strategic investment perspective, the Fund is relatively well positioned in scenarios of lower levels of global warming for the periods to 2030 and 2050. As the time periods increase, it is expected that the overall returns will be negatively impacted by climate change, underlying the need for further review and action. The Committee notes that the modelling may understate the true level of risk and uncertainty is likely to be greater for higher warming scenarios, in particular due to the difficulty in being able to accurately predict the future.

The analysis helps the Committee to understand that asset prices may not fully reflect the financial impact of future physical risks or the transition costs associated with policy action required to limit global warming to 2°C or less, nor that asset prices fully reflect the technology risk inherent in the transition.

The Fund’s long term strategic asset allocation is well positioned to contribute and benefit from limiting global warming by the end of the decade.

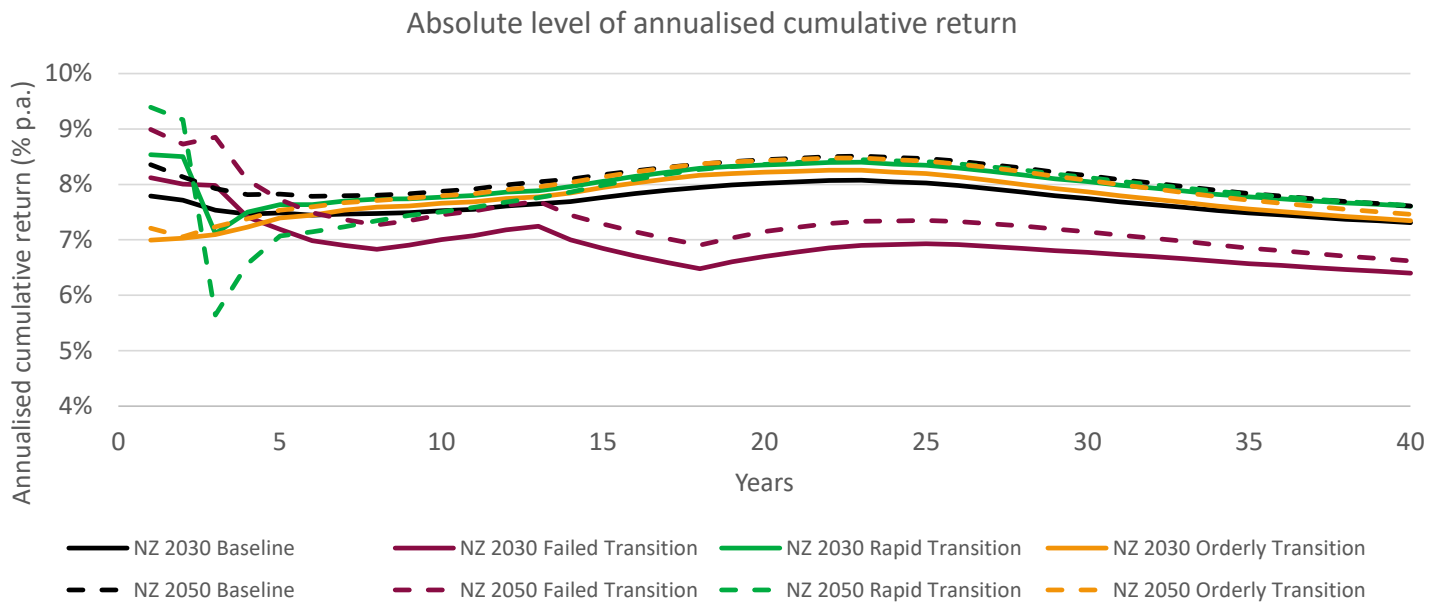
The analysis supports the view that long term investors collectively trying to bring about an effective transition is aligned to their fiduciary duty to seek the best returns within risk, liquidity and complexity constraints.



Figure 4: Net Zero Portfolio Considerations

Consideration	Net zero by 2030	Net zero by 2035	Net zero by 2040	Net zero by 2045	Net zero by 2050	Headline comment
Traditional financial metrics	Green					Under traditional portfolio analysis, the modelled outcomes are relatively similar
Portfolio diversification	Red	Red	Yellow	Yellow	Green	The earlier the Net Zero date, the smaller the investment universe, with implications for sectoral/regional/company diversification
Rapid transition	Green	Green	Yellow	Yellow	Red	The earlier the Net Zero date, the better the portfolio performs under a Rapid Transition scenario over the short- to medium-term
Failed transition (short term)	Red	Red	Yellow	Yellow	Green	The earlier the Net Zero date, the worse the portfolio performs under a Failed Transition scenario over the short-term
Financing the Transition	Red	Red	Yellow	Green	Green	Opportunity for real-world impact through financing the transition increases as the Net Zero target date is extended
Implementation implications	Red	Red	Yellow	Yellow	Green	Feasibility to implement the portfolio increases as the Net Zero target date is extended

Figure 5: Climate Scenario Analysis



Analysis as at 31 Dec 2022.

The above chart shows the expected annualised performance over the next 40 years under the various scenarios. Each scenario tests key elements of climate resilience:

Is the Fund’s portfolio resilient to the financial effects of the rapid decarbonisation of the economy to meet Paris Agreement goals (Rapid Transition)?

Is the Fund’s portfolio resilient to the risks of plausible, severe climate change impacts (Failed Transition) and is our investment strategy consistent with the need to avoid this scenario?

Can the decarbonisation transition happen without material damage to financial returns under an Orderly Transition?



Assessment on the sensitivity and risk analysis of climate change by the Fund's Actuary

For the first time as part of the Funds triennial actuarial valuation the Fund's actuary, Hymans Robertson, assessed potential Funding impacts of climate change.

Climate change is a major source of uncertainty which could affect future investment returns, inflation and life expectancies. Therefore, the Fund has explicitly explored the resilience of its funding and investment strategy to future potential climate change outcomes.

It is impossible to confidently quantify the effect of climate risk given the significant uncertainty over the impact of different possible climate outcomes. Instead, three different climate change scenarios have been considered as a stress-test (instead of trying to predict how climate change affects the funding level in the future).

All the scenarios assume that there will be a period of disruption linked either to the response to climate risk (transition risks) or the effect of it (physical risks). This disruption will lead to high volatility in financial markets, and the later the disruption, the more pronounced it will be.

Further detail on the scenarios is shown in Hymans Robertson's guide Hymans Robertson's LGPS 2022 valuation toolkit.

Outcome of analysis

The Fund has set its funding and investment strategy using asset-liability modelling and considering two main risk metrics:

- Likelihood of success – the chance of being fully funded in 20 years' time
- Downside risk – the average worst 5% of funding levels in 20 years' time

When exploring the potential impact of climate change, the Fund has compared how these risk metrics change under each climate change scenario (against the 'Core' model used when setting the funding and investment strategy). The stress test results for the Fund are shown in the table below.

Sensitivity of funding position to climate change assumption.

Scenario	Likelihood of success	Downside risk
Core	74%	47%
Green Revolution	75%	48%
Delayed Transition	73%	43%
Head in the Sand	68%	39%

Risk metrics are more favourable under the 'Green Revolution' scenario. This is due to a realisation of investments made in the early years of the projection. Risk metrics are weaker in the 'Delayed Transition' and 'Head in the Sand' scenarios, but not materially so and not enough to suggest that the funding and investment strategy is unduly exposed to climate change risk. The Fund will continue to monitor this risk as more information emerges and climate change modelling techniques evolve.

The Fund's full formal actuarial valuation results can be found here: <https://www.lgpsboard.org/images/Valuations2022/SurreyValuation2022.pdf>

RISK MANAGEMENT

Describe the Fund's process for identifying and assessing climate change-related risks

The Committee takes an active role in ensuring it invests with due attention to ESG issues. The Fund's focus remains on maintaining appropriate investments having every regard to climate change implications. The Committee has an annual ESG monitoring framework by covering carbon footprinting analysis and TCFD monitoring indicators. The Committee will engage with its investment managers, including BCPP, on the key findings as necessary by inviting managers to outline their activities as required that enable the Committee to monitor and manage climate risk. The Committee outlines in the following Metrics and Targets section the key findings of the carbon footprinting analysis. On a regular basis, investment managers and BCPP are invited to present to the Committee to explain their approach to climate change risk management, amongst other topics.

The Committee receives regular updates from its investment managers on how they integrate ESG considerations, including climate change, into their investment processes and active ownership activities. If a manager is considered to be "lagging the market", the Committee will engage with the relevant manager(s) to strongly encourage that it improves in policies and practises in this areas.

The Committee uses stewardship monitoring to identify how the managers it chooses vote and engage on climate issues in order to manage climate risks in the portfolio.

The Committee has identified long-term investment strategy risks and included such risks into its risk register. The register is monitored in the course of its overall risk management approach and is reviewed regularly. It is used to effectively identify, prioritise, manage and monitor risks associated with the Fund and the escalations of risk are managed by internal controls in place:

1. The asset allocation is formally reviewed as part of quarterly reports to the Committee and necessary action is taken to correct the balance.
2. The Committee receives formal quarterly reports on both the overall performance of the Fund and individual investment managers.
3. A full investment strategy review is undertaken by the Fund's investment consultant after every triennial valuation with ad-hoc strategy reviews undertaken in intervening years to ensure the strategy is still appropriate to achieve long-term funding objectives.
4. The Fund has set a long-term goal of being Net Zero carbon by 2050 or sooner, the Fund will work towards establishing interim targets to help achieve this target.
5. BCPP has set a long-term goal of being Net Zero carbon by 2050 or sooner, and are working to establish interim targets to help achieve this, which will be regularly monitored.
6. The Fund has in place a Responsible Investment policy.



Describe the Fund’s process for managing climate change related risks

All of the Fund’s investment managers have been asked to provide carbon footprinting metrics, where available, in order to take a “total portfolio” approach and be consistent with TFCF recommendations. This analysis helps identify key sources of carbon risks in manager portfolios and helps the Committee to engage with the manager(s) on such risks.

The Committee manages risk by prioritising those it believes may be most financially materially linked to the Committee’s beliefs.

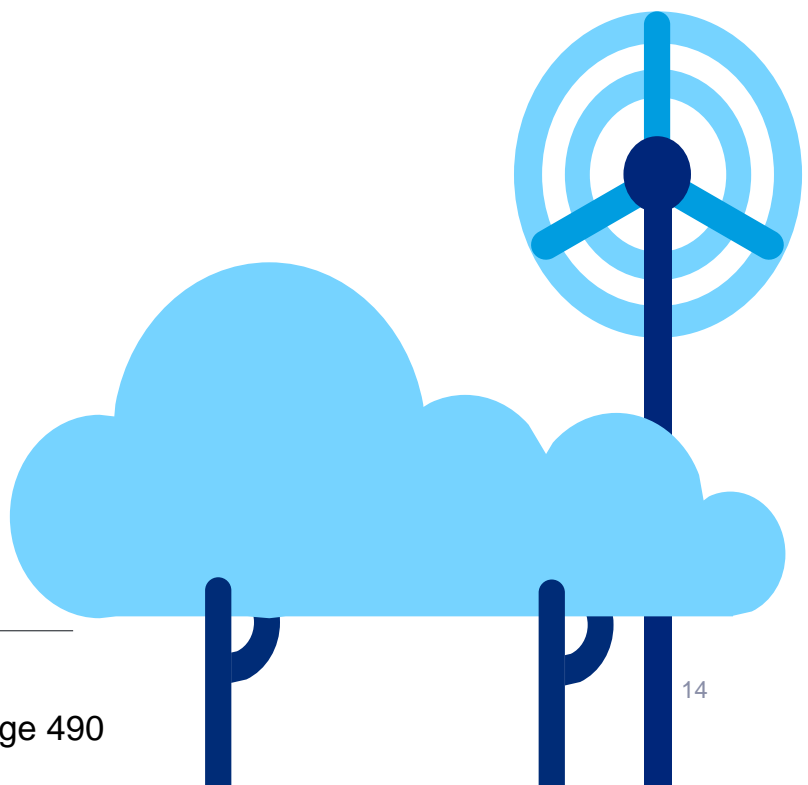
The Committee recognises the challenges with various metrics, tools and modelling techniques used to assess climate change risks. The Committee aims to work with its consultants and advisor, and investment managers on a regular basis with the aim of improving its approach to assessing and managing risks over time.

The Fund sees engagement as a fundamental tool in managing climate risk within its portfolio companies. The Fund is a member of the Local Authority Pension Fund Forum (LAPFF), which collectively engages with multinational companies on behalf of most Local Authority Pension Funds in the UK. Collaboration with other institutional investors enhances the Fund’s own influence in engagement with companies, regulators and policy makers, all playing significant roles in the low carbon transition. The Fund will support climate-related shareholder resolutions after having consulted with BCPP, provided it is in line with their Corporate Governance & Voting Policy, also adopted by all partner funds.

Describe how processes for identifying, assessing and managing climate change-related risks are integrated into the Fund’s overall risk management

Both climate change-related risks and wider investment risks are considered by the Committee. Where possible, climate change and wider investment risks such as demographic trends are treated in a holistic manner by recognising they are often interrelated. Climate change and ESG risks are included alongside other material risks in the Investment Strategy Statement and the risk register.

The climate change scenario analysis is strategic in nature and has therefore been incorporated into wider investment strategy discussions and considerations.



METRICS AND TARGETS

Disclose the metrics and targets used to assess climate change-related risks and opportunities in line with strategy and risk management process.

This section presents carbon data analysis of the Listed Equities holdings of the Fund which represents c.63% of the Fund's investment mandates as at 31 March 2023. Due to practical data availability, the fund-level figures quoted in the report assume that companies not covered by the analysis are represented within the range of companies that have been covered in the analysis – the 'pro-rata approach' (i.e. it is not assumed that companies not covered have emissions of 0) in line with statutory guidance. All figures have been sourced directly from the investment managers.

The remaining assets consist of Fixed Interest Gilts, Property, Multi Asset Credit, Private Equity and Credit and Infrastructure mandates, for which the ability to monitor these risks is currently less achievable. The Committee recognises that the availability of accurate data for some asset classes is an industry wide issue and encourages the Fund's investment managers and the companies in which they hold these assets to improve their carbon reporting as quickly as possible.

The Committee has focused on Weighted Average Carbon Intensity analysis as a key metric for assessing risks and has compared this against a relevant benchmark or other comparator.

The Committee will undertake carbon footprint analysis on a regular basis.

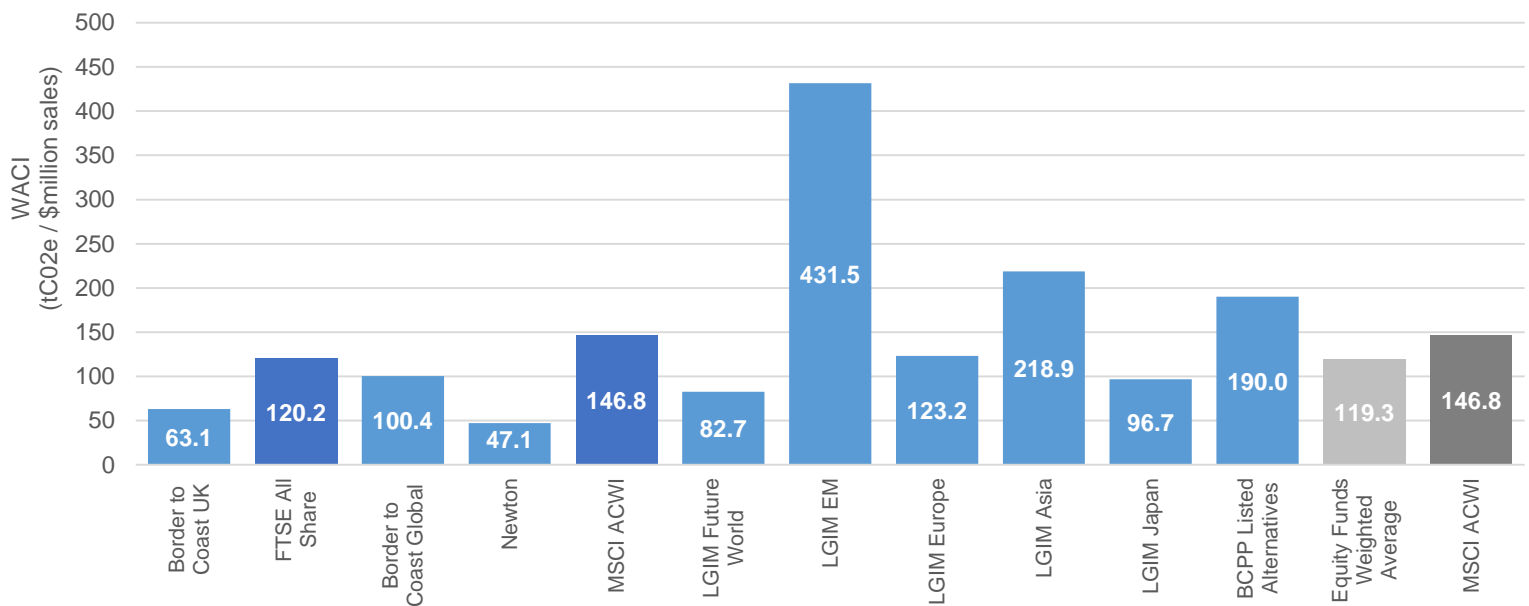
The carbon footprinting metrics measured aid the Committee in assessing the potential climate change related risks to which the Fund is exposed, and identifying areas for further risk management, including company engagement and investment manager monitoring:

- **Weighted Average Carbon Intensity ("WACI")** – measures the carbon emissions (in Metric tons) divided by sales (per \$million of sales). The contribution of each company is weighted according to its portfolio weights. This means, for example, a company with a very high carbon intensity but a low fund weighting might contribute to the WACI measure to a lesser extent than an company with a lower carbon intensity but a higher weighting in the fund.
- **Absolute Emissions** – represents a company's reported or estimated greenhouse gas emissions, where available. It includes various scopes of emissions: – Scope 1 "direct" emissions: those from sources owned or controlled by the company (e.g. direct combustion of fuel from vehicles); and – Scope 2 "indirect" emissions: those caused by the generation of energy (e.g. electricity) purchased by the company.
- **Carbon Footprint** – The amount of carbon dioxide and equivalents (tCO₂e) emitted per million dollars of the Fund's investments. Carbon Footprint is an intensity measure of emissions that takes the Fund's total greenhouse gas emissions figure and normalises it to take account of the size of the investment.
- Scope 3 emissions are currently not included in the carbon footprint metrics for two reasons:
 - The rate of scope 3 disclosure remains insufficient to use reliably in carbon foot printing analysis
 - The inclusion of scope 3 emissions may lead to double counting at the portfolio level.

Analysis summary

- For the purposes of this analysis, Weighted Average Carbon Intensity (WACI) figures have been taken directly from the managers.
- As at 31 March 2023, within the listed equity assets only (c.63% of Fund assets) the Fund had an estimated Weighted Average Carbon Intensity of 119.3 tCO₂e per \$million revenue, this is c. 19% below the MSCI AC World Index benchmark of 146.8 tCO₂e per \$million revenue.
- The carbon footprint of the Listed Equity assets has risen marginally since June 2021 from 52.7 tCO₂e per \$ million invested to 61.0 tCO₂e per \$ million invested. The carbon footprint is however significantly below (c.34%) the market (represented by the MSCI AC World Index benchmark), with this being 92.1 tCO₂e per \$ million invested.

Figure 6: Equity Assets – Weighted Average Carbon Intensity



Note: Underlying data as at 31 March 2023. The weighted average figure is based on the actual allocation as at 31 March 2023.

Data was sourced directly from the managers. LGIM underlying data provided in GBP and as such has been translated to USD via a weighted average of databank quarterly exchange rates.

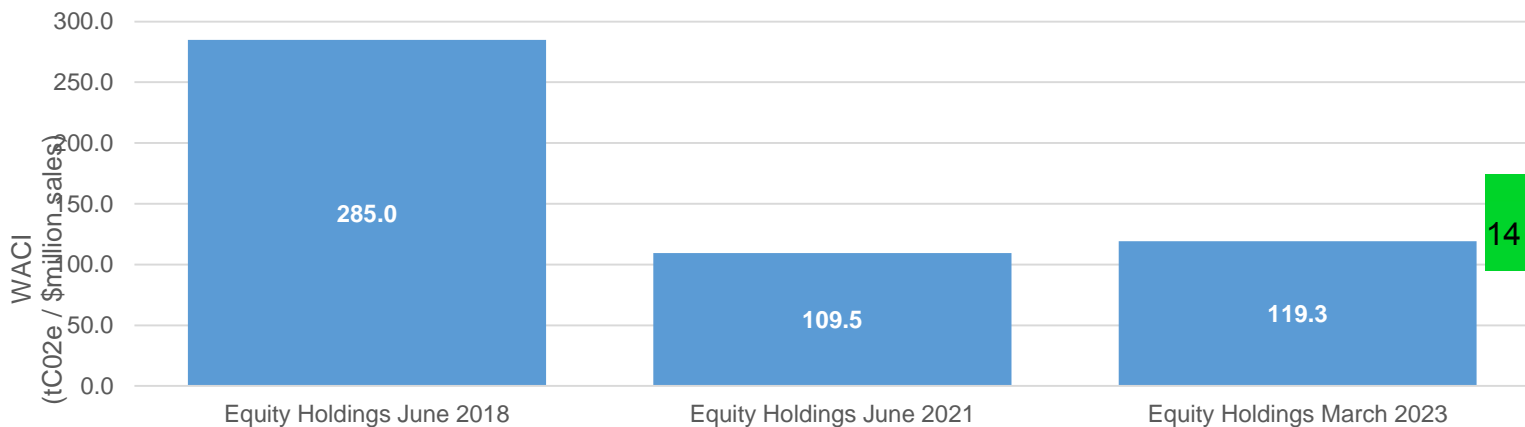
Managers sourced data as follows:

BCPP: MSCI ESG Research

Newton: MSCI ESG Manager

LGIM: HSBC & iSS

Figure 7: Equity Assets – Weighted Average Carbon Intensity Progression – Fund’s listed Equity



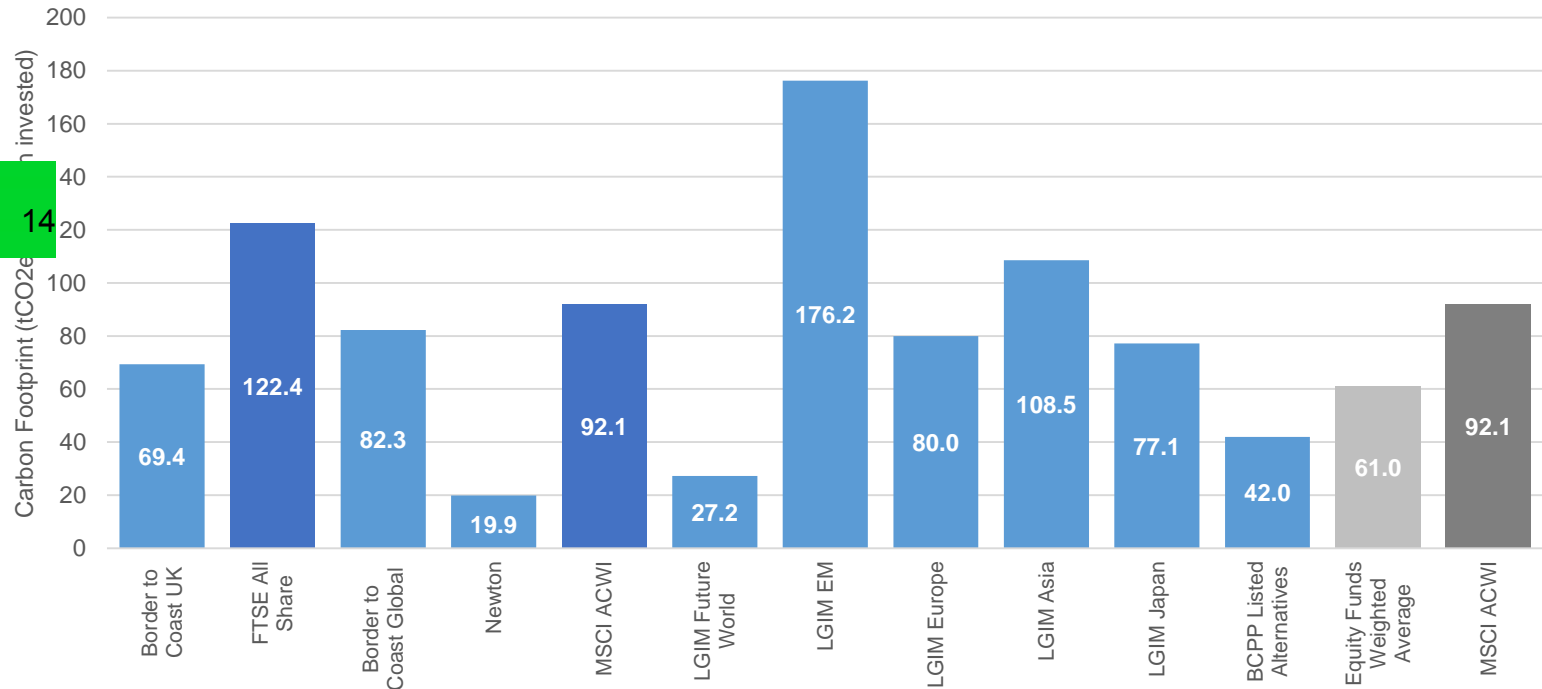
Note: Underlying data as at 31 March 2023. The weighted average figure is based on the actual allocation as at 31 March 2023. Data was sourced directly from the managers. LGIM underlying data provided in GBP and as such has been translated to USD via a weighted average of databank quarterly exchange rates. Managers sourced data as follows:
 BCPP: MSCI ESG Research
 Newton: MSCI ESG Manager
 LGIM: HSBC & iSS

Figure 8: Equity Assets – Weightings

Manager	Asset Value £m	Weighting (%) of equity assets in analysis)
BCPP UK Equity	499.58	15.1%
BCPP Global Equity	739.48	22.4%
Newton Global Equity	491.00	14.9%
LGIM Future World	925.75	28.0%
LGIM Emerging Markets	286.73	8.7%
LGIM Europe ex UK	51.59	1.6%
LGIM Asia Pacific ex Japan	44.05	1.3%
LGIM Japan	15.45	0.5%
BCPP Listed Alternatives	250.71	7.5%

Note: Underlying data as at 31 March 2023. The weighted average figure is based on the actual allocation as at 31 March 2023. Data was sourced directly from the managers. LGIM underlying data provided in Sterling and as such has been translated to USD via a weighted average of databank quarterly exchange rates. Managers sourced data as follows:
 BCPP: MSCI ESG Research
 Newton: MSCI ESG Manager
 LGIM: HSBC & iSS

Figure 9: Equity Assets – Carbon Footprint



Note: Underlying data as at 31 March 2023. Newton data is as at 31 December 2022. The weighted average figure is based on the actual allocation as at 31 March 2023.

Data was sourced directly from the managers. LGIM underlying data provided in Sterling and as such has been translated to USD via a weighted average of databank quarterly exchange rates.

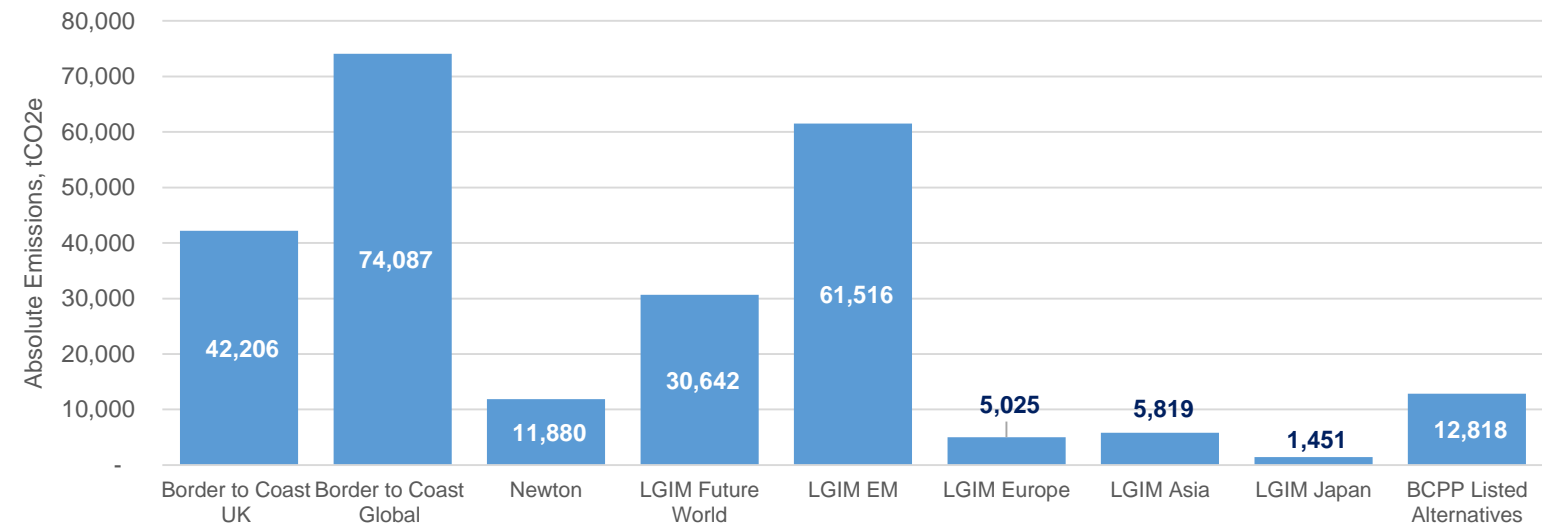
Managers sourced data as follows:

BCPP: MSCI ESG Research

Newton: MSCI ESG Manager

LGIM: HSBC & iSS

Figure 10: Equity Assets – Absolute Emissions



Note: Underlying data as at 31 March 2023. Newton data is as at 31 December 2022. Total Emissions data using 31 March 2023 Fund asset values.

Data was sourced directly from the managers.

Managers sourced data as follows:

BCPP: MSCI ESG Research

Newton: MSCI ESG Manager

LGIM: HSBC & iSS



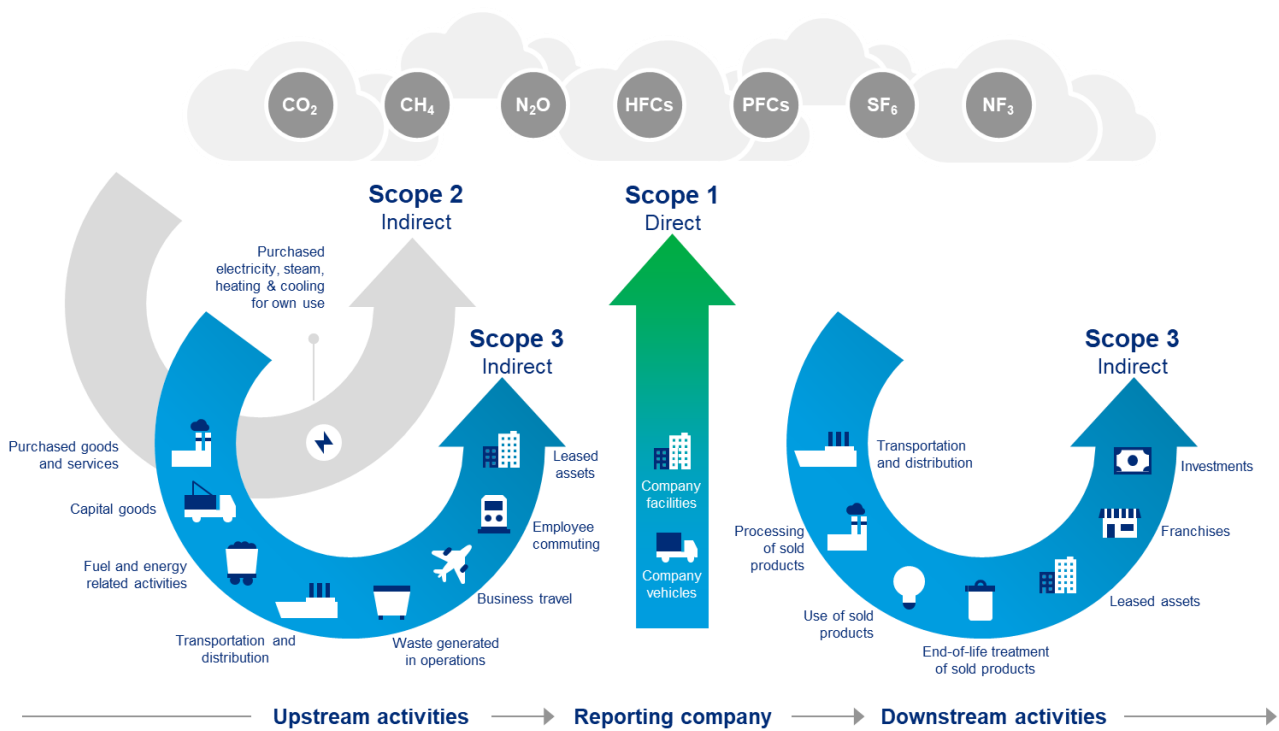
GLOSSARY OF TERMS

Acronym	Meaning
ESG	Environmental, Social & Governance
GHG	Greenhouse Gas
G20	Intergovernmental forum comprising 19 countries and the European Union
IPCC	UN's Intergovernmental Panel on Climate Change
MSCI ACWI	Morgan Stanley Capital International All Country World Index
Net Zero	Achieving a balance between the carbon emitted into the atmosphere, and the carbon removed from it.
Paris Aligned	Achieving Net Zero emissions by 2050 or sooner, in line with the Paris Agreement.
RI	Responsible Investment
SDG	Sustainable Development Goals
TCFD	Task Force on Climate-related Financial Disclosures
WACI	Weighted Average Carbon Intensity

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All analysis in this document is subject to change and should not be relied upon.



TECHNICAL APPENDIX

Climate scenario modelling approach.

	Rapid Transition	Orderly Transition	Failed Transition
Summary	Sudden divestments in 2025 to align portfolios to the Paris Agreement goals have disruptive effects on financial markets with sudden repricing followed by stranded assets and a sentiment shock.	Political and social organizations act quickly and predictably to implement the recommendations of the Paris Agreement to limit global warming to below 2°C above pre-industrial levels by 2100.	The world fails to meet the Paris Agreement goals and global warming reaches 4.3°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.
Cumulative emissions to 2100	416 GtCO _{2e}	810 GtCO _{2e}	5,127 GtCO _{2e}
Key policy and technology assumptions	An ambitious policy regime is pursued to encourage greater decarbonisation of the electricity sector and to reduce emissions across all sectors of the economy. Higher carbon prices, larger investment in energy efficiency and faster phase out of coal-fired power generation under a 'Rapid' transition.		Existing policy regimes are continued with the same level of ambition.
Financial climate modelling	Pricing in of transition and physical risks of the coming 40 years occurs within one year in 2025. As a result of this aggressive market correction, a confidence shock to the financial system takes place in the same year.	Pricing in of transition and physical risks until 2050 takes place over the first 4 years.	Physical risks are priced in two different periods: 2026-2030 (risks of first 40 years) and 2036-2040 (risks of 40-80 years).
Physical risk impact on GDP	Physical risks are regionally differentiated, consider variation in expected temperature increase per region and increase dramatically with rising average global temperature. Physical risks are built up from: Gradual physical impacts associated with rising temperature (agricultural, labour, and industrial productivity losses) Economic impacts from climate-related extreme weather events Current modelling does not capture environmental tipping points or knock-on effects (e.g., migration and conflict).		
Physical risk impact on inflation	Gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total impact on a Global CPI Index is +2% in 2100.	No explicit modelling of physical risk impact on inflation (supply-side shocks). Impact on inflation follows historical relationship between GDP and CPI.	Severe gradual physical impact (supply shocks) on inflation included through damages to agriculture and change in food prices. Total impact on a Global CPI Index is +15% in 2100.

Source: Mercer and Ortec. Climate scenarios as at December 2022

The return impacts of the climate scenarios represented in this report are relative to the 'baseline'. The baseline represents what we are assuming the market is currently pricing in. The baseline includes a 10% weight to a **Failed Transition**, 40% weight to an **Orderly Transition**, 10% to a **Rapid Transition** and 40% to a range of **low impact scenarios**.

TECHNICAL APPENDIX

Limitations associated with climate modelling

Climate scenario modelling is a complex process. The Committee is aware of the modelling limitations. In particular:

1. The further into the future you go, the less reliable any quantitative modelling will be.
2. There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
3. Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
4. Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.
5. New and emerging risks, such as the impact of climate change on biodiversity loss, and vice versa, is expected to be integrated into climate scenario modelling over time once the supporting science and impact on econometrics and finance is better understood.

Important notices from data providers

Mercer

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MSCI

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Ortec Finance

Mercer has entered into a global agreement with Ortec Finance regarding the use of their climate scenarios by Mercer's clients.

Climate scenarios have been prepared with care using the best available data. The scenarios may contain information provided by third parties or derived from third party data and/or data that may have been categorized or otherwise reported based upon client direction. The scenarios are for information purposes and are not to be construed as investment advice. Ortec Finance assumes no responsibility for the accuracy, timeliness or completeness of any such information. Ortec Finance accepts no liability for the consequences of investment decisions made in relation on information in this report. The scenarios are copyright of Ortec Finance. You may not, except with our express written permission, distribute or commercially exploit the content. All Ortec Finance services and activities are governed by its general terms and conditions which may be consulted on www.ortecfinance.com and shall be forwarded free of charge upon request.

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