Derbyshire Pension Fund

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Climate-Related Financial Disclosures

June 2024

County Hall, Matlock, Derbyshire, DE4 3AH
Administered by Derbyshire County Council

lgps

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1. Glossary of Terms and Abbreviations

Anthropogenic
Anthropogenic in terms of climate change refers to the impact humans have had on climate change, primarily through emissions of greenhouse gases.

Financial Stability Board
The Financial Stability Board is an international body that monitors and makes recommendations about the global financial system. It was established after the G20 London summit in April 2009 as a successor to the Financial Stability Forum.

Greenhouse Gases
Greenhouse gases are gases in the Earth's atmosphere that are capable of absorbing infrared radiation and thereby trap and hold heat in the atmosphere. The main greenhouse gases are:

- carbon dioxide
- methane
- nitrous oxide

Scope 1 Greenhouse Gas Emissions
Scope 1 emissions are direct emissions produced by the activities of the emitter.

Scope 2 Greenhouse Gas Emissions
Scope 2 emissions are indirect emissions generated by the electricity, heat, or steam consumed and purchased by the emitter.

Scope 3 Greenhouse Gas Emissions
Scope 3 emissions are indirect emissions that are not controlled by the emitter but occur as a result of the emitters activities.

UNFCCC
The UNFCCC secretariat (UN Climate Change) is part of the United Nations and was established in 1992 when countries adopted the United Nations Framework Convention on Climate Change (UNFCCC).

2. Abbreviations

Abbreviation	Full term
CO_2	Carbon Dioxide
Committee	Pensions & Investments Committee
CH_4	Methane
DLUHC	Department for Levelling Up, Housing & Communities
DPF or Fund	Derbyshire Pension Fund
ESG	Environmental, Social & Governance
FSB	Financial Stability Board
GHG	Greenhouse Gas
IEA	International Energy Agency
IIGCC	Institutional Investors Group on Climate Change
IPCC	Intergovernmental Panel on Climate Change
LGIM	Legal & General Investment Management
LGPSC	LGPS Central Limited
NDC	Nationally Determined Contribution
TCFD	Taskforce on Climate-related Financial Disclosures
WEF	World Economic Forum

3. Introduction

The Taskforce on Climate-related Financial Disclosures (The Task Force/TCFD) was commissioned in 2015 by Mark Carney in his remit as Chair of the Financial Stability Board (FSB), in recognition of the risks caused by greenhouse gas emissions to the global economy and the impacts that are likely to be experienced across many economic sectors. The Task Force was asked to develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders and insurance underwriters in understanding material climate-related risks.

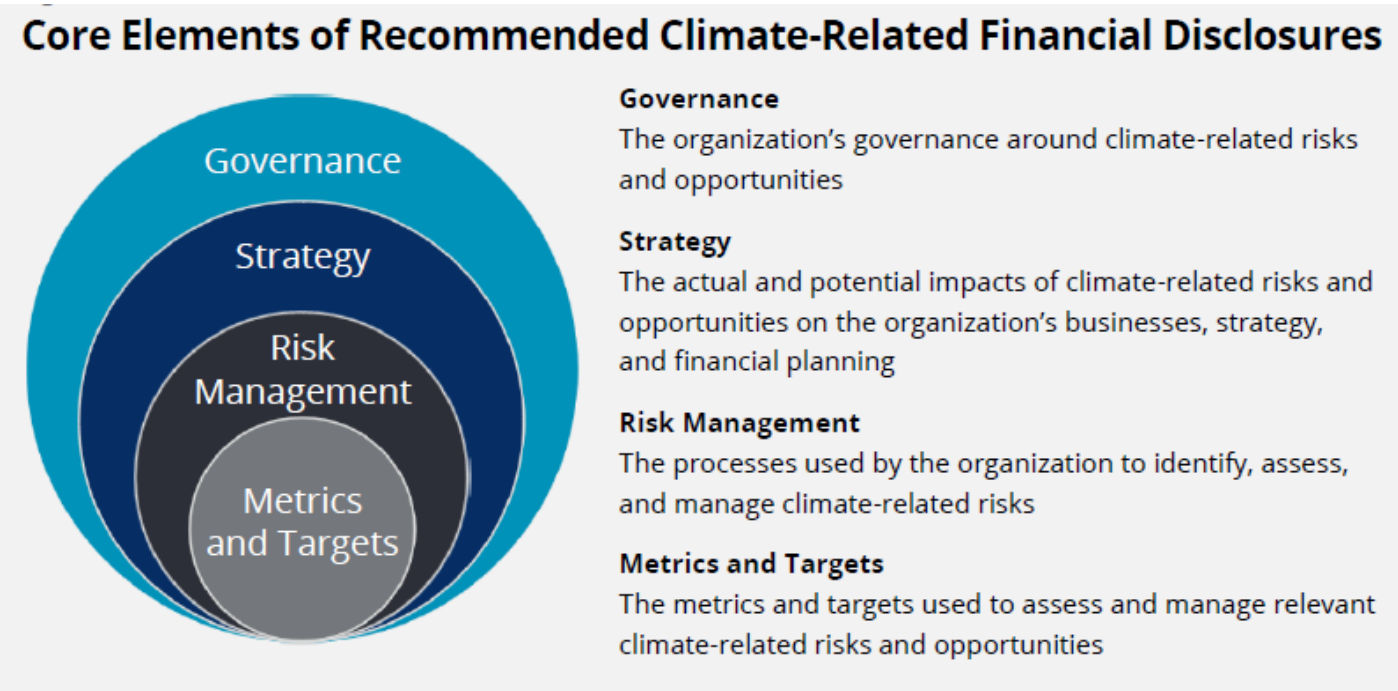
In 2017, the TCFD released its recommendations for improved transparency by companies, asset managers, asset owners, banks, and insurance companies with respect to how climate-related risks and opportunities are being managed. Guidance was also released to support all organisations in developing disclosures consistent with the recommendations, with supplemental guidance released for specific sectors and industries, including asset owners.

In his introduction to the final TCFD report, Michael Bloomberg (TCFD Chair) noted: 'it is difficult for investors to know which companies are most at risk from climate change, which are best prepared, and which are taking action. The Task Force's report establishes recommendations for disclosing clear, comparable, and consistent information about the risks and opportunities presented by climate change. Their widespread adoption will ensure that the effects of climate change become routinely considered in business and investment decisions. Adoption of these recommendations will also help companies better demonstrate responsibility and foresight in their consideration of climate issues. That will lead to smarter, more efficient allocation of capital, and help smooth the transition to a more sustainable, low carbon economy.'

The Task Force divided climate-related risks into two major categories: risks related to the transition to a lower-carbon economy; and risks related to the physical impacts of climate change. The TCFD report noted that climate-related risks and the expected transition to a lower carbon economy affect most economic sectors and industries, however, opportunities will also be created for organisations focused on climate change mitigation and adaptation solutions. The report also highlights the difficulty in estimating the exact timing and severity of the physical effects of climate change.

The Task Force structured its recommendations around four thematic areas that represent core elements of how organisations operate: governance, strategy; risk management; and metrics and targets (Figure 1).

Figure 1: Core Elements of Recommended Climate-Related Financial Disclosures



The four overarching recommendations are supported by recommended disclosures (Appendix 1) that build out the framework with information that will help investors/stakeholders understand how reporting organisations assess climate related risks and opportunities. The disclosures are designed to make TCFD-aligned disclosures comparable, but with sufficient flexibility to account for local circumstances.

The Fund is a long-term investor, diversified across asset classes, regions, and sectors. It is in the Fund's interest that the market is able to effectively price climate-related risks and that policy makers are able to address market failure. The Fund's TCFD reports note the important role that large asset owners have in influencing the organisations in which they invest to provide better climate-related financial disclosures.

The Fund notes that the FSB concluded in October 2023 that the remit of the Taskforce had been fulfilled and it was disbanded. The FSB asked the IFRS Foundation to take over the monitoring of progress of companies' climate related disclosures.

Moving forward it is expected that the reporting of LGPS governance on climate change risks will be covered by guidance issued by the Department for Levelling Up, Housing & Communities (DLUHC). DLUHC launched a consultation on 'Local Government Pension Scheme (England & Wales): Governance and Reporting of Climate Change Risks' on 1 September 2022. Derbyshire Pension Fund (the Pension Fund/Fund) responded to the consultation in November 2023. DLUHC has yet to respond to the consultation responses and issue final guidance. Once published in final form, the Fund plans to comply with the DLUHC guidance to the extent possible.

4. About this report

This is the fourth Climate-related Disclosures report issued by the Fund. The report describes the way in which climate-related risks are currently managed by the Fund. It includes the results of climate scenario analysis and carbon risk metrics analysis undertaken on the Fund's assets as part of LGPSC's preparation of an annual Climate Risk Management Report for the Pension Fund.

Climate scenario analysis carried out at the asset class level estimates the effects of different climate scenarios on key financial parameters (for example, risk and return) over a selection of time periods.

The Fund recognises that the use of scenarios in assessing climate-related issues and their potential financial implications is relatively recent and that practices will evolve over time, but believes that such analysis is a directional indicator and provides useful climate-related financial information. Carbon risk metrics analysis on the Fund's listed equities and investment grade corporate bond portfolios considers: portfolio carbon footprint (weighted average); financed emissions, fossil fuel exposure; thermal coal exposure; clean technology exposure and Paris Agreement alignment.

The challenges of measuring the potential impact of climate change on investment portfolios are well recognised. The Fund believes that a suite of carbon risk metrics and climate scenario analysis currently provides the most appropriate method of analysing climate risk to support the development of a detailed strategy for integrating climate risk into investment decisions.

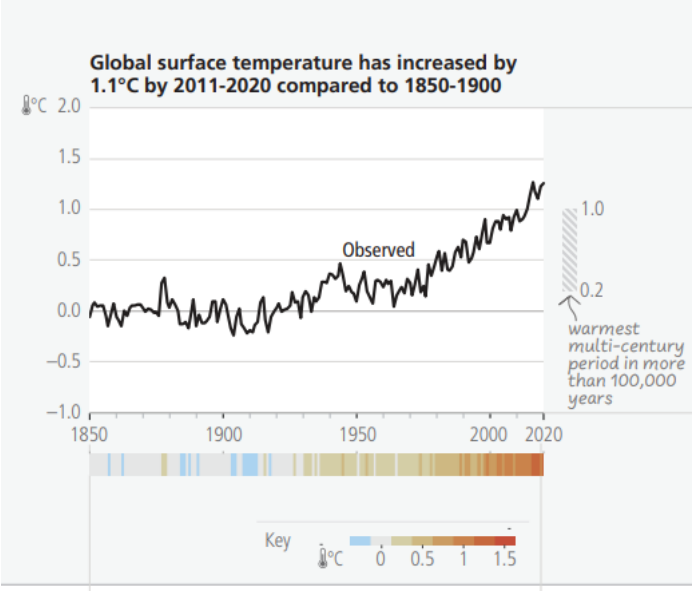
The findings of the Climate Risk Managment Report, together with the Fund's own ongoing climate research, which is structured around the TCFD's four thematic areas of governance, strategy, risk management and metrics and targets, are used to support the development of the Fund's Climate Strategy. In addition, high level climate change risk analysis from the Fund's actuary, Hymans Robertson LLP, which considers the potential effect of climate change on the Fund's liabilities as well as on the assets of the Pension Fund, is used to support the development of the Fund's Climate Strategy. Guidance on implementing the TCFD recommendations for asset owners from the TCFD and the Principles for Responsible Investment is also utilised.

The Fund published its first TCFD report in March 2020, its second TCFD report in November 2021, and its third TCFD report in March 2023. The Fund's climate-related disclosures are expected to develop over time and are supported by the Fund's Climate Strategy, which was last updated and approved by the Pensions and Investments Committee (the Committee) in March 2024. The Fund's climate-related disclosures are also included in the Pension Fund's Annual Report.

5. Climate-related risk

Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels. Most of this warming has occurred in the last 35 years, with 2023 being the warmest year on record. In the Intergovernmental Panel on Climate Change (IPCC) Climate Change 2023 Synthesis Report, the IPCC noted that between 2010 and 2019, the observed global mean surface temperature is 0.8°C to 1.3°C higher than the average over the 1950 to 1990 period, with a best estimate of 1.07°C. Over 97% of climate scientists (Source: NASA) agree that this trend is the result of greenhouse gas (GHG) emissions which are being trapped in the atmosphere and creating a 'greenhouse effect' – a warming that occurs when the atmosphere blocks heat radiating from Earth towards space. These climate scientists have observed that these climactic changes are primarily the result of human activities including electricity and heat production, agriculture and land use change, industry, and transport.

Figure 2: Change in global surface temperature (annual average) 2011-2020 compared to 1850-1900. Source: ICPP; Climate Change 2023 Synthesis Report



The principle source of GHG emissions, particularly carbon dioxide, is the burning of fossil fuels for the production of energy[1]. The second largest contributor is agriculture, forestry, and other land use.

Since 1750, atmospheric concentrations of carbon dioxide (CO_2) and methane (CH_4) have increased by 47% and 156%, respectively. The 2023 IPCC Climate Change Synthesis Report noted that the global average concentration of carbon dioxide was 410 parts per million (ppm) compared to its pre-industrial equivalent of 280ppm.

Climate scientists believe that to mitigate the worst economic impacts of climate change, there should be a globally co-ordinated policy response. Most climate scientists anticipate that given the current level of climate action, the world will be between 2°C and 4°C warmer by 2100, with significant regional variations. This is substantially higher than the Paris Climate Change Agreement (Figure 3 for selected extracts of the Paris Agreement), which reflects a collective goal to hold the

[1] British Geological Survey Climate-related Financial Disclosures Report

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increase in the climate's mean global surface temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C.

Figure 3: Selected extracts from the Paris Agreement on climate Change. Source: UNFCCC.

Paris Agreement Article 2(1)a

Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

Paris Agreement Article 2(1)c

Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

Paris Agreement Article 4(1)

In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

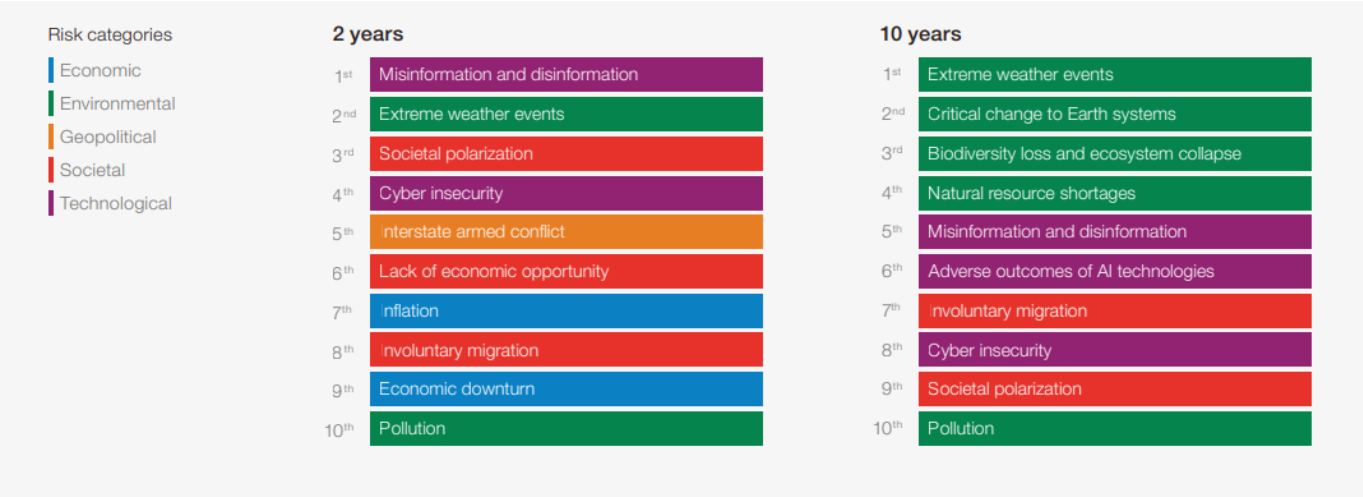
The Paris Agreement commits signatories to the establishment of Nationally Determined Contributions (NDCs), which are intended to be individually equitable and collectively sufficient to achieve Article 2(1) a. The United Nations Environmental Programme[2], noted that as things stand, fully implementing unconditional NDCs made under the Paris Agreement will put the world on track for limiting the temperature rise to 2.9°C by 2100, indicating that more remains to be done to meet the ambitions of the Paris Agreement.

The low-carbon transition is already underway, with a number of governments and institutions around the world intensifying their climate change policies, and corporates responding in turn. One example is the UK's declaration to bring all greenhouse gas emissions to Net Zero by 2050, with a target of cutting emissions by 68% by 2030, rising to 77% by 2035, compared to 1990 levels.

Acknowledgement of the risks posed by climate change among business and government leaders is reflected in the World Economic Forum (WEF) Global Risks Report, which illustrates the increased focus on environmental and social risks (compared with purely economic and political risks) over time. Environmental risks, particularly those associated with climate change, account for four of the five long term (10 years) risks of global business leaders.

[2] Source: UN Environmental Programme Emissions Gap Report 2023 (20 November 2023)

Figure 4: WEF Top global risks



Source: World Economic Forum; The Global Risks Report 2024

The more attention business leaders pay to managing climate risk, the greater the implications for investors. The WEF's global risks are also highly interconnected. For example, climate change potentially exposes businesses to more natural disasters, extreme weather, water shortages and biodiversity loss. These in turn may lead to involuntary migration or conflict. Taking the interconnectivity of risks into account will continue to be important for long-term investors seeking to anticipate the effects of climate change and prepare their portfolios for a changing global context.

Given its contribution to global GHG emissions, the energy sector is expected to play a significant role in the long-term decarbonisation of the economy, albeit fossil fuels are expected to continue to provide a large proportion of the global energy mix for many years to come. The behaviour of private and state-owned energy companies will be as important as the actions taken by their publicly traded counterparts. It is also important to recognise that the demand for energy, the type of energy demanded, and energy security will also play a crucial role in global decarbonisation.

However, the potential climate-related issues faced by diversified investors (such as Pension Funds) are not limited to the oil & gas and power generation sectors. Investors focussing exclusively on primary energy suppliers could fail to identify material climate risks in other sectors. There is considerable uncertainty in the crystallisation pathway for climate risk.

Well known concepts such as stranded assets risk are not homogeneous within certain sectors (for example, oil & gas and power generation), and robust due diligence will be required in order to identify the potential winners and losers. The uncertainty of climate change stems from the complexity and inter-relationship of value and supply chains, the flow through of fossil fuels to by-products and services across multiple sectors and industries, the pass-through cost of carbon, policy fragmentation, and the consideration that certain companies are too big to fail. The likelihood of asset stranding depends on the commodity, the asset quality, the customer base, the rate of technological change, cost curve dynamics, mitigating strategies (for example, company diversifying portfolio), and the ability of the market to price risk and timing thereof.

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.

6. Governance

TCFD Recommended Disclosure
a) Describe the board's oversight of climate-related risks and opportunities

Roles and responsibilities at the Fund are clearly set out in the Fund's Governance Policy & Compliance Statement.

The Fund's Committee is responsible for approving the Fund's Investment Strategy Statement, together with the Fund's standalone Responsible Investment Framework and Climate Strategy. The committee meets six to eight times a year. The Committee also receive a quarterly stewardship report setting out the stewardship and voting activities of the Fund's largest investment managers.

The Fund's approach to managing climate risk, including the Fund's beliefs, objectives, metrics, and targets is set out in detail in the Fund's Climate Strategy.

The Committee receives an annual Climate Risk Management Report from LGPSC and receives ongoing training in respect of responsible investment and climate related risks and opportunities.

The Fund also has an independent investment advisor, Mr Anthony Fletcher from MJ Hudson Allenbridge, who provides advice to the Committee and takes Environmental, Social and Governance (ESG) factors, including climate-related risks and opportunities, into account when making recommendations on the Fund's Strategic Asset Allocation Benchmark and on tactical asset allocations.

Derbyshire Pension Board has an oversight role in ensuring the effective and efficient governance and administration of the Fund, including securing compliance with the LGPS Regulations and any other legislation relating to the governance and administration of the Scheme.

In order to support good decision-making, the Fund applies the Myners Principles. Disclosure of the Fund's compliance against the Myners Principles is made annually in the Fund's Annual Report.

TCFD Recommended Disclosure
b) Describe management's role in assessing and managing climate-related risks and opportunities.

The Head of Pension Fund and the Investments Manager have primary day-to-day responsibility for the way in which climate-related investment risks are currently managed. As a largely externally managed fund, the implementation of much of the management of climate-related risk is delegated to portfolio managers. Each manager's approach to ESG factors and how these are integrated into their investment process is assessed as part of the manager selection process. The Fund's external managers are monitored on a regular basis, and a Climate Stewardship Plan has been developed.

7. Strategy

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

As a diversified asset owner, the range of climate-related risks and opportunities are varied and constantly evolving. A subset of risk factors is presented in Figure 5.

Figure 5: Examples of Short, Medium & Long-Term Risks

	Short & Medium Term	Long Term
Risks	Carbon prices Policy change Technological change Geopolitical shocks Consumer preferences Stock selection Timing	Resource scarcity Extreme weather events Sea level rise Geopolitical shocks
Asset class	Listed equities Growth assets Energy-intensity industry Oil-dependent sovereign issuers Carbon-intensive corporate issuers	Infrastructure Property Agriculture Commodities Insurance

Short-term risks include stock price movements resulting from increased regulation to address climate change.

Medium-term risks include technology and policy changes leading to rapid product obsolescence or changes in consumer behaviour (for example, uptake in electric vehicles), stock selection (there will be winners and losers across all sectors) and timing (being the first adopter does not guarantee success or better returns).

Long-term risks include stranded assets, physical damages to real assets and resource availability. An example includes the risk to coastal infrastructure assets from rising sea levels.

The Fund receives an annual Climate Risk Management Report from LGPSC, the findings of which, together with the Fund's own ongoing climate research, support the preparation of the Fund's Climate Strategy.

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

The Fund believes that diversification across asset classes, regions, and sectors is an important investment risk management tool to reduce risk. The Fund recognises that climate risk is systemic and is unlikely to be eliminated through diversification alone. As part of the last review of the Fund's Investment Strategy Statement in March 2024, a 36% allocation to Global Sustainable Equities by 1 April 2025 was approved, up from zero at the start of 2020. This allocation targets investments in global companies that are sustainable in financial, environmental, social and governance terms and, where appropriate, that are providing solutions to sustainability challenges. Furthermore, the Fund has invested in several renewable energy opportunities, and continues to assess new opportunities.

The Fund's strategic allocated weighting to the UK equity market has also been reduced from 30% in December 2016 to 8% by 1 April 2025. This has significantly reduced the Fund's exposure to companies with fossil fuel reserves. The Fund's carbon risk metrics analysis indicates that the UK equity market has one of the highest exposures to fossil fuel reserves compared to other regional equity markets, although it should be noted that some of the largest UK companies with fossil fuel reserves are among the most progressive in terms of factoring climate risk into their long-term strategy. In each regional equity portfolio, the Fund has a lower exposure to fossil fuel reserves companies than the benchmark.

The Fund is exploring options to further embed climate-related risks and opportunities into its investment strategy.

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

Analysis has been carried out by Mercer for LGPSC to understand the extent to which the Fund's risk and return characteristics could come to be affected by a set of climate scenarios, including an estimation of the annual climate-related impact on returns. Mercer has partnered with Ortec Finance and Cambridge Econometrics to develop climate scenarios that are grounded in the latest climate and economic research and give practical insights. This partnership brings together Mercer's investment and climate expertise alongside Ortec's research and scenario generator technology.

All asset classes are included in this analysis. The climate scenarios are:

- 1.5°C Rapid Transition: average temperature increase of 1.5°C by 2100 in line with the Paris Agreement. This scenario assumes sudden large-scale downward re-pricing across multiple securities in 2025. This could be driven by a change of policy or realisation that policy change is inevitable, consideration of stranded assets or expected cost. To a degree, the shock is sentiment driven and is, therefore, followed by a partial recovery across markets. The physical damages are most limited under this scenario.

- 1.6°C Orderly Transition: average temperature increase of 1.6°C by 2100. This scenario assumes political and social organisations act in a co-ordinated way to implement the recommendations of the Paris Agreement to limit global warming well below 2°C. Transition impacts do occur but are relatively muted across the broad market.
- 4°C Failed Transition: average temperature increase above 4°C by 2100. This scenario assumes the world fails to co-ordinate a transition to a low carbon economy and global warming exceeds 4°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasingly negative impacts from extreme weather events. These are reflected in re-pricing events in the late 2020s and late 2030s.

The climate scenario analysis covers the following asset allocations:

- the Fund's actual asset allocation on 31 March 2022; and
- the Fund's strategic asset allocation benchmark on 31 March 2022.

The climate scenario analysis forecasts the estimated climate related impact on returns, and does not take account of any other factors which may have an impact on investment returns including economic and market conditions; political and geopolitical events; monetary policy conditions, etc. It is also important to note that the asset allocation required to capture the upside under one scenario, may have a negative impact under an alternative scenario. For example, annual returns under a 1.5°C Rapid Transition benefit from higher allocations to sustainable equities and sustainable infrastructure, whereas these allocations may have a negative impact under a 4°C Failed Transition because the assets will be subject to increased physical risk.

The results of the climate scenario analysis are shown in Figure 6:

Figure 6: Annualised climate change impact on portfolio returns to 5, 15 and 40 years[3]

Climate Scenario	Timeframe	Asset Allocation 31 Mar-22	Strategic Asset Allocation Benchmark
Rapid Transition	5 years	(1.4%)	(1.3%)
	15 years	(0.4%)	(0.4%)
	40 years	(0.1%)	(0.1%)
Orderly Transition	5 years	(0.1%)	(0.1%)
	15 years	0.0%	0.0%
	40 years	0.0%	0.0%
Failed Transition	5 years	0.1%	0.1%
	15 years	(0.6%)	(0.7%)
	40 years	(1.0%)	(1.0%)

≤ -10 bps > -10 bps, < 10bps ≥ 10 bps

[3] Extract from Mercer Limited's (Mercer) report "Climate Scenario Analysis" prepared for and issued to LGPS Central Limited for the sole purpose of undertaking climate change scenario analysis for Derbyshire Pension Fund. Other third parties may not rely on this information without Mercer's prior written permission. The findings and opinions expressed are the intellectual property of Mercer and are not intended to convey any guarantees as to the future performance of the investment strategy. Information contained herein has been obtained from a range of third-party sources. Mercer makes no representations or warranties as to the accuracy of the information and is not responsible for the data supplied by any third party.

The climate scenario analysis forecasts the following:

- A 1.5°C Rapid Transition is forecast to have a negative impact on returns, particularly on a five-year basis, reflecting an assumption that the hastiness and uncoordinated response to a rapid transition leads to a short-term decline in asset prices. Thereafter, the forecast impact on long-term returns stabilises, albeit remaining marginally negative.
- The impact of a 1.6°C Orderly Transition is forecast to be broadly return neutral across all time horizons.
- A 4°C scenario would have a significant negative impact on long-term returns, reflecting the market wide impact of physical risks.

Over the long-term, Mercer forecast that a successful transition leads to enhanced projected returns for nearly all investors when compared to scenarios associated with higher temperature outcomes due to lower physical damage.

The delivery of a successful transition will require a global and coordinated policy response and is outside the control of the Fund. However, the Fund will continue to work collaboratively with its managers and with fellow investors towards the aim of achieving a portfolio of assets with net zero carbon emissions by 2050.

Translating climate scenario analysis into an investment strategy is a challenge as: there is a wide range of plausible climate scenarios; the probability of any given scenario is hard to determine; and the best performing sectors and asset classes in a 1.5°C Rapid Transition tend to be the worst performers in a 4°C Failed Transition and vice versa. Despite the challenges, the Fund believes it is worthwhile procuring climate-related research in order to support robust decision making.

8. Risk Management

TCFD Recommended Disclosure
a) Describe the organisation's process for identifying and assessing climate-related risks.

The Fund seeks to identify and assesses climate-related risks at the total Fund level and at the individual asset level. Both 'top-down' and 'bottom-up' analysis has been received by the Fund from LGPSC. The Fund recognises that the tools and techniques for assessing climate-related risks in investment portfolios are an imperfect but evolving discipline. The Fund aims to use the best available information to assess climate-related threats to investment performance.

As far as possible climate risks are assessed in units of investment return, in order to compare with other investment risk factors.

As a largely externally managed pension fund, the identification and assessment of climate-related risks is also the responsibility of individual fund managers appointed by the Fund. Existing fund managers are monitored on a regular basis to review the integration of climate risks into the portfolio management, and to understand their engagement activities.

Stewardship activity is conducted with investee companies by the Fund. The Fund values the importance of shareholder voting as a stewardship tool and has retained the services of a specialist third party voting service provider. Historically the Fund largely executed voting activities directly

but following the transition of the vast majority of its direct equity holdings into pooled products, voting is executed by the Fund's appointed fund managers. The Fund has several selected stewardship partners including LGPSC, Hermes EOS, and Local Authority Pension Fund Forum (LAPFF) (Figure 7). The Fund has developed a Climate Stewardship Plan based on the results of the LGPSC Climate Management Risk Report in order to focus the Fund's engagement resources.

TCFD Recommended Disclosure
b) Describe the organisation's process for managing climate-related risks.

The Fund manages risk by prioritising those risks which it believes will have the biggest impact on the Fund. For climate-related risks, this will likely depend on analysis including climate scenario analysis and carbon risk metrics. The Fund's approach to climate risk management is set out in detail in the Fund's Climate Strategy.

Stewardship activities will remain an important aspect of the Fund's approach to managing climate risk. The Fund expects all investee companies to manage material risks, including climate change, and the Fund believes that climate risk management can be meaningfully improved through focussed stewardship activities by investors.

Either through its own membership or through LGPSC's membership, the Fund has several engagement partners that engage investee companies on climate risk.

Figure 7: The Fund's Stewardship Partners

Organisation	Remit
ISS	Specialist third party voting service provider. ISS' research includes recommendations on casting votes on climate-related shareholder resolutions.
LGPS Central Limited	The Fund is a 1/8th owner of LGPSC. Climate change is one of LGPSC's stewardship themes, with quarterly progress reporting available on the website. The Responsible Investment Team at LGPSC engages companies on DPF's behalf, including via the Climate Action 100+ initiative.
HERMES EOS	Hermes EOS is engaged by LGPSC to expand the scope of the engagement programme, especially to reach non-UK companies.
Local Authority Pension Fund Forum	DPF is a long-standing member of the LAPFF. LAPFF conducts engagements with companies on behalf of local authority pension funds.

Based on analysis reported in the 2023 LGPSC Climate Risk Management Report, LGPSC, either directly or indirectly, engaged with:

- 63.5% of the companies accounting for the Fund's listed equity financed emissions in 2022-2023; and
- 51.6% of the companies accounting for the Fund's investment grade bonds financed emissions in 2022-2023.

Engagement is calculated as the proportion of financed emissions which are accounted for under an engagement program either directly, in partnership and/or through stewardship provider.

This analysis excludes any engagement conducted directly by the Fund, or by the Fund's other external investment managers, such as Legal and General Investment Managers (LGIM). The analysis therefore serves as a minimum percentage of holdings within the Fund which are covered by some form of engagement programme.

The Fund is a member of the Institutional Investors Group on Climate Change (IIGCC), a leading global membership body and the largest in Europe focussing specifically on climate change. The IIGCC has around 400 members. The IIGCC's mission is to support and enable the investment community in driving significant and real progress by 2030 towards a net zero and resilient future. The Fund recognises that outcomes of engagement are of greater importance than the volume of engagement. The outcomes of engagement activities of the Fund's stewardship partners are published on each provider's website.

The instruction of shareholder voting opportunities is an important part of climate stewardship. Following the transition of the vast majority of its direct equity holdings into pooled products, voting activity is largely carried out by external fund managers. Legal & General Investment Management (LGIM) currently manages a sizeable proportion of the Fund's assets on a passive basis. The votes in respect of these assets are cast by LGIM. LGIM has a robust approach to incorporating climate change factors in its voting decisions, including on specific climate-related shareholder resolutions. The stewardship and voting activities of the Fund's largest investment managers are reported to Committee on a quarterly basis.

The Fund became a signatory to the UK Stewardship Code 2020 in 2023. The UK Stewardship Code 2020 sets high standards of stewardship for those investing money on behalf of savers and pensioners, and those that support them.

The Fund has developed a Climate Stewardship Plan which, alongside the wide-scale engagement activity undertaken by LGPSC, Hermes EOS, and LAPFF, will include targeted engagement at investee companies of particular significance to the Fund's portfolio.

Figure 8: Holdings included in the Fund's forward Climate Stewardship Plan

Holding	Sector	Net Zero Target	TPI Climate Risk Management Quality	TPI Carbon Performance To 2025	TPI Carbon Performance To 2035	TPI Carbon Performance To 2050	Manager engage-ment
Anglo American (*)	Materials	✓	4	1.5°C	1.5°C	National Pledges	✓
BP	Energy	✓	4*	Not Aligned	Not Aligned	Not Aligned	✓
CRH	Materials	✓	4	Below 2°C	1.5°C	1.5°C	✓
Glencore	Materials	✓	4	1.5°C	Below 2.0°C	National Pledges	✓
Rio Tinto	Materials	✓	4	Paris Pledges	Paris Pledges	Below 2°C	✓
Shell	Energy	✓	4	Not Aligned	National Pledges	National Pledges	✓
TSMC	IT	✓	-	-	-	-	✓

(*) Based on diversified mining activities.

Each of the companies on the Fund's Climate Stewardship plan has committed to net zero by 2050.

The Transition Pathway Initiative (TPI) is a global, asset owner led initiative which assesses companies' preparedness for the transition to a low carbon economy. The TPI Framework evaluates companies based on:

1) climate risk management quality
2) carbon performance

Climate risk management quality includes an assessment of policies, strategy, risk management and targets, and results in the awarding of a quality level ranging from 0 – unaware of, or not acknowledging climate change to 4* -satisfies all management quality criteria.

Carbon performance relates to an assessment of the level of alignment with the Paris Agreement. The TPI measures each company's carbon performance against three sector pathways: 1.5°C; Below 2°C; and 3) National Pledges.

The holdings included in the Fund's Climate Stewardship Plan accounted for around 23% of the Fund's Total Quoted Equity carbon footprint on 31 March 2023 on a weighted average carbon intensity basis, and around 36% of the Fund's Total Quoted Equity financed emissions on the same date.

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

Both 'mainstream' risks and climate-related risks are discussed by the Pensions & Investments Committee. While specific macro-economic risks are not usually included in isolation, the Fund includes climate risk as a separate risk on the Fund's Risk Register.

Climate risk is further managed through the Fund's Climate Strategy and the Climate Stewardship Plan.

9. Metrics and Targets

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

The Fund has, to date, received four LGPSC Climate Risk Management Reports covering the carbon metrics of its listed equities and investment grade bond investments at the following dates:

- 31 July 2019 (the 2020 benchmark) (listed equities only)
- 31 March 2021
- 31 March 2022
- 31 March 2023

The listed equity and investment grade bonds carbon metrics set out in the LGPS Climate Risk Management Reports are based on data provided by MSCI. To allow users to assess the quality and coverage of the data, MSCI assigns a data quality score to each companies' data, ranging as follows:

- Score 1: Audited CHG emissions data or actual primary energy data
- Score 2: Non-audited CHG emissions data or other primary data
- Score 3: Averaged data that is peer/sub-sector specific
- Score 4: Proxy data on the basis of region or country
- Score 5: Estimated data with very limited support

The Fund's listed equity and investment grade bonds data quality and data coverage scores on 31 March 2023 were as follows:

Figure 9: Total Listed Equity & Investment Grade Bonds Data Quality & Data Coverage[4]

	Data Quality	Data Coverage (*)
Listed Equities	2.1	96.6%
Investment Grade Bonds	2.2	71.8%

(*) Percentage of AUM with data coverage for financed emissions calculation.

The poor availability of data in asset classes other than listed equities and investment grade bonds prevents a more complete analysis at the present time. Notwithstanding the lack of carbon metrics in respect of these other asset classes (for example, Infrastructure; Property, Sovereign Bonds, Private Equity, etc) at the present time, a table setting out an overview of the Fund's approach to managing the climate related risks and opportunities of these other asset classes is set out later at Figure 19.

The Fund notes that several of these asset classes are naturally tilted towards lower carbon industries (for example, Infrastructure and Private Equity) or supported by national net zero commitments (for example, Sovereign Bonds), albeit similar to other assets, they are not immune to climate risk, particularly those with a growth tilt. The Fund notes that most of the Fund's underlying asset managers have made net zero commitments and are working towards reduced carbon emissions in line with the Paris Agreement.

Carbon risk metrics aid the Fund in assessing the potential climate-related risks to which the Fund is exposed, and identifying areas for further risk management, including company engagement and fund manager monitoring. The Fund additionally monitors stewardship data.

TCFD Recommended Disclosure
b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

The Fund provides in Figure 10 the carbon metrics of the Fund's listed equity portfolio and investment grade bond portfolio on 31 March 2023, which represented 51.0% and 5.7%, respectively, of the Fund's total investment assets at that date.

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The carbon metrics comprise:

Figure 10: Carbon Metrics

Carbon Metric	Unit	Definition	What does it show?
Weighted Average Carbon Intensity (WACI)	tCO2/$m Revenue	Scope 1 & 2 carbon intensity, weighted by each portfolio company	A measure of portfolio carbon intensity. Indicates whether a portfolio is more or less carbon intensive than the benchmark index
Absolute Financed Emissions	tCO2e	Scope 1 & 2 absolute carbon emissions	A measure of absolute tons of CO_2 emissions for which an investor is considered responsible
Normalised Financed Emissions	tCO2/£m	Scope 1 & 2 normalised carbon emissions	A measure of tons of CO_2 normalised by a portfolio's AUM to provide a measure of carbon intensity.
Weight in Fossil Fuel Reserves	%	The weight of a portfolio invested in companies that own (i) fossil fuel reserves; (ii) thermal coal reserves; and (iii) utilities deriving more than 30% of their energy mix from coal power	A measure of a portfolio's exposure to companies with fossil fuel reserves. The measure does not consider the amount of revenue a company generates from fossil fuel activities. As a result, diversified business (for example. those engaged in a range of activities) would be included when calculating the metric regardless of the proportion of their revenue derived from fossil fuel reserves
Weight in Fossil Fuel Reserves by Revenue	%	Identifies each portfolio company's maximum percentage of revenue derived from conventional and unconventional oil and gas, as well as thermal coal. Each company's maximum possible revenue values are summed and weighted by the portfolio weights to produce a weighted exposure	Overcomes some of limitations of the Weight in Fossil Fuel Reserves carbon metric
Weight in Thermal Coal Exposure Reserves	%	The weight of a portfolio invested in companies that own thermal coal reserves	A measure of a portfolio's exposure to companies with thermal coal reserves. The measure does not consider the amount of revenue a company generates from thermal coal activities. As a result, diversified business (for example those engaged in a range of activities) would be included when calculating the metric regardless of the proportion of their revenue derived from thermal coal reserves
Weight in Clean Technology	%	The weight of a portfolio invested in companies whose products and services include clean technology (Alternative Energy, Energy Efficiency, Green	Provides an assessment of a portfolio's exposure to companies with clean technology activities. The measure does not consider the amount of revenue a company

		Buildings, Pollution Prevention and Sustainable Water)	generates from the clean technology. As a result, diversified business (for example, those engaged in a range of activities) would be included when calculating the metric regardless of the proportion of their revenue derived from clean technology
Weight Clean Technology by Revenue	%	Identifies each portfolio company's maximum percentage of revenue derived from clean technology. Each company's maximum possible revenue values are summed and weighted by the portfolio weights to produce a weighted exposure	Overcomes some of limitations of the Weight in Clean Technology carbon metric
Low Carbon Transition (LCT)	Numerical (1 – 10)	Low Carbon Transition scores are assigned from 1 – 10, whereby a score of 10 indicates exceptional management of climate risks and opportunities, while a score of 1 indicates poor management. The metric shows the proportion of financed emissions within a portfolio with a manager score above 5	A measure of how well the overall portfolio manages the risk and opportunities related to the low carbon transition
Implied Temperature Rise (ITR)	%	The Implied Temperature Risk is typically expressed in degrees centigrade and is based on the implied global temperature rise if the entire economy adopted the same decarbonisation policy as the company in question. The metric is expressed as a percentage, and relates to the proportion of financed emissions within a portfolio with an Implied Temperature rise of 2C or less	Implied temperature rise is an intuitive, forward looking metric, expressed in degrees Celsius, designed to show the temperature alignment of companies, portfolios, and funds with global temperature goals
Science-Based Targets (SBT)	%	The proportion of financed emissions which are accounted for by a company with science-based climate targets	Provides an insight into the proportion of companies which have implemented science-based targets. Apportioning by financed emissions places greater weight on companies where emissions are more substantial
Paris Agreement Alignment (PAA)	%	This is a metric calculated in-house by LGPSC. A company is considered to be aligned if they have a LCT Score greater than 5, as well as either an ITR of 2 degrees Celsius or lower, or an SBT	Designed to provide insight into the overall Paris Agreement alignment of a portfolio. Apportioning by financed emissions places a greater weigh on companies where emissions are more substantial

The weighted average carbon intensity (WACI) carbon footprint and the absolute & normalised financed emissions analysis set out in this TCFD report includes Scope 1 and 2 emissions (those emitted either directly by a company or indirectly through its procurement of electricity and steam) but does not include Scope 3 emissions (those emitted by a company's suppliers and customers). This means that for some companies the assessment of their carbon footprint could be considered an 'understatement'. Examples could include an online retailer whose logistics emissions are not included in Scope 1 or 2.

The Fund has chosen not to include Scope 3 emissions in the WACI carbon footprint metric and the absolute & normalised financed emissions analysis for two reasons: (1) the rate of Scope 3 disclosure remains insufficient to use reliably in carbon foot-printing analysis; and (2) the inclusion of Scope 3 emissions leads to double-counting at the portfolio level. To overcome the risk of 'understating' carbon risk, the Fund additionally assesses its exposure to fossil fuel reserves (Figure 14).

The weighted 2020 Listed Equity Base Benchmark data set out in this report is based on the restated data presented in LGPSC's fourth Climate Risk Management Report dated January 2024. Climate data is an evolving field, and methodologies are continuously updated by governments, data providers and companies. LPGSC notes that the data accessible through its data provider (MSCI) undergoes frequent revisions as estimated data is replaced by reported data, estimations are refined for greater precision, and data coverage expands. As a result, LGPSC recalculates its emissions data annually, and the restatements in respect of prior years can be significant. Figure 11 shows the weighted 2020 Listed Equity Base Benchmark data as previously reported by LGPSC in its first Climate Risk Management Report dated February 2020 as well as the restated data.

Figure 11: Total Listed Equity DPF Weighted 2020 Base Benchmark Restatements[5]

Weighted 2020 Base Benchmark	LGPSC Previously Reported (February 2020)	LGPSC Restated (January 2024)	Variance
WACI Carbon Footprint	182.8	192.8	+5.5%
Weight in Fossil Fuel Reserves	11.7%	9.4%	-232bps
Weight in Thermal Coal Reserves	3.2%	3.1%	-13bps
Weight in Clean Technology	33.2%	33.0%	-22bps

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10. Listed equities

The carbon metrics of the Fund's listed equity portfolio relative to the benchmark on 31 March 2023 is set out in figure 12.

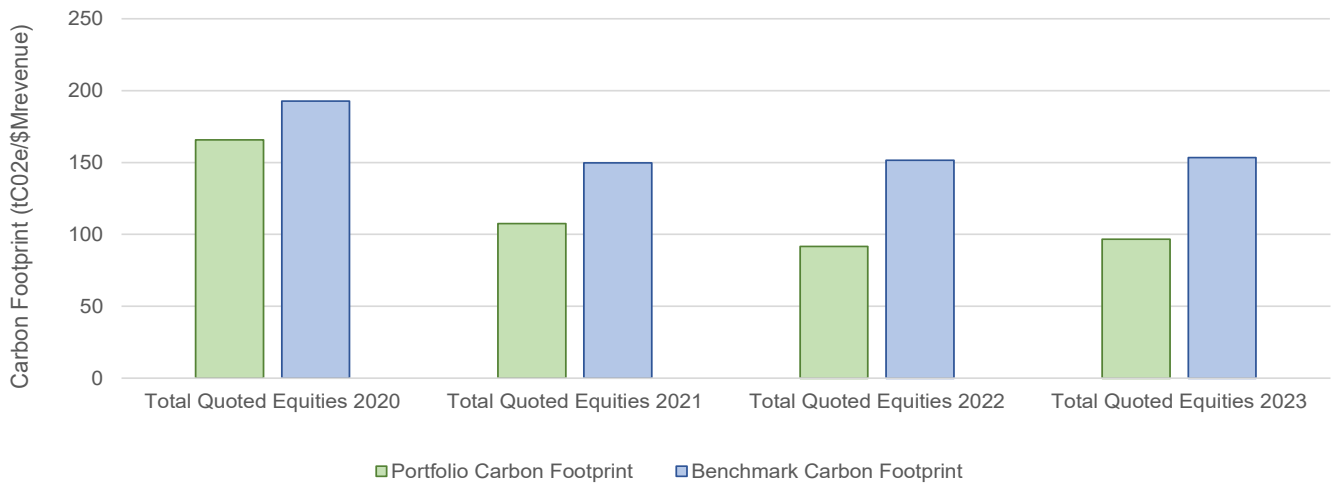
Figure 12: Total Listed Equity Carbon Metrics[6]

Carbon Metric	DPF 31 Mar-23	Benchmark 31 Mar-23	% Variance
WACI Carbon Footprint	96.8	153.4	(36.9%)
Absolute Financed Emissions	183,713	277,979	(33.9%)
Normalised Financed Emissions	63.2	93.7	(32.6%)
Weight in Fossil Fuel Reserves	5.7%	8.5%	-280bps
Weight in Fossil Fuel Reserves by Revenue	2.0%	3.8%	-180bps
Weight Thermal Coal Reserves	1.9%	3.0%	-110bps
Weight in Clean Technology	38.5%	38.5%	-
Weight in Clean Technology by Revenue	5.3%	5.2%	+10bps

The Fund's Total Listed Equity portfolio on 31 March 2023 represented 51.0% of the Fund's total investment assets on that date.

Figure 13 shows that compared to the weighted 2020 base benchmark, the Fund's Total Listed Equities portfolio on 31 March 2023 was around 50% less carbon intensive than the weighted 2020 base benchmark. This means that, on average, for every $m of economic output companies produce, the Fund's investee companies emit 50% fewer GHG emissions than the companies in the weighted 2020 base benchmark.

Figure 13: Total Listed Equity Carbon Footprint[7]



Note: The blended benchmark comprises the underlying regional benchmarks, weighted in proportion to the current GBP amount in each equity region

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In addition to the reduction in the WACI carbon footprints noted, Figure 14, shows the Fund's Total Listed Equity Absolute and Normalised Financed Emissions on 31 July 2019, 31 March 2022 and 31 March 2023.

Figure 14: Total Listed Equity Financed Emissions[8]

Financed Emissions	31 July 2019	31 March 2022	31 March 2023
Absolute Financed Emissions	261,547	185,275	183,713
Normalised Financed Emissions	Not available	62.6	63.2

The Fund's absolute financed emissions have fallen by 30% between 31 July 2019 and 31 March 2023. Normalised financed emissions increased between 31 March 2022 and 31 March 2023, principally reflecting a general market rally in brown energy assets, albeit they were 32.6% lower than the 2023 weighted benchmark.

Figure 15: Total Listed Equity Exposure to Fossil Fuel reserves[9]

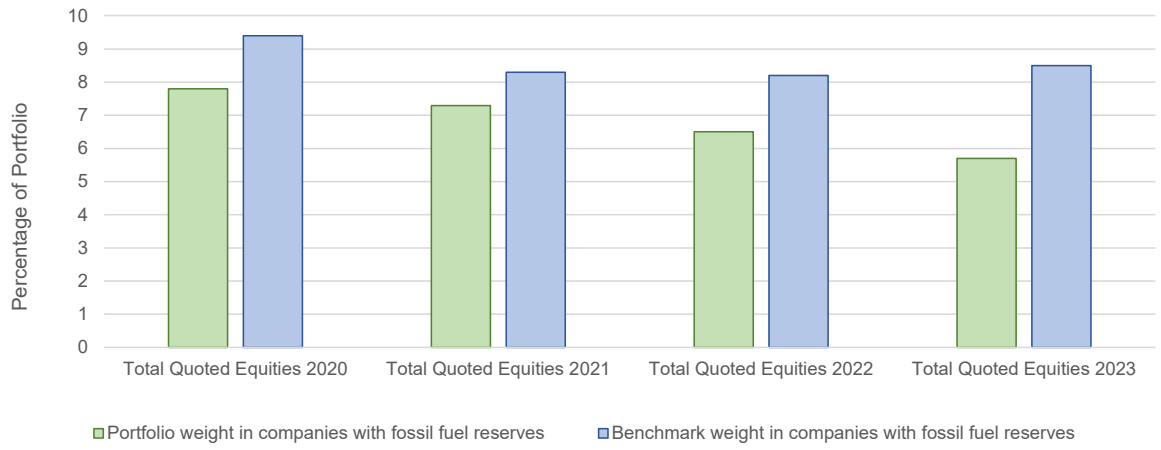

Figure 15 shows the Fund's Total Listed Equities portfolio weight in companies with fossil fuel reserves on 31 March 2023 was 39% lower than the weighted 2020 base benchmark.

The full weight of a company is included in the companies with fossil future reserves measure, regardless of how much of that company's activities relate to those reserves. When apportioned by revenue, 2.0% of the Total Listed Equities portfolio derives revenue from fossil fuel reserves (47% lower than the weighted 2023 benchmark), indicating that most of companies with fossil fuel reserves are diversified businesses.

The Fund's weight in thermal coal reserves was also 39% lower than the weighted 2020 base benchmark (Figure 16). On a revenue basis, 1.9% of the Total Listed Equities portfolio is exposed to revenue streams attributable to thermal coal production (37% lower than the 2023 weighted benchmark).

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Figure 16: Total Listed Equity Exposure to Thermal Coal Reserves[10]

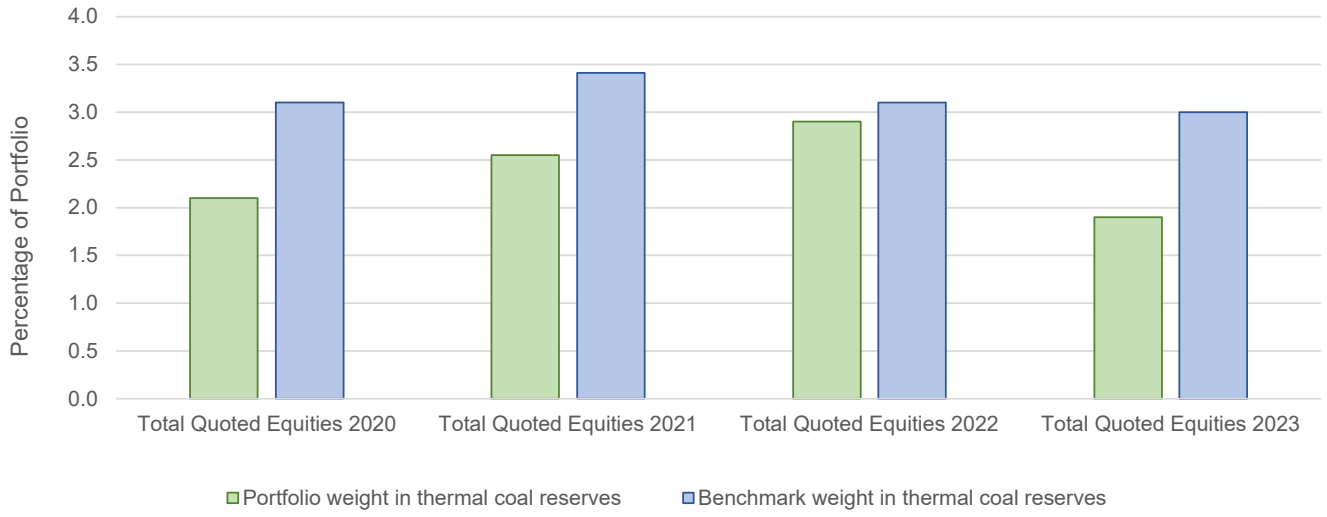
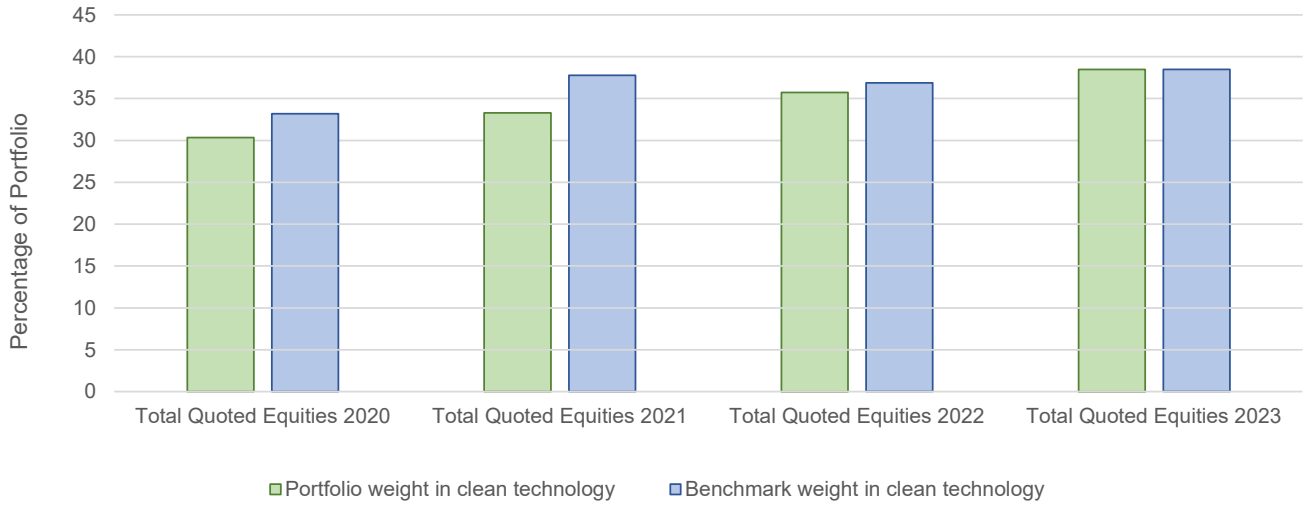


Figure 17 indicates that the Fund's Total Listed Equities portfolio exposure to clean technology was in line with the weighted 2023 benchmark. The Fund notes that this measure should be viewed with some caution as there appears to be a moderate positive correlation in the dataset between sectors that have a high carbon intensity (or a higher weight in fossil fuel reserves) and those that have a higher weight in clean technology. For example, the Utilities and Oil & Gas sectors have some of the highest weights in clean technology. This correlation means that it may be difficult to have a diversified portfolio that is simultaneously carbon efficient, is underweight fossil fuels, and overweight clean technology. The analysis takes no account of the Fund's quoted and unquoted onshore & offshore, solar, and hydro renewable energy infrastructure investments. These were more than £250m on a committed basis on 31 March 2023, equating to around 4.1% of total net investment assets.

Figure 17: Exposure to Clean Technology in each regional equity portfolio[11]



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It is also possible to show the Fund's Low Carbon Transition, Implied Temperature Rise, Science Based Targets and Paris Agreement Alignment percentages on 31 March 2023 relative to the FTSE All World. These metrics are designed to allow the Fund to assess Paris Agreement alignment.

Figure 18: LCT, ITR, SBT & PAA Listed Equity Carbon Metrics[12]

Carbon Metric	DPF	Benchmark	% Variance
Low Carbon Transition	39.0%	32.6%	+640bps
Implied Temperature Rise	28.1%	12.3%	+1,580bps
Science Based Targets	32.4%	8.1%	+2,430bps
Paris Agreement Alignment	22.1%	11.5%	+1,060bps

Figure 18 shows that for each of the metrics, the Fund's metric score was higher than the FTSE All World metric score on 31 March 2023.

The Fund's top 10 listed equity emission contributors ranked by proportion of financed emissions are set out in Figure 19.

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Figure 19: Listed Equity – Top 10 Emissions Contributors[13]

Holdings	Proportion of Financed Emissions	Proportion of WACI	Scope 1 & 2 (1)	Scope 3 (1)	DPF Weight	Benchmark Weight	Data Quality Score	LCT	ITR	SBT	LGPSC Engagement
Shell	18.4%	7.1%	137.7M	1,174M	1.9%	2.1%	2	2.9	2.5	No	Yes
CRH	5.7%	3.6%	33.8M	22.4M	0.3%	0.4%	2	4.9	1.8	Yes	Yes
BP	4.3%	1.6%	35.5M	640.7M	1.0%	1.2%	2	2.8	2.4	No	Yes
Rio Tinto	3.3%	3.9%	30.3M	583.9M	0.7%	0.8%	2	5.5	5.9	No	Yes
Cemex	2.7%	1.7%	39.3M	14.8M	0.1%	0.0%	2	4.0	1.9	Yes	Yes
EOG Resources	1.6%	1.5%	10.5M	146.1M	0.4%	0.1%	2	2.7	3.7	No	No
Intercontinental Hotels	1.4%	2.9%	2.5M	3.5M	0.3%	0.1%	2	5.3	4.9	Yes	No
Anglo America	1.4%	1.6%	13.3M	335.2M	0.4%	0.4%	2	5.8	5.5	No	Yes
Ultratech Cement	1.2%	2.4%	62.5M	5.3M	0.1%	0.0%	2	1.8	3.7	Yes	No
TSMC	0.9%	3.4%	11.3M	35.0M	1.7%	1.1%	2	5.8	2.9	No	Yes
Total	**40.9%**	**29.7%**			**6.9%**	**6.2%**					

Note: Total Corporate Scope 1, 2 & 3 emissions (Million tCO2e) not the Fund's share of those emissions

Figure 19 shows that a sizeable proportion of the portfolio's financed emissions and WACI carbon footprint is concentrated in a few significant names; 6.9% of the portfolio accounted for 40.9% of financed emissions on 31 March 2023.

Moving forward, the Fund plans to monitor the progression to net zero by each of the top 10 emissions contributors, including scope 3 emissions, as part the Fund's annual TCFD report.

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11. Investment grade bonds

Figure 20 sets out the carbon metrics in respect of the Fund's investment grade bond investments on 31 March 2023, which represented 5.7% of total investment assets at that date.

Figure 20: Carbon Metrics in respect of the Fund's Investment Grade Bond Portfolio[14]

Carbon Metric	DPF 31 Mar-23	Benchmark 31 Mar-23	% Variance
WACI Carbon Footprint	175.5	159.0	+10.4%
Absolute Financed Emissions	17,036	17,260	(1.3%)
Normalised Financed Emissions	71.3	51.9	+37.4%
Weight in Fossil Fuel Reserves	4.4%	6.3%	-190bps
Weight in Fossil Fuel Reserves by Revenue	1.2%	2.1%	-90bps
Weight Thermal Coal Reserves	1.5%	1.4%	+10bps
Weight in Clean Technology	22.3%	28.9%	-660bps
Weight in Clean Technology by Revenue	3.7%	4.6%	-90bps

The Fund's investment grade bonds portfolio is around 5% more carbon efficient than the 2020 benchmark (10% less efficient than the 2023 benchmark). It should be noted that one of the features of the investment grade bonds asset class is that companies may not be as willing to engage with their debt holders as they are with their equity shareholders. Furthermore, the higher turnover / shorter hold period of debt relative to equity, may make it more challenging to plan and commit to long-term engagement plans with a debt issuer.

It is also possible to report the portfolio's LCT, ITR, SBT and PAA as shown in Figure 21, albeit benchmark data is not available.

Figure 21: LCT, ITR, SBT & PAA Investment Grade Bonds Carbon Metrics[15]

Carbon Metric	DPF
Low Carbon Transition	26.1%
Implied Temperature Rise	38.9%
Science Based Targets	39.7%
Paris Agreement Alignment	24.4%

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Figure 22: Investment Grade Bonds – Top 10 Emissions Contributors[16]

Holdings	Proportion of Financed Emissions	Proportion of WACI	Scope 1 & 2 (1)	Scope 3 (1)	DPF Weight	Benchmark Weight	Data Quality Score	LCT	ITR	SBT	LGPSC Engagement
Cleco Corporate Holdings	18.6%	11.2%	9.2M	3.7M	0.4%	0.0%	4			No	No
The Southern Company	12.2%	17.7%	82.6M	34.8M	0.9%	0.1%	2	3.1	3.7	No	Yes
RWE Aktiengesellschaft	8.3%	3.0%	89.6M	23.0M	0.2%	0.0%	2	4.5	6.6	Yes	Yes
Holcim Sterling Finance	5.3%	1.9%	83.0M	30.9M	0.1%	0.1%	2	4.2	2.3	Yes	No
WEC Energy Group	4.1%	5.5%	21.8M	29.0M	0.4%	0.0%	2	2.7	3.5	No	Yes
Duke Energy Corporation	3.5%	5.3%	78.0M	26.5M	0.3%	0.1%	2	4.0	2.6	No	Yes
Enel Finance	2.8%	1.2%	55.9M	69.2M	0.4%	0.6%	2	6.1	1.4	Yes	No
Intercontinental Hotels	2.1%	2.1%	2.5M	3.5M	0.5%	0.1%	2	5.3	4.9	Yes	No
The AES Corporation	2.0%	2.0%	41.0M	8.6M	0.1%	0.0%	2	4.2	3.6	No	Yes
Dominion Energy	1.5%	2.7%	35.0M	25.4M	0.2%	0.1%	2	3.7	2.9	No	Yes
Total	**60.4%**	**52.6%**			**3.5%**	**1.1%**					

Note: Total Corporate Scope 1, 2 & 3 emissions (Million tCO2e) not the Fund's share of those emissions

Figure 22 shows that the portfolio's financed emissions and WACI carbon footprint are concentrated in a few significant names; 3.5% of the portfolio accounted for 60.4% of financed emissions on 31 March 2023.

Moving forward the Fund plans to monitor the progression to net zero by each of the top 10 emissions contributors, including scope 3 emissions, as part the Fund's annual TCFD report.

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

The Fund developed its first standalone Climate Strategy in November 2020, which set out the Fund's approach to addressing the risks and opportunities related to climate change.

The Fund believes that portfolio-wide 'top down' targets are an important means to set direction and appropriate ambition for an investment strategy towards net zero, and to monitor whether that strategy is achieving expected outcomes. However, a focus on just a single top-down portfolio emissions reduction target can incentivise a shift of assets within a portfolio from high to already lower carbon assets and sectors, rather than driving additional 'real world' emissions reductions from increasing investments in climate solutions that contribute to the achievement of the net zero goal. As a result, the Fund set out its aim to:

- Reduce the carbon footprint (Scope 1 & 2) of the Fund's listed equity portfolio by at least 30% relative to the weighted 2020 base benchmark by the end of 2025; and
- Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025.

Figure 23 shows the progress to date in respect of the two targets.

Figure 23: DPF Climate Strategy Targets

Target	Target by end of 2025	Actual 31 July 2019	Actual 31 March 2021	Actual 31 March 2022	Actual 31 March 2023
Reduce the carbon footprint (Scope 1 & 2) of the Fund's listed equity portfolio by at least 30% relative to the weighted benchmark in 2020 by the end of 2025	(30%)	(14%)	(44%)	(52%)	(50%)
Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025	30%	Not Measured	19%	Invested: 27% Committed: 29%	Invested: 29% Committed: 30%

Subsequent to 31 March 2023, the invested weight in low carbon & sustainable investments had increased to around 33% on 31 March 2024, whereas the committed weight had increased to around 34%.

The carbon metrics set out in this report relate to the Fund's listed equity and investment grade bond investments. These accounted for 56.7% of the Fund's total investment assets on 31 March 2023. Whilst it is not currently possible to quantify, and present, comparable carbon metrics in respect of the Fund's other asset classes, Figure 24 sets out an overview of the Fund's approach to managing the climate related risks and opportunities in respect of these assets.

Figure 24: Other Asset Classes – Approach to Managing Climate Related Risks & Opportunities

Asset Class	Asset Class Weight 31 Mar-23	Comments
Infrastructure	10.8%	• Most the Fund's Infrastructure assets are in low carbon sectors such as renewable energy assets (on and offshore wind, solar and hydro, together with associated supporting infrastructure including battery storage and energy transition), critical business services, telecommunications, transportation assets (for example, rail rolling stock, ferries, etc) and Private Public Partnerships (for example, social infrastructure, including hospitals and schools). • Around 35% of the Fund's committed infrastructure allocation on 31 March 2023 related to renewable energy assets and most of the Fund's underlying infrastructure managers have made net zero commitments. For example, Macquarie Asset Management, which accounted for around 18% of the Fund's committed infrastructure allocation on 31 March 2023, has committed to investing and managing its portfolio in line with global net zero emissions by 2040. • The Fund expects an increasing proportion of its Infrastructure allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).
Sovereign Bonds	9.7%	• The Fund's Sovereign Bond investments relate entirely to UK or US conventional or index-linked bonds. It is not possible to measure the carbon metrics for a sovereign bond at the moment, but it is possible to assess whether the borrower (for example, the national government) has made suitable net zero commitments. Both the UK and US Governments have committed to being net zero by 2050. • The Fund made its first investment in respect of the recently launched UK Government 'Green Gilt' programme in 2022 and increased its 'Green Gilt' weight in 2022-23. UK Green Gilts are used by the UK Government to finance expenditure in clean transportation, energy efficiency, renewable energy, pollution prevention and control, living and natural

		resources, and climate change adaptions. Subject to performance and debt security, the Fund expects to make further investments in green bonds moving forward.
Property	7.9%	• Most the Fund's Property assets relates to a portfolio of directly owned UK commercial properties (for example, Retail; Office; Industrial; and Alternatives). The portfolio is managed by Colliers Global Investors on a discretionary arrangement. • Colliers Global Investors integrates ESG considerations, including climate related risks and opportunities, into its investment and on-going asset management process. • Over 80% (by rent) of the Fund's directly owned UK commercial properties have an Energy Performance Certificate (EPC) of C or above. The Fund has no directly owned UK commercial properties with an EPC of F or below. Colliers Global Investors is targeting that the Fund's entire directly owned UK commercial properties will have an EPC of C or above by 2027, rising to B or above by 2030.
Private Equity	5.1%	• The Private Equity asset class typically lends itself to low carbon high growth business such as business services, healthcare, Information Technology and Consumer Discretionary. • The typical Private Equity investment period is between four and six years and the Fund's expects its underlying investment managers to fully integrate ESG considerations, including climate related risks and opportunities, into their investment processes. • The Fund expects an increasing proportion of its Private Equity allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).
Diversified Multi-Asset Credit	3.9%	• The Fund's Diversified Multi-Asset Credit allocation is managed through two third party managers: CQS and Janus Henderson. The Fund expects both managers to fully integrate ESG considerations, including climate related risks and opportunities into their investment process. • CQS is a signatory to the Net Zero Asset Managers Initiative. In doing so, CQS is part of the collective goal to engage and, through investment, achieve net zero greenhouse gas emissions by 2050 or sooner.

		• Janus Henderson states that it believes in the spirit and goals of a net zero economy and the need for a transition to a low carbon world. • Both managers are currently in the process of designing and implementing systems which will allow them to report on the carbon metrics of their respective portfolios.
Private Debt	3.2%	• The Fund's Private Debt assets are currently managed by four managers. Each of these managers integrates ESG considerations, including climate related risks and opportunities, into their investment processes. Furthermore, several of the managers, actively incentivise the underlying debt borrowers to reduce carbon emission through interest rate discounts linked to carbon reduction targets. • Most of the debt funding relates to private equity transactions, which typically lends itself to low carbon high growth business such as business services, healthcare, Information Technology and Consumer Discretionary. • The Fund expects an increasing proportion of its Private Debt allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).
Cash	2.7%	• The Fund's Cash balance is managed through a portfolio of cash deposits in accordance with the Fund's approved Treasury Management Strategy. • The Fund's main operational bank account is with Lloyds Bank. Lloyds Bank states that it supports the transition to a low carbon economy and recognises the importance of transitioning to net zero by 2050 or sooner. Lloyds Bank has committed to achieving net zero across the activities that it finances by 2050 or sooner.

12. Updated March 2024 Climate Strategy

The Fund's Pensions & Investments Committee approved an updated Climate Strategy in March 2024, which included the following new targets:

- **Target 1:** Reduce the weighted average carbon footprint (Scope 1 & 2) of the Fund's listed equity and investment grade bond portfolios by at least 60% relative to the weighted benchmark in 2020 by the end of 2030.

- **Target 2:** Reduce the absolute financed emissions (Scope 1 & 2) of the Fund's listed equity and investment grade bond portfolios by at least 60% relative to the weighted benchmark in 2020 by end of 2030.

- **Target 3:** The Fund will aim to assess / estimate the carbon footprint (weighted average carbon intensity and/or absolute financed emissions) (Scope 1 & 2) of at least 70% of the Fund's other assets, excluding sovereign bonds and cash, by AUM by the end of 2030. The aim is to build-up the scope, accuracy and comparability of the Fund's other assets' carbon metrics, allowing the Fund to meaningfully engage and monitor investment managers, and track progression towards net zero by 2050.

- **Target 4:** The Fund will aim to invest at least 45% of the Fund's total investment portfolio in low carbon & sustainable investments by the end of 2030.

- **Target 5:** The Fund will track the reported Scope 3 financed emissions of the Fund's combined top 10 listed equity and investment grade bond portfolio companies by Scope 3 financed emissions as part of the Fund's TCFD report.

- **Target 6:** Listed Assets Engagement Target: engage with investee companies covering at least 90% of financed emissions in material sectors by the end of 2030. Investee company engagement classified as either net zero aligned or aligning (Transition Pathway Initiative Rating and/or other recognised measure used by the Fund's climate metric data provider) or subject to direct or indirect engagement.

- **Target 7:** Listed Asset Coverage Targets: at least 50% of financed emissions in material sectors classified as either net zero aligned or aligning (Transition Pathway Initiative Rating and/or other recognised measure used by the Fund's climate metric data provider) by the end of 2030.

- **Target 8:** Other Assets Engagement Target: engage with at least 70% of the Fund's other assets investment managers, excluding sovereign bonds and cash, either directly or indirectly, on carbon metrics and net zero by 2050 targets by the end of 2030.

The Fund will, to the extent possible, report performance against the new targets from the 31 March 2024 period end onwards. For completeness, Figure 25, shows to the extent possible, performance relative to the new targets using the Fund's carbon metrics on 31 March 2023.

Figure 25: DPF's Carbon Metrics on 31 March 2023 relative to the Fund's Updated 2024 Climate Strategy

New Target	Target	DPF on 31 March 2023
(1) Reduce the Fund's Listed Equity & Investment Grade Bonds (IGB) WACI	60% relative to the 2020 weighted base benchmark by 2030	Listed Equities: 50%[17] IGB: 5%[18]
(2) Reduce the Fund's Listed Equity & IGB absolute financed emissions	60% relative to the 2020 weighted base benchmark by 2030	Listed Equities: 40%[19] IGB: 10%[20]
(3) Assess/measure the carbon footprint of the Fund's other assets	70% by 2030	Not yet measured
(4) Invest 45% of the Fund's total investment assets in low carbon and sustainable investments	45% by 2030	Invested: 29% Committed: 30%
(5) Track Scope 3 financed emissions of the Fund's top 10 Listed Equity & IGB holdings	Track in the Fund's TCFD report	Listed Equities: Figure 19 IGB: Figure 22
(6) Listed Assets Engagement Target	90% financed emissions coverage in material sectors by 2030	LGPSC total engagement coverage by financed emissions: Listed Equities: 63.5% IGB: 51.6%
(7) Listed Asset Coverage Target (classified as net zero aligned/aligning)	50% of financed emissions in material sectors by 2030	LGPSC Paris Agreement Aligned: Listed Equities: 22.1% IGB: 24.4%
(8) Other Asset Engagement Target	70% by 2030	Not yet measured

[17] 2020 weighted base benchmark: 192.8 tCO2/£M invested on 31 July 2019
[18] 2020 weighted base benchmark: 184.5 tCO2/£M invested on 31 March 2021 (investment inception 2020-21)
[19] 2020 weighted base benchmark: 306,325 tCO2e on 31 July 2019
[20] 2020 weighted base benchmark: 18,973 tCO2 e on 31 March 2021 (investment inception 2020-21)

Appendix 1

TCFD Recommendations for Asset Owners

Governance

Recommended Disclosure (a) Describe the board's oversight of climate-related risks and opportunities.

Recommended Disclosure (b) Describe management's role in assessing and managing climate-related risks and opportunities.

Strategy

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

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

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

Risk Management

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

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

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

Metrics and Targets

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

Recommended Disclosure (b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

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

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