FOR PROFESSIONAL CLIENTS ONLY

WORCESTERSHIRE PENSION FUND

Climate Risk Management Report

FIFTH EDITION • JANUARY 2025 • PUBLIC

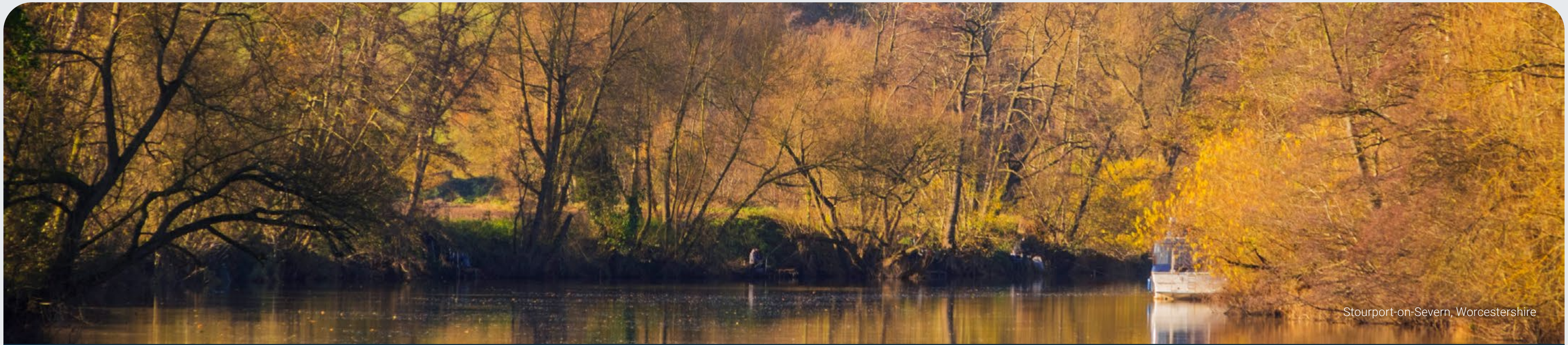
PREPARED BY LGPS CENTRAL LIMITED

LGPS Central Limited

Front Cover: Worcester Cathedral, Worcestershire
Images (Clockwise): Poppy Fields, Bewdley, Worcestershire
Broadway Tower, Worcestershire
Broadway, Worcestershire

Contents

Key Highlights



Stourport-on-Severn, Worcestershire

EQUITY CLIMATE METRICS

(relative to 2022 reference index)[1]

Financed emissions:

117,841 tCO_2e

↓ 44.1%
vs 2022 reference index

Normalised financed emissions:

50.1
tCO_2e/£m invested

↓ 56.6%
vs 2022 reference index

Weighted average carbon intensity:

69.3
tCO_2e/$m sales

↓ 54.0%
vs 2022 reference index

The Fund has continued to invest in low carbon and sustainable investments.

As of 2024 the Fund held approximately

£468m

in equity portfolios with low carbon/sustainability characteristics.

[1] Comparing the Fund's climate metrics relative to the 2022 reference index aligns with the Fund's approach to targets as outlined in the Worcestershire Pension Fund Climate Change Strategy March 2024.

Introduction

This report constitutes the fifth edition of Worcestershire Pension Fund's (WPF or 'the Fund') analysis of its approach to climate-related risks and opportunities. The report also contains a detailed analysis of the Fund's climate metrics. The previous version of this report was provided by LGPS Central Limited (LGPS Central) in 2023 and focussed on a gap analysis comparing the Fund's approach to climate risk management with the proposed requirements put forward in the 2022 consultation[2] by the Department for Levelling Up, Housing, and Communities (DLUHC).[3] As the recommendations raised in that report are unlikely to significantly change year-on-year, this report returns to the structure of the first three Climate Reports.

This approach means that the report is once again structured around the four pillars of the Task Force on Climate-Related Financial Disclosures (TCFD): Governance, Strategy, Risk Management, and Metrics & Targets.

Each of these pillars is represented by one section, which describes the Fund's current approach and finishes with recommendations, where appropriate.

Further details that extend beyond the scope of the DLUHC requirements will be added to the Risk Management and Metrics & Targets sections. In the latter, detailed analyses of the Fund's portfolios will be presented. For the first time, this will include an analysis of the climate metrics associated with the Fund's sovereign debt holdings and an analysis of the Fund's private markets investments which are managed by LGPS Central.

This report therefore aims to continue to provide an in-depth review of the Fund's approach to identifying, assessing, and managing climate risks and opportunities across its investments.


Worcestershire Countryside

[2] DLUHC, Local Government Pension Scheme (England and Wales): Governance and reporting of climate change risks. Consultation can be accessed on DLUHC's website.
[3] In July 2024, the new Labour government changed the name of this department to the Ministry of Housing, Communities and Local Government (MHCLG).

Governance

The Fund's governance of climate risk has developed significantly over recent years, as shown in Figure 1.

FIGURE 1: THE FUND'S CLIMATE PROGRESS

2020

Climate Risk Report

The Fund received its first Climate Risk Report which included the results of the Metrics and Targets analysis and Climate Scenario analysis. The Fund also published its first TCFD Report.

2021

Stewardship Code Signatory

WPF became the first local government pension scheme to receive signatory status to the 2020 UK Stewardship Code.

2022

Climate Change Strategy

The Fund published its first Climate Change Strategy, detailing WPF's approach to addressing the risks and opportunities associated with climate change.

Sustainable Investment Fund

The Fund invests approximately £200 million in LGPS Central's newly created Global Sustainable Equity fund, helping the Fund to decarbonise at a faster rate.

2024

Updated Climate Change Strategy

The Fund agrees to an updated Climate Change Strategy, which includes the Fund's aim to continue reducing the carbon footprint of the Fund's listed equity portfolio.

Governance *(continued)*

Board Oversight

Roles and responsibilities at the Fund are set out clearly in the Fund's Governance Policy Statement and the Fund's annual reports include a Governance Compliance Statement. Overall responsibility for managing the Fund lies with Worcestershire County Council which has delegated the management and administration of the Fund to the Worcestershire Pension Fund Pensions Committee.

The Pensions Committee ('the Committee') is responsible for the oversight of climate-related risks and the Fund's Climate Change Risk Strategy. The Committee meets four times a year, or otherwise as necessary and receives quarterly engagement and voting reports (including climate change) from the Fund's investment managers as a standing item on the agenda. Quarterly engagement reports are made available by the Fund on their website. The Committee also approve the Investment Strategy Statement (ISS), which includes the Fund's approach to responsible investment and a specific section on climate change. The ISS includes a set of responsible investment beliefs, including a formal investment belief on climate change, recognising it as a factor that could materially impact financial markets. The Climate Change Risk Strategy is premised on five foundational evidence-based beliefs about climate risk, considering climate science, the energy transition, and climate stewardship. The Climate Change Risk Strategy is reviewed at least every two years by the Committee.

The Pension Investment Sub Committee is responsible for identifying and approving investment in climate related opportunities. The Committee is currently exploring the potential for additional allocations to sustainable and/or low carbon equities.

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


Croome Park, Worcestershire

Governance *(continued)*

Management's Roles and Responsibilities

The Chief Financial Officer and the Head of Pension Investments, Treasury Management & Banking have primary day-to-day responsibility for the way in which climate-related investment risks are managed. As a primarily 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 manager selection guidelines on impact criteria and TCFD Compliance further strengthens this process. External portfolio managers are monitored on a regular basis by the Pension Investment Sub-Committee.

Fund Officers have received annual Climate Risk Reports since 2020. These enable the consideration of climate change within strategy setting, including asset allocation and fund selection. These reports also assist in the production of the Climate Change Risk Strategy produced by the Fund. It is anticipated that the Climate Risk Report will continue to be provided annually. Completion of an SDG[4] mapping is expected to occur every two to three years.

As detailed in the Climate Change Risk Strategy, the Fund leverages partnerships and initiatives – including the Institutional Investors Group on Climate Change (IIGCC) – to identify and manage climate risk.

Roles of Advisors

The committee is supported by an Independent Investment Advisor, who focusses on investment policy and general investment matters. The Fund's ESG Advisor is LGPS Central, which assists the Fund in producing annual Climate Risk and TCFD Reports. Advice is ongoing with quarterly touchpoints and attendance at Committee meetings.

Ongoing Education and Training

The Committee, the Pensions Investment Subcommittee, and the Pension Board all receive regular training on responsible investment topics including climate change. For example, each year LGPS Central delivers a presentation to the Committee on the monitoring and management of climate risk. The annual presentation on the Climate Risk Report produced by LGPS Central also gives the Pension Committee the opportunity to ask questions on the Fund's carbon footprint trajectory and its performance relative to peers/ reference indexes. In the past, the Fund has also engaged Pensions for Purpose to assist with providing climate-related training.

Lavender Fields, Worcestershire

[4] SDGs (Sustainable Development Goals) were adopted by the UN in 2015. The 17 goals aim to address various environmental, social, and economic challenges facing the modern world.

Strategy

Description of Climate-related Risks and Opportunities

As a diversified asset owner, the range of climate-related risks and opportunities is multifarious and constantly evolving. A subset of risk factors is presented in the table below.

TABLE 1: EXAMPLES OF SHORT-, MEDIUM-, AND LONG-TERM CLIMATE-RELATED RISKS AND OPPORTUNITIES

Source of Risk and Opportunities	Category	Risk or Opportunity	Time Horizon	Impact Area	Mitigation / Management Strategy
Policy Changes (Including Carbon Pricing)	Transition	Risk and Opportunity	• Short • Medium • Long	• Across investments and funding • Investments in carbon-intensive and low-carbon industries • Operational	• Monitor potential regulatory changes (domestic and international) and consider the impact of these changes on the Fund's approach to investments and its internal operations. • The achievement of the Fund's climate targets will mitigate the impact of increasing carbon prices. • Monitor manager preparedness and awareness of changing carbon prices across relevant markets, alongside their awareness of low-carbon alternatives which may benefit from rising carbon prices. • Consider the impact of likely policy changes in strategic decisions.
Technological Change	Transition	Risk and Opportunity	• Short • Medium • Long	• Across Asset Classes	• Monitor manager awareness of emerging and disruptive technologies. • Consider the impact of these changes on strategic decisions.
Changing Weather Systems and Climate Adaptation	Physical	Risk and Opportunity	• Short • Medium • Long	• Physical Assets • Corporate Holdings	• Carry out scenario analyses on credible climate scenarios to assess impact. • Ensure external managers maintain adequate consideration of both acute risks (floods, storms, etc) and chronic risks (damages associated with rising sea levels, global temperature increases, etc). • Ensure managers monitor the market for investment opportunities in climate adaptation projects. These could include large-scale infrastructure projects such as floodwalls, alongside technological products such as AC units and other cooling systems. • Ensure managers monitor portfolio company's assessments of extreme weather impacts on their operations.
Resource Scarcity	Physical	Risk	• Medium • Long	• Physical Assets	• Monitor manager awareness of resource scarcity. • Consider managers' awareness of agricultural holdings.

Strategy *(continued)*

Description of Impact of Climate-related Risks and Opportunities

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. The Fund is exploring options to further embed climate-related risks and opportunities into its investment strategy, including reviewing potential investments in sustainable and/or low carbon equities where this supports the Fund's investment and funding objectives.

The Fund aims to target investments in global companies that are sustainable in financial, environmental, social and governance terms and, where appropriate, providing solutions to sustainability challenges. Furthermore, the Fund has invested in several renewable energy opportunities, and continues to actively assess and explore additional opportunities. Research commissioned by LGPS Central from Mercer LLC (Mercer) (discussed below) suggests that these allocations could lead to a positive return impact on the Fund's investment portfolio in rapid transition and orderly transition scenarios.

Partly to reduce its climate-related risks, the Fund transitioned out of a carbon intensive passive fund and invested £200m in a climate multi-factor fund in November 2021. While seeking exposure to five style factors, the fund tilts away from companies that are carbon intensive or own high levels of fossil fuel reserves, and tilts towards companies that generate green revenues, relative to the FTSE AW. In Q2 2022, the Fund invested approximately £170m in LGPS Central's Global Sustainable Equity fund. The carbon metrics associated with this fund are significantly lower than those of the reference index, representing another significant step forward for the Fund's management of climate risk.

The Fund is exploring options to further embed climate-related risks and opportunities into its investment strategy where this supports the Fund's investment and funding objectives.


Kidderminster, Worcestershire

Strategy *(continued)*

Description of Resilience of the Organisation's Strategy

To consider the resilience of the Fund's strategy, via Mercer LLC (Mercer), the Fund conducted climate scenario stress testing in the contribution modelling exercise for the local authority employers as part of the 2022 valuation. This was conducted to better understand how the Fund's funding strategy performs under different climate scenarios.

The results of this analysis were produced for the Fund's 2022 Actuarial Valuation Report, and summarised in the 2024 iteration of the same report.[5]

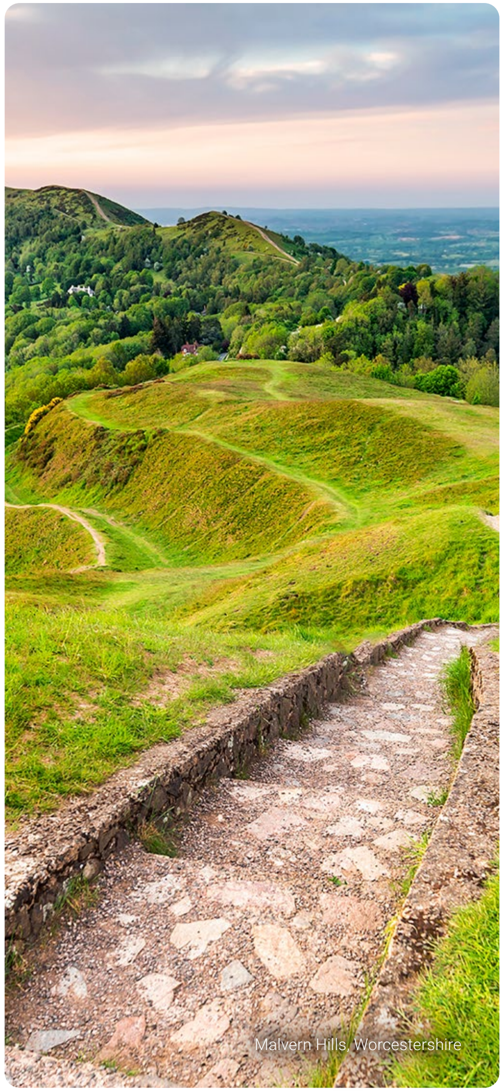
Additionally, in 2020 and 2022, via LGPS Central, the Fund engaged Mercer to better understand the extent to which the Fund's risk and return characteristics could come to be affected by a set of plausible climate scenarios.

In the 2022 iteration, this included an estimation of the annual climate-related impact on returns (at the Fund and asset-class level) across three different climate scenarios including all asset classes. The three climate scenarios considered were Rapid Transition, Orderly Transition and Failed Transition. In the analysis, Mercer focused on short-, medium- and long-term time frames of 5, 15 and 40 years. The results of this analysis can be found in the Fund's 2022 Climate Risk Report.

It should be noted here that translating climate scenario analysis into an investment strategy is a challenge for several reasons. Firstly, there is a wide range of plausible climate scenarios with significantly different and far-reaching consequences. Secondly, the probability of any given scenario is hard to determine, and especially so when considering longer time horizons. Finally, the best-performing sectors and asset classes in an orderly scenario tend to be the worst performers in a failed scenario and vice versa. This makes categoric strategic recommendations particularly challenging.

It should also be noted that Climate Scenario Analyses are often unable to accurately model the impact of climate-related tipping points. Tipping points are thresholds which may lead to abrupt and potentially irreversible changes to the global climate. Given the limited data and high levels of uncertainty around these events, accurate predictions are difficult to achieve.

Despite the challenges, the Fund believes in seeking out the best available climate-related research in order to make its portfolio as robust as possible.



Malvern Hills, Worcestershire

[5] Worcestershire Pension Fund Funding Strategy Statement 2024

Risk Management

Identifying and Assessing Climate-Related Risks and Opportunities

The Fund seeks to identify and assess climate-related risks at the total Fund level and at the individual asset level. The Fund has received a Climate Risk Report to assess financially material risks in support of the Fund's Climate Change Risk Strategy which includes both top-down and bottom-up analysis of its listed holdings to support this endeavour. 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 primarily 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. In the future, the Fund's monitoring process will be more focussed on reviewing the integration of climate risks into portfolio management approaches, and to understand the managers' engagement activities.

Engagement activity is conducted with investee companies through selected stewardship partners including LGPSC, EOS at Federated Hermes (EOS), and Local Authority Pension Fund Forum (LAPFF) (see below). Based on the findings of the Fund's climate reports, the Fund is devising a Climate Stewardship Plan in order to focus engagement resources on the investments most relevant to the Fund.

The Fund will continue to monitor and consider both existing and emerging regulatory requirements relating to climate change.


Broadway, Worcestershire

Risk Management *(continued)*

Managing Climate Risks and Opportunities

The prioritisation of risks is determined by the level of perceived threat to the Fund which, for climate-related risk, will likely depend on analyses including Climate Scenario Analysis and Carbon Risk Metrics. As set out in the Fund's Climate Change Risk Strategy, the main management methods include the utilisation of various tools and techniques for assessing climate-related risks; accessing the best climate data available; and working collaboratively with other investors.

Although the Fund's Climate Change Risk Strategy involves more than just engagement and shareholder voting, 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.

The Fund supports the engagement objectives of the Climate Action 100+ initiative, namely that companies: adopt the appropriate governance structures to effectively manage climate risk; decarbonise in line with a 1.5°C and disclose effectively using the TCFD recommendations.

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

TABLE 2: THE FUND'S STEWARDSHIP PARTNERS

Organisation	Remit
LGPS Central Limited	The Fund is a 1/8th owner of LGPS Central. Climate change is one of LGPS Central's stewardship themes, with quarterly progress reporting available on the website. The Responsible Investment and Engagement Team at LGPS Central engages companies on the Fund's behalf, including via the Climate Action 100+ initiative.
Federated Hermes	EOS at Federated Hermes is engaged by LGPS Central to expand the scope of the engagement programme, especially to reach non-UK companies.
Local Authority Pension Fund Forum	WPF is a long-standing member of LAPFF. LAPFF conducts engagements with companies on behalf of local authority pension funds.

Risk Management *(continued)*

The use of shareholder voting opportunities is an important part of climate stewardship. The Fund's approach to shareholder voting is to appoint high quality asset managers whose voting policies support the long-term economic objectives of shareholders. Voting rights attached to securities in portfolios managed by LGPS Central are instructed according to LGPS Central's Voting Principles, to which the Fund contributes during the annual review process. LGPS Central's Voting Principles incorporate climate change, for example by voting against companies that do not meet certain thresholds in the Transition Pathway Initiative (TPI) scoring system. LGPS Central has co-filed shareholder resolutions that relate to climate change.

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 results of engagement and voting activities are reviewed by the Committee and Pension Investment Sub-Committee. LGPS Central's activities are reported in Quarterly Stewardship Updates which are available on LGPS Central's website.

Following the Fund's first Climate Risk Report, the Fund has developed a Climate Stewardship Plan which, alongside the widescale engagement activity undertaken by LGPS Central, EOS, and LAPFF, includes targeted engagement with eight investee companies of particular significance to the Fund's portfolio. The Fund believes that all companies should align their business activities with the Paris Agreement on climate change.

Malvern Hills, Worcestershire

Risk Management *(continued)*

The companies in the Fund's priority list can be seen in the table below.

TABLE 3: CLIMATE PRIORITY LIST

Company Name	Weight	Financed Emissions	Contribution to Total Financed Emissions
SHELL PLC	1.7%	16,952	13.4%
BP PLC	0.8%	5,045	4.0%
GLENCORE PLC	0.6%	5,001	4.0%
RIO TINTO PLC	0.6%	4,345	3.4%
HOLCIM AG	**0.0%**	**2,170**	**1.7%**
ANGLO AMERICAN PLC	**0.2%**	**1,696**	**1.3%**
RWE AG	**0.0%**	**1,623**	**1.3%**

Previously, BHP, Cemex, CRH and Taiwan Semiconductor Manufacturing Company, were included in the Fund's Climate Stewardship Plan (CSP). We have recommended the removal of these companies from the Fund's CSP. Recommendations for changes to the CSP are based on a combination of economic relevance, including exposure and significance of risk, contribution to portfolio financed emissions, and LGPS Central's ability to engage with the company on the issue.

While BHP, Cemex, CRH and Taiwan Semiconductor Manufacturing Company were all previously significant contributors to the Fund's financed emissions, all now fall outside of the Fund's top 20 contributors of financed emissions.

Risk Management *(continued)*

Climate in the Context of the Fund's Risk Framework

Both 'mainstream' risks and climate-related risks are discussed by the Pension Committee. While specific macro-economic risks are not usually included in isolation, the Fund has deemed climate risk to be sufficiently significant and therefore included it on the Fund's Risk Register. Climate risk is further managed through the Fund's Climate Stewardship Plan.


River Avon, Worcestershire

Metrics and Targets

What We Measure

Over time, the scope of analysis and the metrics employed has expanded and evolved to keep abreast of the latest methodologies and available data. As of 31 March 2024, we measure the carbon footprints of the Fund's equities, corporate bonds, sovereign debt, and private equity investments.

The metrics chosen for assessing climate risks and opportunities in the Fund's investments are based on several criteria:

1) **Usefulness:** The selected metrics are tailored to fit into the Fund's framework for managing climate risks and opportunities.
2) **Regulatory requirements:** The metrics align with the DLUHC's consultation.[6] They also align with the FCA's requirements on climate reporting, as set out in the December 2021 policy statement.[7] These requirements are largely in line with the TCFD's recommendations.
3) **Data and methodology availability:** We prioritise sourcing appropriate data from reputable sources and adhere to the methodology prescribed by the Partnership for Carbon Accounting Financials (PCAF).[8]

A selection of headline metrics and other metrics are utilised to measure the Fund's climate risks and opportunities. We don't believe any single metric is sufficiently insightful (when considered in isolation) to highlight the Fund's climate risks and opportunities. Because of this, we have constructed a comprehensive suite of climate metrics, including emissions, engagement, and alignment metrics. However, this is dynamic and will be updated as data availability and analytical techniques evolve.

The headline metrics contained within this report include:

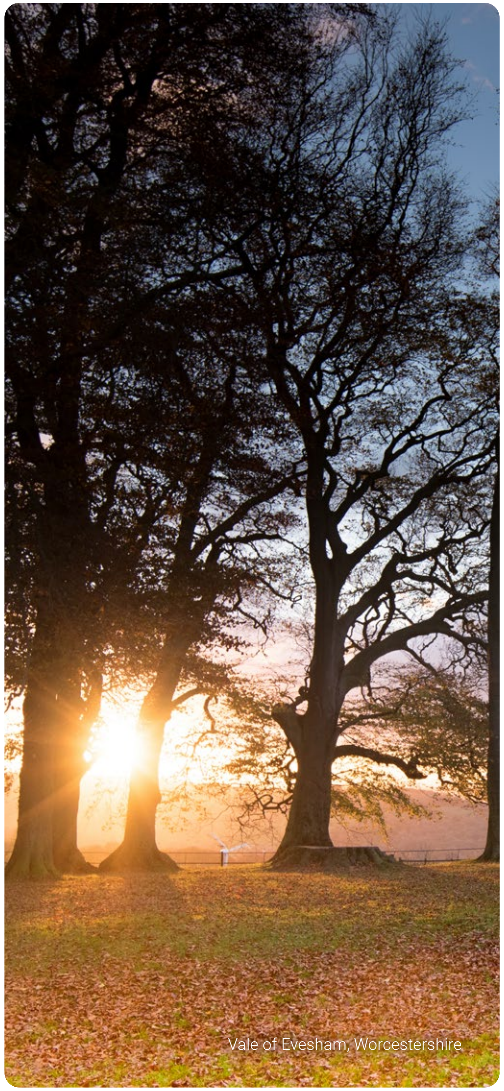
Absolute emissions metric – financed emissions

Emissions intensity metric – normalised financed emissions and weighted average carbon intensity (WACI)

Paris alignment metric

The analysis in this report is based on a dataset provided by MSCI ESG Research LLC (MSCI). We utilised data that was downloaded from MSCI on 30 July 2024. We gain comfort from the quality of MSCI's data through our own assessment of MSCI's methodology and our data validation processes. Data is sense-checked internally, and any anomalies are investigated in the underlying data to ensure inaccuracies are promptly identified and amended.

These metrics illustrate the Fund's aggregated climate risks, which are supplemented with an in-depth, holistic analysis of individual portfolio companies, which can be used to drive engagement activity.


Vale of Evesham, Worcestershire

[6] DLUHC, Local Government Pension Scheme (England and Wales): Governance and reporting of climate change risks. Consultation can be accessed on DLUHC's website.
[7] FCA, Enhancing climate-related disclosures by asset managers, life insurers and FCA-regulated pension providers. Policy Statement can be accessed on FCA's website.
[8] PCAF, The Global GHG Accounting and Reporting Standard for the Financial Industry. The report can be accessed on PCAF's website.

Metrics and Targets *(continued)*

Headline Metrics

The headline metrics below detail the absolute emissions and carbon intensity metrics utilised to analyse the Fund's climate risks and opportunities. WACI has been a staple carbon footprint metric, and we introduced financed emissions and normalised financed emissions more recently as data improved and methodologies were introduced. The introduction of the former provides an insight into the absolute emissions the Fund is responsible for through its investments. The latter normalises these emissions by £m invested.

TABLE 4: HEADLINE METRICS

Metrics	Financed Emissions	Normalised Financed Emissions	Weighted Average Carbon Intensity (WACI)
Absolute / Intensity	Absolute	Intensity	Intensity
Definition	Financed emissions calculates the absolute tonnes of CO_2 equivalent for which an investor is responsible.	This metric measures the Financed Emissions for every £1 million invested.	WACI measures a fund's exposure to carbon-intensive companies.
Question answered	What is my fund's total carbon footprint?	What is my fund's normalised carbon footprint per million GBP invested?	What is my fund's exposure to carbon-intensive companies?
Unit	tCO_2e	tCO_2e / £m invested[9]	tCO_2e / $m sales[10]
Comparability	No; does not take size into account	Yes; adjusts for fund size	Yes

[9] Normalised financed emissions uses GBP as the base currency as this is the currency used for the Fund's investments.

[10] WACI uses USD as the base currency due to USD's prevalence in global corporate reporting.

Metrics and Targets *(continued)*

Paris Alignment Metric

LGPS Central's Paris Alignment Metric is a proprietary metric constructed using several MSCI data points. It provides an insight into how portfolio companies are currently managing their climate risks, as well as incorporating forward looking metrics.

A company will be considered aligned/aligning to the Paris Agreement if:

The company scores above **Median** in **Low Carbon Transition score**

\+ and it meets **one** of the following criteria: +

The company has a **science-based target**

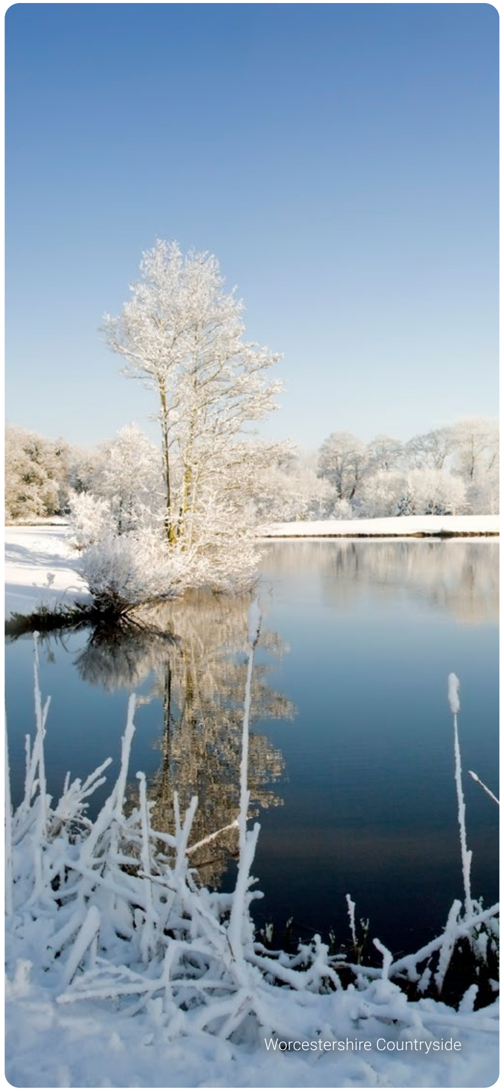
or

The company has an **implied temperature rise rating** of 2.0°C or lower

Scope 3 Emissions

In addition to reporting scope 1 and 2 emissions, scope 3 financed emissions are also included. Scope 3 represents the emissions released through the value chain of the company, both upstream and downstream, which are not otherwise captured in scope 1 and 2. Scope 3 emissions are important to account for, as without this metric many companies' emissions would be significantly understated. The addition of scope 3 data gives a better indication of a company's climate risk exposure.

Due to the nature of this measurement, for many industries and assets the associated scope 3 emissions of the company will often be significantly greater than those of scopes 1 and 2. When aggregated at the portfolio level, scope 3 emissions will also be subject to double counting. Scope 3 emissions have not been combined with scopes 1 and 2 as to mitigate this issue.



Worcestershire Countryside

Metrics and Targets *(continued)*

The Fund's Climate Targets

In the below table, the Fund's climate targets are provided alongside the progress that the Fund is making in order to achieve those targets.

TABLE 5: THE FUND'S CLIMATE TARGETS

<table>
<tr><th>Target</th><th colspan="4">Progress</th></tr>
<tr><td rowspan="3"></td><td></td><td>2022 Weighted Reference Index (restated)</td><td>2024</td><td>Difference</td></tr>
<tr><td>Normalised Financed Emissions</td><td>115.4 tCO_2e/£m invested</td><td>50.1 tCO_2e/£m invested</td><td>-56.6%</td></tr>
<tr><td colspan="4">From 2020 the Fund has made several investments into low carbon and sustainable investments, including the LGPS Central Global Sustainable Equity (GSE) Targeted and Thematic Funds and the LGPS Central Climate Multifactor Fund. These three portfolios represent approximately £468.0 million of the Fund's investments, or 11.8% of the Fund's total assets.[11]</td></tr>
<tr><td>Use the Climate Scenario Analysis to track and better understand the portfolio's capacity to transition into a low carbon economy.</td><td colspan="4">As discussed in the Strategy section, the Fund previously conducted climate scenario analysis in 2022 as part of its triennial valuation. The Fund is now investigating how to best pursue climate scenario analysis in 2025, following a triennial schedule.</td></tr>
</table>

[11] This percentage does not include any investments in private markets which may be considered low carbon or sustainable.

Metrics and Targets *(continued)*

The Fund's Climate Metrics

Scope of Analysis

The following Climate Metrics offer a detailed, bottom-up analysis with the following objectives:

- Observing climate transition risks and opportunities within the portfolio.
- Identifying opportunities for engagement with companies.
- Facilitating the monitoring of climate risk management by managers.

This analysis encompasses public market investments reported by the Fund as of 28 March 2024. It includes holdings in listed equity, fixed income funds including government debt, and the Fund's private market holdings managed by LGPS Central. Private market holdings have been newly incorporated into this report as of 2024. Where available, reported data for private market holdings has been utilised. Where unavailable, estimations have been constructed using the portfolio holdings value, revenue, sector and attributed ownership.

Due to the current non-uniformity of private market data, it has not been possible to extend this coverage to the Fund's external private market investments.

The assets under management (AUM) within the report's scope totalled approximately £2.7 billion as of that date, with the specific funds outlined in the chart below. This figure includes the Fund's approximate £62.9 million infrastructure NAV managed by LGPS Central. The Fund's infrastructure climate metrics can be found in Appendix 1.

LGPS Central has been calculating carbon footprint metrics for the Fund since 2019. The scope of the footprinting exercise has expanded over time as the Fund effected asset allocation decisions and new data for additional asset classes were added during this period. This report summarises the evolution of the Fund's carbon footprint up to 28 March 2024.

Chaddesley Corbett, Worcestershire

Metrics and Targets *(continued)*

FIGURE 2: BREAKDOWN OF FUNDS INCLUDED IN THE ANALYSIS

- **Worcestershire County Council Pension Fund**
  - **Equity**
    - **Active**
      - Nomura Asia-Pacific Equity
      - LGPS Central GSE Thematic Fund
      - LGPS Central GSE Targeted Fund
    - **Passive**
      - LGIM UK Equity Index
      - LGIM North America Equity Index
      - LGIM Europe Ex-UK Index
      - LGIM Global Fund
      - LGPS Central Climate Multi Factor Fund
  - **Fixed Income**
    - LGPS Central Global Active Investment Grade
  - **LGPS Central Private Markets***
    - LGPS Central Managed Infrastructure

* Private markets data can be found in Appendix 1

Metrics and Targets *(continued)*

Restated Data

Climate data is an evolving field, and methodologies are continuously updated by governments, data providers, and companies. The data accessible through our data provider (MSCI) undergoes frequent revisions as estimated data gets replaced by reported data, estimations are refined for greater precision, and data coverage expands.

We recalculate our emissions annually and may revise previously reported greenhouse gas (GHG) data to incorporate the most current information. When possible, we align our holding period with the period in which emissions from the underlying issuer occurred. Consequently, there may be variations between the data reported in previous documents and the figures presented in this report due to these restatements. Our metrics employ methodologies aligned with those used by the Partnership for Carbon Accounting Financials (PCAF) and MSCI.

TABLE 6: RESTATEMENTS

Data as of	Asset Class	Data	Portfolio Value (as reported in 2023)	Reference Index Value (as reported in 2023)	Portfolio Value (restated in 2024)	Reference Index Value (restated in 2024)	Change from Restatement (Portfolio)	Change from Restatement (Reference Index)
2023	Equities	WACI	98.7	164.1	87.0	149.4	-11.9%	-9.0%
		Financed Emissions	167,214.0	222,645.0	146,490.3	204,531.5	-12.4%	-8.1%
	Fixed Income	WACI	174.6	159.0	152.3	138.8	-12.8%	-12.7%
		Financed Emissions	9,299.0	9,421.0	9,746.2	8,670.8	4.8%	-8.0%

Metrics and Targets *(continued)*

Data Quality

TABLE 7: DATA QUALITY OF PUBLIC ASSETS

Asset Class	Reported	Estimated	Missing/ Unavailable
Equity	92.3%	3.8%	3.9%
Fixed Income	82.6%	10.4%	7.0%

Table 7 illustrates the overall data quality of the Fund's public assets reported within this report.


Cotswolds, Worcestershire

Metrics and Targets *(continued)*

Equity

The below dashboard shows the Fund's aggregated climate risk metrics for the equity asset class.

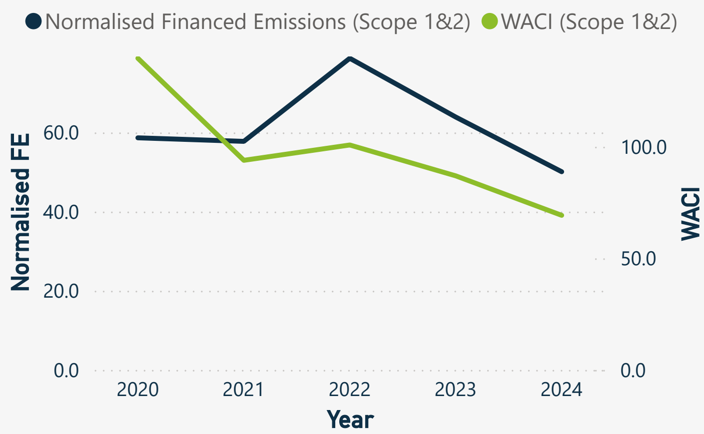
Equity	Multiple	Multiple	£2,455,175,346	Blended	Q1 2024
Fund Asset Class	Fund Classification	Fund Manager	NAV	Reference Index	Period

Carbon Footprint Metrics						
	Emissions Category	Portfolio	Index	Previous Year	Portfolio	Index
Listed Equity / Corporate Bonds						
Financed Emissions (tCO_2e)	Scope 1+2	117,841	155,584	146,490	97.3%	99.2%
	Scope 3	1,351,532	1,274,078	1,398,907	85.2%	89.1%
Normalised Financed Emissions (tCO_2e/£m Invested)	Scope 1+2	50.1	71.1	63.9		
	Scope 3	624.2	582.4	683.9		
Weighted Average Carbon Intensity (tCO_2e/$m Sales)	Scope 1+2	69.3	112.1	87.0	97.4%	99.2%
Sovereign Debt						
Financed Emissions (tCO_2e)	Production					
Weighted Average Carbon Intensity (tCO_2e/Capita)	Consumption					

Top 10 Emissions Contributors

Issuer	Portfolio Weight	Index Weight	% Financed Emission		% WACI		Scope 1+2	Scope 3	Engagement	LCT	ITR	SBT
SHELL PLC	1.8%	2.1%	14.4%	1	6.3%	1	90.0M	1,174.0M	Yes	2.5	1.8	Yes
BLUESCOPE STEEL LIMITED	0.2%	0.0%	6.7%	2	2.1%	7	10.1M	19.9M	Yes	5.1	3.4	
BP P.L.C.	0.9%	1.0%	4.3%	3	1.9%	8	33.1M	314.9M	Yes	1.8	2.5	
GLENCORE PLC	0.6%	0.6%	4.2%	4	0.9%	17	27.0M	342.1M	Yes	4.6	1.9	
RIO TINTO PLC	0.6%	0.7%	3.7%	5	5.1%	2	30.3M	583.9M	No	3.0	4.2	
SEMBCORP INDUSTRIES LTD	0.1%	0.0%	2.4%	6	3.2%	3	10.5M	16.7M	No	4.7	5.9	
Holcim AG	0.1%	0.0%	1.8%	7	1.9%	9	83.0M	47.0M	Yes	4.1	1.9	Yes
RIO TINTO LIMITED	0.3%	0.0%	1.6%	8	2.7%	4	30.3M	583.9M	No	3.0	4.2	
ANGLO AMERICAN PLC	0.2%	0.3%	1.4%	10	1.4%	13	12.5M	95.8M	Yes	2.9	3.5	
Air Liquide SA	0.1%	0.1%	1.4%	12	2.3%	6	37.6M	21.1M	Yes	4.5	10.0	Yes

Emissions Over Time



High Impact Sectors / Climate Solutions Exposures (Portfolio vs Benchmark)

Fossil Fuel Reserves	Fossil Fuel Revenue	Thermal Coal Reserves	Coal Power Exposure	Cleantech Exposure	Cleantech Revenue
7.2% | 9.5%	2.7% | 4.1%	3.0% | 3.4%	1.0% | 2.2%	36.9% | 38.3%	5.7% | 6.1%

Portfolio Alignment & Engagement

Engagement	Data Quality	LCT	ITR	SBT	Alignment
60.5%	2.1	42.1%	37.2%	48.9%	24.5%

Metrics and Targets *(continued)*

We analysed nine equity portfolios totalling approximately £2.4 billion as of 28 March 2024.

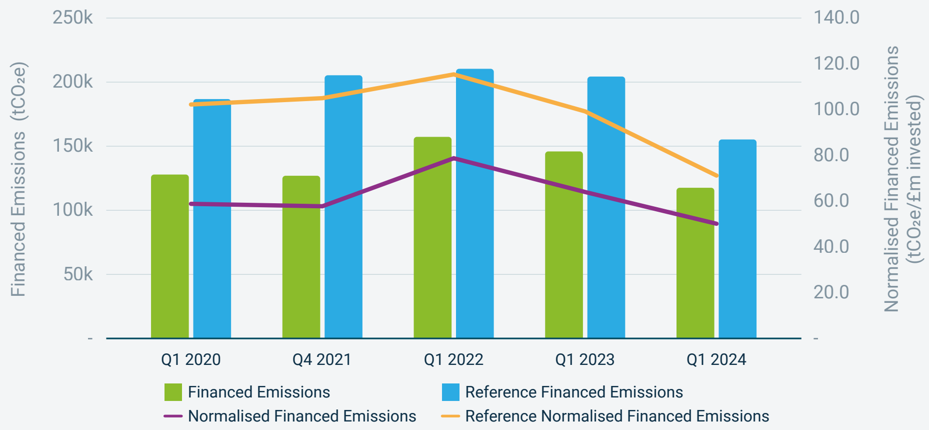
Each fund's carbon footprint is evaluated in comparison to the primary market index in which it predominantly invests. The table below summarises the reference indices that we utilised.

TABLE 8: REFERENCE INDICES

Investment Universe (Most Predominant)	Reference Index
UK Equities	FTSE UK All Share Index
Developed Markets	FTSE All-World Index
Emerging Markets	FTSE Emerging Index

Carbon Footprint Metrics

GRAPH 1: EQUITY FINANCED EMISSIONS OVER TIME



GRAPH 2: EQUITY WACI OVER TIME

As shown in Graph 1, the Fund's equity financed emissions decreased by 8.2% from 2020, despite a 2.1% increase of the NAV within scope over the same period. Accounting for fluctuations of the NAV with scope, normalised financed emissions decreased by 14.6% from 2020.

This decrease in financed emissions can be associated with the Fund's asset allocation decisions. For instance, the largest year-on-year decreases in the Fund's equity normalised financed emissions occurred between 2022 and 2023, and 2023 and 2024. In the former, a decrease of 18.9% in the Fund's normalised financed emissions coincides with new investments into LGPS Central's GSE Targeted and Thematic funds. In the latter, the Fund's equity normalised financed emissions decreased by 21.6% as the Fund exited the LGPS Central Global Emerging Market fund. Emerging market portfolios typically have higher carbon metrics than their developed market counterparts, reflecting differences in the rate of decarbonisation across these regions.

Decreased financed emissions can also be associated with lower exposure to carbon

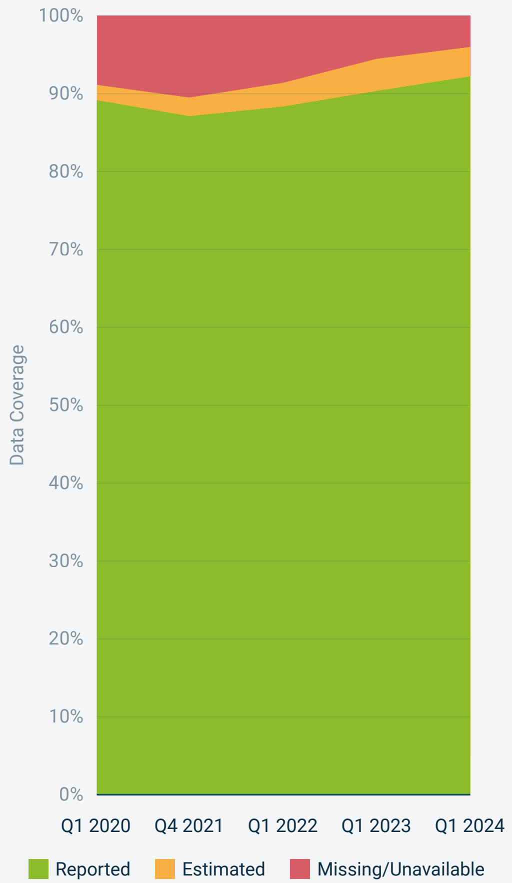
Metrics and Targets *(continued)*

intensive companies. Graph 2 illustrates a 50.4% decrease in WACI, which provides a measure for the Fund's equity exposure to carbon intensive companies.

Notably, the Utilities sector, which accounted for 26.7% of the Fund's financed emissions during 2020, experienced a decrease of 61.9% in WACI and a 30.3% in normalised financed emissions between 2020 and 2024. This reduction was compounded by a reduction in portfolio weight attributed to this sector.

Data

GRAPH 3: EQUITY DATA AVAILABILITY OVER TIME



While data availability for equities has been relatively strong since we began carbon footprinting on behalf of the Fund, Graph 3 illustrates an improving trend as the data availability of portfolio companies improves. A high level of data availability implies the aggregated carbon metrics are more reflective of the portfolio's overall carbon emissions profile. Where data availability is lower, aggregated carbon metrics are more likely to be skewed and therefore less reflective of the actual portfolio emissions, as a whole.

Typically, it is the most carbon intensive companies which are most likely to have available carbon metrics. This is due to a greater interest in their emissions and greater pressure on these companies to report these emissions. Portfolios with low carbon emissions data availability therefore tend to be skewed towards companies with greater emissions, which can inflate the portfolio's carbon emissions.

We have had access to a substantial amount of equity data since we began calculating carbon footprint metrics. Our current primary focus is to enhance the quality of the data used in these calculations. At present, the majority (92.3%) of the data analysed, as measured as a percentage of the total value of equity funds, is sourced from company-reported data.

Metrics and Targets *(continued)*

Sources of Emissions

FIGURE 3: EQUITY: SECTOR CONTRIBUTIONS TO FINANCED EMISSIONS

From a sector perspective, the Materials and Energy sectors are the greatest contributors of financed emissions, attributable to 35.8% and 26.6% respectively, despite only accounting for 5.2% and 4.2% of the portfolio's NAV. Two of the top three contributors to portfolio financed emissions are within the Energy sector, while seven of the top ten contributors to portfolio financed emissions are within the Materials sector.

Metrics and Targets *(continued)*

Fixed Income

The below dashboard shows the Fund's aggregated climate risk metrics for the Fixed Income asset class.

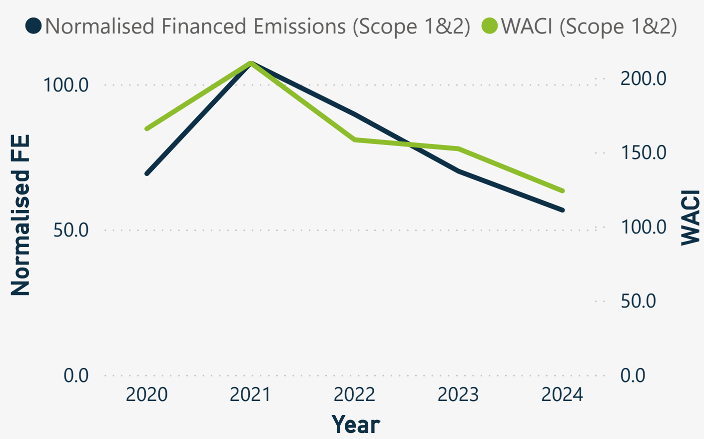
Fixed Income	Fixed Income Global	Multiple	£199,739,377	50% Sterling Non-Gilt & 50...	Q1 2024
Fund Asset Class	Fund Classification	Fund Manager	NAV	Reference Index	Period

Carbon Footprint Metrics						
	Emissions Category	Portfolio	Index	Previous Year	Portfolio	Index
Listed Equity / Corporate Bonds						
Financed Emissions (tCO_2e)	Scope 1+2	8,538	9,327	9,746	79.0%	77.3%
	Scope 3	45,250	65,565	37,841	74.3%	73.6%
Normalised Financed Emissions (tCO_2e/£m Invested)	Scope 1+2	56.7	63.4	70.0		
	Scope 3	319.3	445.8	286.7		
Weighted Average Carbon Intensity (tCO_2e/$m Sales)	Scope 1+2	123.9	137.7	152.3	93.3%	96.9%
Sovereign Debt						
Financed Emissions (tCO_2e)	Production	1,968		1,759	100.0%	
Weighted Average Carbon Intensity (tCO_2e/Capita)	Consumption	14.1		14.7	100.0%	

Top 10 Emissions Contributors

Issuer	Portfolio Weight	Index Weight	% Financed Emission		% WACI		Scope 1+2	Scope 3	Engagement	LCT	ITR	SBT
CLECO CORPORATE HOLDINGS LLC	0.3%	0.0%	17.7%	1	12.3%	2	9.2M		No			
THE SOUTHERN COMPANY	0.8%	0.1%	13.9%	2	18.7%	1	85.0M	38.5M	Yes	3.5	4.0	
ELECTRICITE DE FRANCE SA	1.7%	1.2%	7.4%	3	2.2%	5	24.4M	95.8M	No	6.7		Yes
ENGIE SA	0.5%	0.4%	4.1%	4	1.2%	16	30.6M	143.7M	Yes	4.0	1.7	Yes
WEC ENERGY GROUP, INC.	0.3%	0.0%	3.5%	5	4.6%	3	19.1M	25.1M	Yes	3.2	2.4	Yes
OCCIDENTAL PETROLEUM CORPORATION	0.4%	0.1%	3.1%	6	1.9%	8	22.5M	217.0M	Yes	2.1	10.0	
Holcim Sterling Finance (Netherlands) B.V.	0.1%	0.1%	2.4%	8	1.2%	14	83.0M	47.0M	Yes	4.1	1.9	Yes
Dominion Energy, Inc.	0.2%	0.0%	2.1%	10	2.9%	4	33.6M	29.3M	Yes	4.5	2.4	
WESTERN MIDSTREAM OPERATING, LP	0.2%	0.0%	2.0%	13	2.0%	6	4.9M		No	1.5	3.2	
THE AES CORPORATION	0.1%	0.0%	2.0%	14	1.9%	7	40.3M	7.2M	Yes	4.4	4.2	

Emissions Over Time



High Impact Sectors / Climate Solutions Exposures (Portfolio vs Benchmark)

Fossil Fuel Reserves	Fossil Fuel Revenue	Thermal Coal Reserves	Coal Power Exposure	Cleantech Exposure	Cleantech Revenue
5.3% | 6.5%	1.2% | 2.1%	1.5% | 1.4%	3.5% | 6.1%	27.1% | 29.5%	4.6% | 4.8%

Portfolio Alignment & Engagement

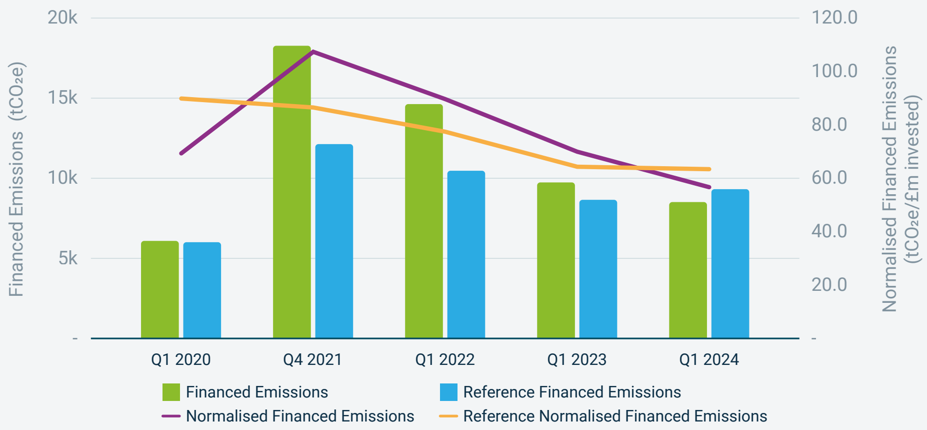
Engagement	Data Quality	LCT	ITR	SBT	Alignment
51.5%	2.1	34.0%	54.0%	41.3%	31.1%

Metrics and Targets *(continued)*

Our analysis covers the Fund's single fixed income portfolio, the LGPS Central Global Investment Grade Fund, which accounts for approximately £200 million in NAV. The reference index used to measure the funds' relative performances is a 50% Sterling Non-Gilt & 50% Global Corporate index.

Carbon Footprint Metrics

GRAPH 4: CORPORATE BOND FINANCED EMISSIONS



GRAPH 5: CORPORATE BOND WACI

As illustrated in Graph 5, the portfolio's financed emissions increased by 39.7% from 2020. This should be considered alongside the 47.5% increase of NAV within scope; the only year-on-year increase in financed emissions occurred between 2020 and 2021, where the NAV within scope also increased significantly. Excluding 2020, the portfolio's financed emissions have reduced by more than half (53.3%) since 2021. Accounting for fluctuations in NAV, normalised financed emissions decreased by 18.2%.

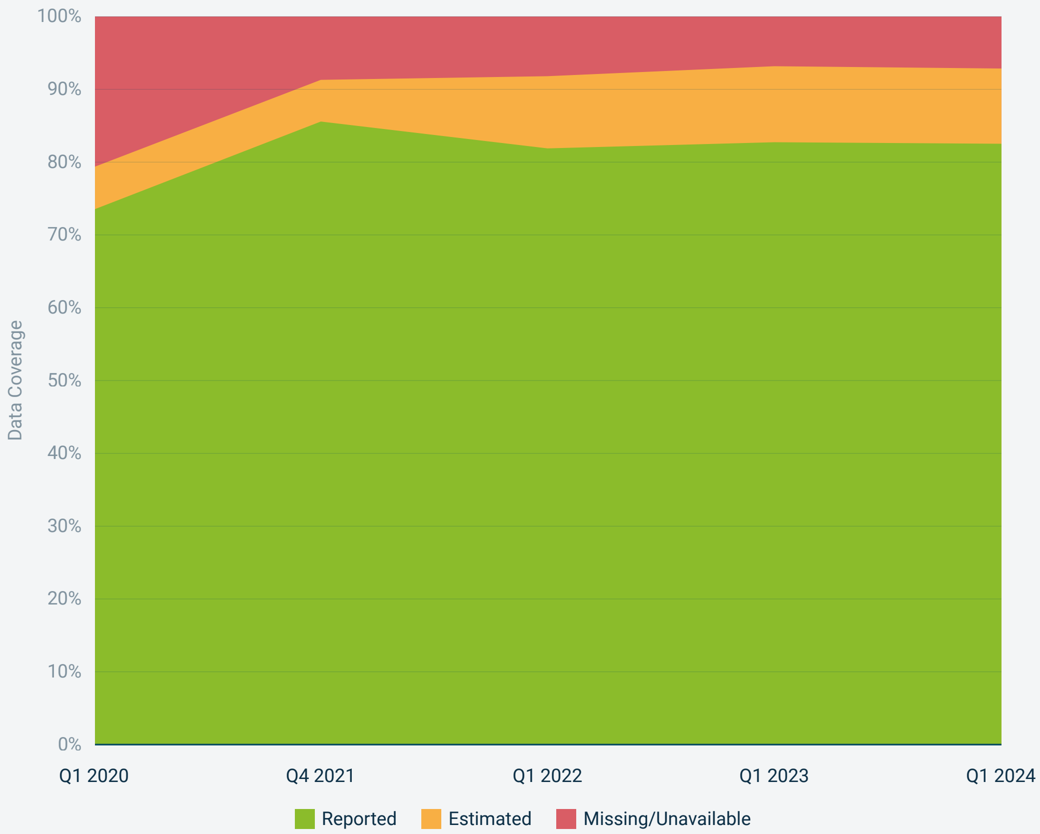
Similarly, WACI has decreased consistently since the increase in 2021, indicating that the portfolio is now less exposed to more carbon intensive companies. Specifically, the WACI of the Utilities and Energy sector, the two most carbon intensive sectors within the portfolio during 2020, decreased by 26.0% and 33.4% from 2020 respectively.

In 2020, the WACI associated with the Fund's investments in the Financials sector was relatively low, despite this being the sector with the greatest weight by NAV. While the Fund's holdings in this sector have increased further since 2020, the WACI has decreased by nearly 50% (48.4%).

Metrics and Targets *(continued)*

Data

GRAPH 6: CORPORATE BOND DATA AVAILABILITY



Graph 6 illustrates the proportion of NAV associated with reported, estimated or missing carbon data. As of Q1 2024, the majority of the NAV (82.6%) was associated with reported data.

River Avon, Pershore, Worcestershire

Metrics and Targets *(continued)*

Sources of Emissions

FIGURE 4: CORPORATE BOND: SECTOR CONTRIBUTIONS TO FINANCED EMISSIONS

From a sector perspective, over a third (37.8%) of the portfolio's scope 1 and 2 financed emissions are attributable to the Utilities sector, despite the sector accounting for just 8.0% of the portfolio's NAV. Five of the portfolio's top ten contributors of financed emissions are within the Utilities sector.

Appendix

Appendix 1: Private Market Carbon Metrics

Please note that, due to the resource intensity and challenges involved in collecting private market data, we have focused our efforts on providing private market carbon footprint data for portfolios managed by LGPS Central.

The data shown below is a combination of reported and estimated data, where reported data is provided by the manager and sourced through a range of methods such as provided by the underlying portfolio company or estimated by the manager. As we believe reported data will be most accurate, this data is preferred overestimated. Estimated data is utilised where reported data is unavailable.

It should also be noted that there are often large discrepancies between estimated and reported data. The estimation process focuses on company size, revenue and sector, and is unable to capture the nuances of company operations which can be provided by reported data. However, we believe the use of estimated data still provides a valuable insight into the carbon footprint of portfolio companies. We expect the proportion of reported data to increase as we work with managers to pursue greater disclosures.

Infrastructure

	Single Asset Partnership LP
Financed Emissions (Scope 1&2)	14,715
Normalised Financed Emissions (Scope 1&2)	240.4
Financed Emissions (Scope 3)	24,502
Normalised Financed Emissions (Scope 3)	400.2
Proportion of Reported Data (Financed Emissions Scope 1&2)	0.0%

Cotswolds, Worcestershire

LGPS Central Limited