

FOR PROFESSIONAL CLIENTS ONLY



Staffordshire
Pension Fund
Local Government Pension Scheme

Climate-Related Disclosures

Report prepared in alignment with the recommendations of the
Taskforce on Climate-Related Financial Disclosures (TCFD)

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PREPARED BY LGPS CENTRAL LIMITED



LGPS Central Limited



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Front Cover: Ramshaw Rocks, Staffordshire Peak District
Images (Clockwise): Trentham Gardens, Staffordshire
Leek, Staffordshire
Shugborough Estate, Staffordshire



Key Highlights



SPF'S LISTED EQUITY CLIMATE TARGETS

Weighted average
carbon intensity:

64.9
tCO₂e/\$m sales

↓ 61.9%
vs 2020

Exposure to
Fossil Fuel:

3.5%

↓ 1.7
percentage points
vs 2020

Apportioned
by revenue:

1.5%

↓ 0.5
percentage points
vs 2020

Exposure to
Thermal Coal:

1.4%

↓ 1.4
percentage points
vs 2020

Proportion of
investments where
carbon metrics
are reported:

92.6%



Introduction to the TCFD

The Taskforce on Climate-related Financial Disclosures (TCFD) was commissioned in 2015 by Mark Carney in his remit as Chair of the Financial Stability Board. 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. Official supporters of the TCFD total 930 organisations representing a market capitalisation of over \$11 trillion. Disclosure that aligns with the TCFD recommendations currently represents best practice.

The recommendations are based on the financial materiality of climate change. The four elements of recommended disclosures (see Figure 1 below) are designed to make TCFD-aligned disclosures comparable, but with sufficient flexibility to account for local circumstances. Examples of pension funds that have been early adopters of the TCFD recommendations include AP2, NEST, PGGM, RPMI Railpen, The Pensions Trust, and Environment Agency Pension Fund.

FIGURE 1: TCFD DISCLOSURE PILLARS

Core Elements of Recommended Climate-Related Financial Disclosures



GOVERNANCE

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

STRATEGY

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

RISK MANAGEMENT

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

METRICS AND TARGETS

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



Staffordshire Countryside



Introduction to the TCFD *(continued)*

Staffordshire Pension Fund (SPF or ‘the Fund’) supports the TCFD recommendations as the optimal framework to describe and communicate the steps the Fund is taking to manage climate-related risks and incorporate climate risk management into investment processes. As a pension fund, the Fund is a long-term investor and is diversified across asset classes, regions, and sectors, making it a “universal owner”. It is in the Fund’s interest that the market is able to effectively price climate-related risks and that policymakers are able to address market failure. The Fund believes TCFD-aligned disclosure from asset owners, asset managers, and corporates, is in the best interest of their beneficiaries.

About this report

This report is the Fund’s fifth climate-related disclosure report. It describes the way in which climate-related risks are currently managed within the Fund.

Since March 2021, SPF has received five Climate Risk Management Reports from the Fund’s pooling company, LGPS Central Ltd (LGPS Central). These reports have provided an in-depth review of the Fund’s climate risks under different climate change scenarios across all asset classes. The Fund uses these reports to develop its climate strategy.

In the interests of being transparent with the Fund’s beneficiaries and broader stakeholder base, this report discloses the most recent Carbon Risk Metrics Analysis undertaken on the Fund’s assets. The Fund expect to update their Carbon Risk Metrics on an annual basis.



Stafford Castle, Staffordshire



Introduction to the TCFD *(continued)*

Climate-related risks

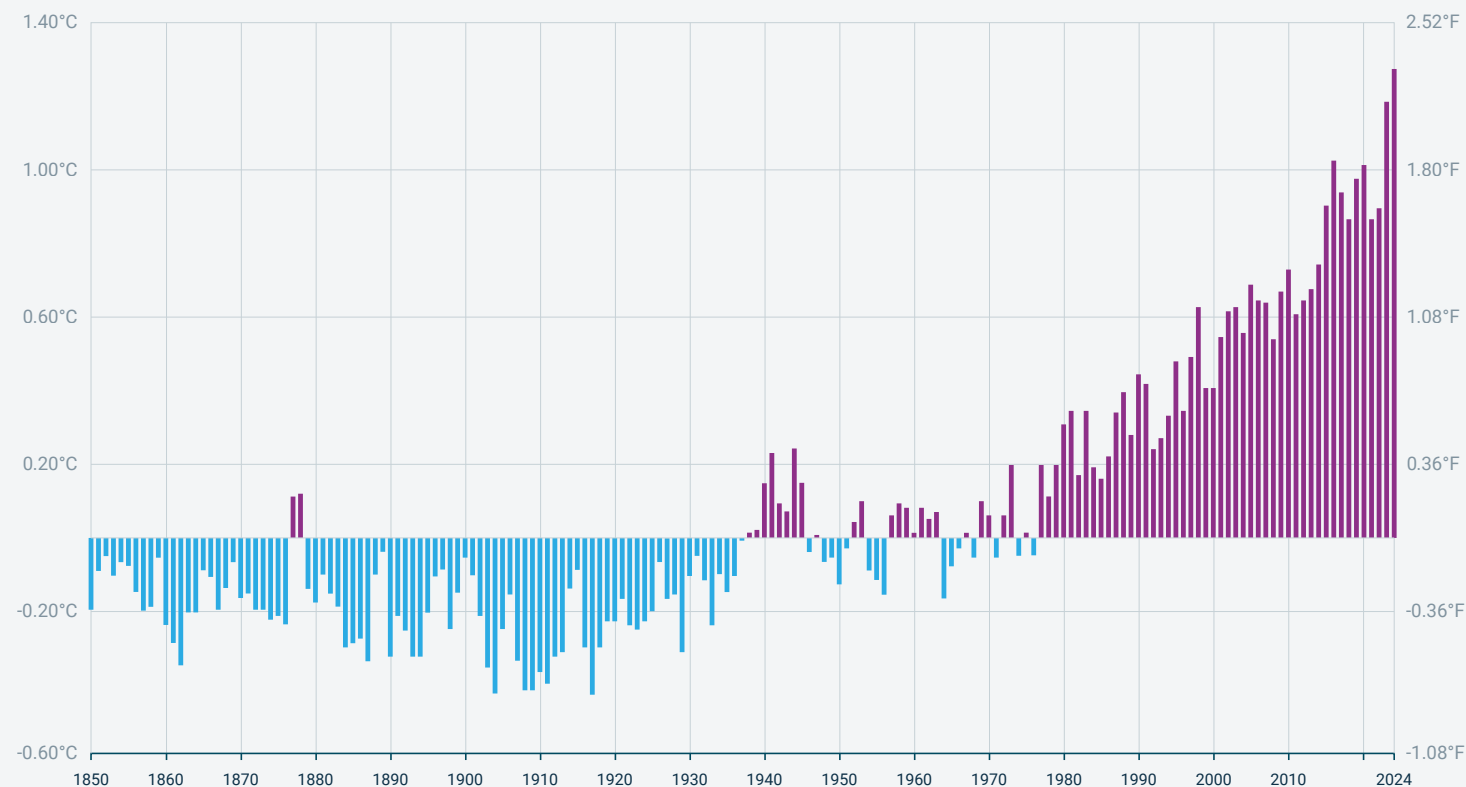
Human activities are estimated to have caused approximately 1.1°C of global warming above pre-industrial levels.¹ 2024 represented the warmest year on record since global records began in 1850. Additionally, the ten warmest years in the 175-year record have all occurred in the last decade (2015–2024).²

The overwhelming scientific consensus is that the observed climatic changes are the result primarily of human activities including electricity and heat production, agriculture and land-use change, industry, and transport.

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

FIGURE 2: GLOBAL LAND AND OCEAN ANNUAL TEMPERATURE ANOMALIES (1850-2024)²

Global Land and Ocean Average Temperature Anomalies January-December



¹ IPCC_AR6_SYR_SPM.pdf

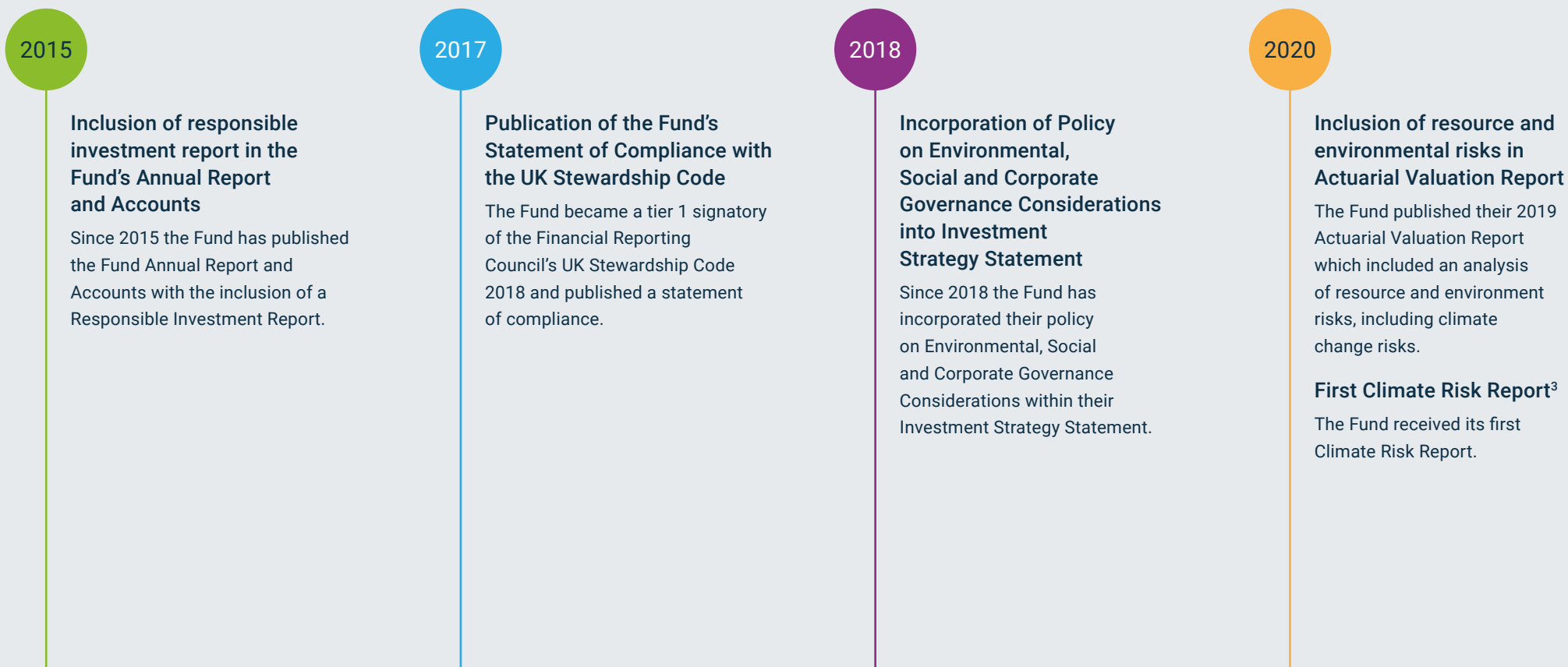
² Annual 2024 Global Climate Report | National Centers for Environmental Information (NCEI) (noaa.gov)



Governance

The Fund's governance of climate risk has developed significantly over recent years, as shown in Figure 3.

FIGURE 3: THE FUND'S CLIMATE PROGRESS



³ The name of this report was altered to the "Climate Risk Management Report" during 2023 to avoid confusion with the with the DLUHC climate-related disclosure requirement, also titled "Climate Risk Report".



Governance *(continued)*

FIGURE 3: THE FUND'S CLIMATE PROGRESS (CONTINUED)

2021

First TCFD Report

The Fund published its first TCFD compliant report.

First Climate Stewardship Plan

Following the production of the Fund's Climate Risk Report, the Fund published its first Climate Stewardship Plan (CSP).⁴

2022

First Climate Change Strategy

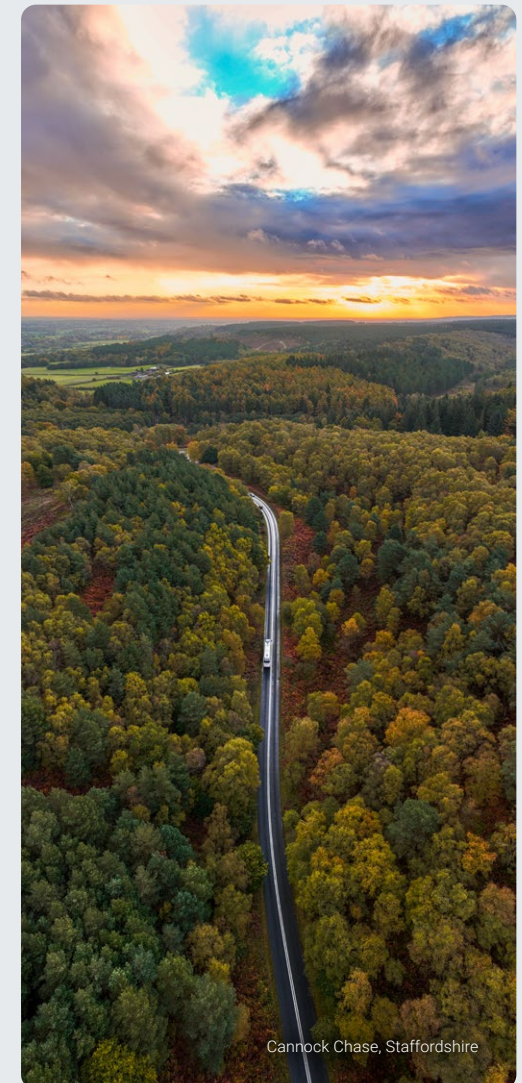
In 2022 the Fund published its first Climate Change Strategy.

2023

UK Stewardship Code signatory

In 2022 the Fund published its first Annual Stewardship Report and became a signatory of the UK Stewardship Code 2020.

⁴ The CSP was excluded from the fourth iteration of Fund's Climate Risk Management Report. However, this iteration of the report introduces the Fund's Climate Stewardship Priority List which builds upon the CSP. Companies previously included within the CSP have been carried over into the Climate Stewardship Priority List.



Cannock Chase, Staffordshire



Governance *(continued)*

Board Oversight

Roles and responsibilities at the Fund are set out clearly in the Fund's Governance Compliance Statement.⁵ Overall responsibility for managing the Fund lies with the full Council of Staffordshire County Council in its role as administering authority. Under the County Council's Constitution, further delegations for the management, administration and investment of the Fund are made to the Pensions Committee ('the Committee'), the Pensions Panel and the Director of Finance and their staff.

The Committee is responsible for approving the Investment Strategy Statement⁶ (ISS) and Climate Change Strategy. The ISS includes a formal investment belief on climate change, recognising it as a factor that could materially impact financial markets. The Climate Change Strategy is premised on 10 beliefs about climate change, which consider the science behind climate change, the energy transition and climate stewardship.

The Committee and the Pensions Panel each meets quarterly. The Pensions Panel receives quarterly engagement and voting reports from its stewardship providers, LGPS Central, the Local Authority Pension Fund Forum (LAPFF) and external investment managers, as regular items on the meeting agenda. Reports from the Fund's investment adviser, which include advice on responsible investment, are also received regularly.

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

⁵ Governance Compliance Statement December 2023

⁶ Investment Strategy Statement April 2024



Essex Bridge, Staffordshire

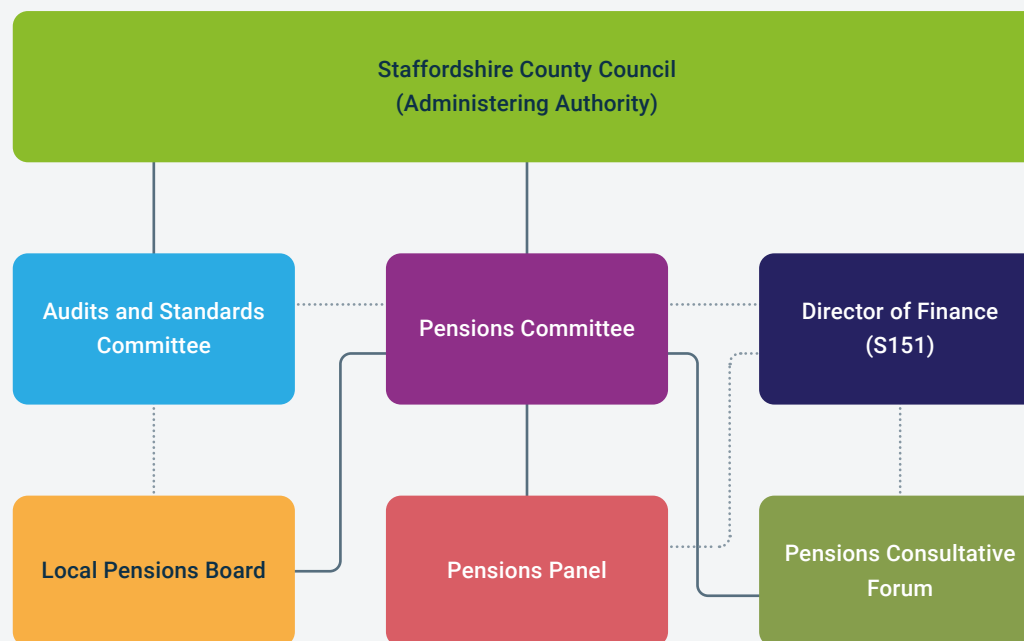


Governance *(continued)*

Management's Roles and Responsibilities

The Assistant Director for Treasury and Pensions has primary day-to-day responsibility for the way in which climate-related investment risks are currently managed and, where appropriate, LGPS Central assists in assessing and managing climate-related risks. As detailed in the Climate Change Strategy,⁷ the Fund leverages partnerships, and initiatives, including the Institutional Investors Group on Climate Change (IIGCC), to identify and manage climate risk. The Assistant Director for Treasury and Pensions and the Fund's Senior Officers are accountable to the Pensions Committee for delivery of the Climate Change Strategy. As a predominantly externally managed fund, the implementation of much of the management of climate-related risk is delegated to a range of appointed investment managers. These external investment managers are monitored on a regular basis by the Pensions Panel.

FIGURE 4: GOVERNANCE STRUCTURE OF THE FUND



⁷ Climate Strategy June 2024



Governance *(continued)*

Roles of Advisors

Hymans Robertson LLP (Hymans Robertson) are investment advisers to the Staffordshire Pension Fund and support the Fund with investment advice, attendance at Pension Committee and Panel meetings, training for Members, and advice on responsible investment and engagement issues. Hymans Robertson have a dedicated Responsible Investment team and a wealth of experience in incorporation of RI&E factors into investment advice for LGPS Funds. The Fund works closely with Hymans Robertson to ensure that any long-term net-zero carbon target is achievable.

The Fund also employs two independent advisers, Carolan Dobson and John Harrison, who provide challenge and an independent perspective on investments and responsible investment and engagement matters.



The Roaches, Staffordshire Peak District



Governance *(continued)*

Roles of Actuaries

The Fund engaged its Investment Adviser, Hymans Robertson, to conduct asset liability modelling in preparation for the Fund's 2025 triennial actuarial valuation, to evaluate the suitability of its funding strategy. The sensitivity and risks associated with climate change are addressed in the actuarial valuation report. This topic will be explored further in the Strategy section.

Roles of Pooling Company

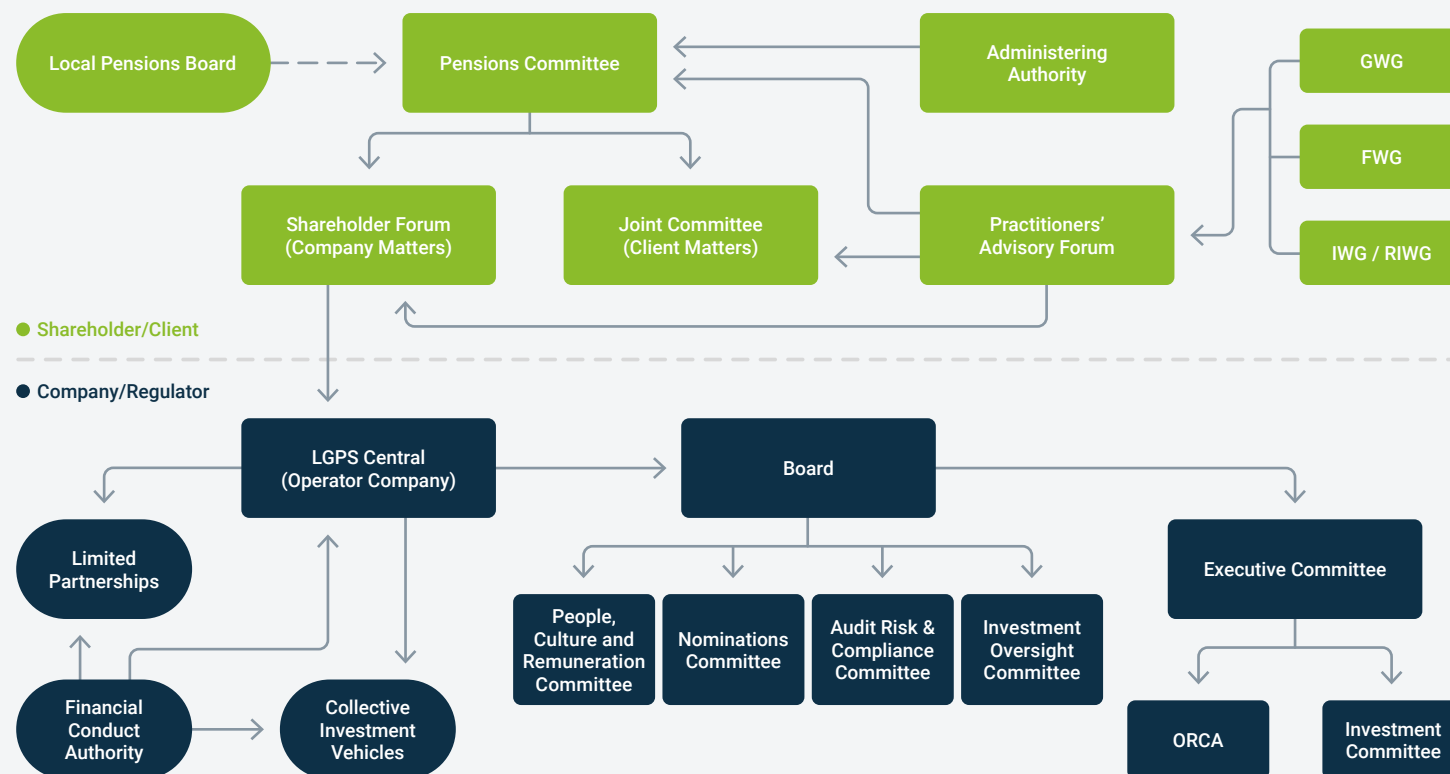
LGPS Central operates as the pooling company for the Fund, from a climate perspective this includes producing annual Climate Risk Management Reports including the production of the Fund's climate metrics which help inform the establishment of the Fund's Climate Strategy and targets, as well as the tracking of these targets.

LGPS Central also assists the Fund in integrating responsible investment, including climate considerations, into the Fund's investments during the selection and monitoring process⁸ as well as conducting engagement on behalf of the Fund.⁹

⁸ For the portfolio's which are managed by LGPS Central.

⁹ More information on LGPS Central's Responsible Investment can be found here: [Responsible Investment – LGPS Central](#).

FIGURE 5: INVESTMENT POOLING GOVERNANCE STRUCTURE



List of abbreviations included in the chart

GWG	Governance Working Group
FWG	Finance Working Group
IWG	Investment Working Group

RIWG	Responsible Investment Working Group
ORCA	Operations, Risk, Compliance & Administration Committee



Governance *(continued)*

Ongoing Education and Training

The Fund's approach to training is supportive in nature with the intention of providing Committee, Panel and Local Pension Board Members with regular sessions that will contribute to their level of skills and knowledge.¹⁰

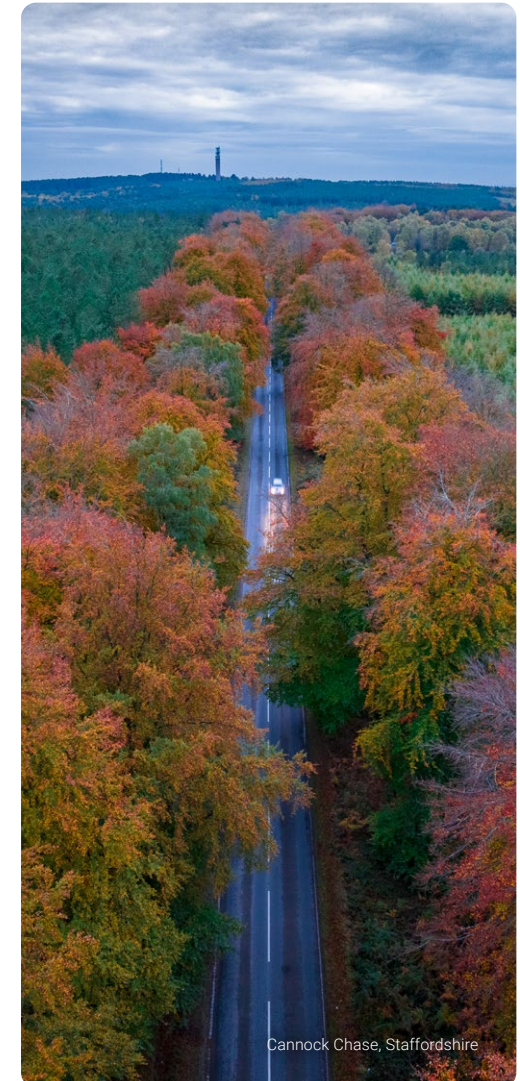
During 2023 and 2024, members of the Fund's decision-making bodies, the Committee and Pensions Panel, have attended training sessions on responsible investment and engagement, including climate change. This was to ensure they are equipped with the knowledge to enable them to incorporate these factors effectively in their decision-making. This training aims to inform and incentivise the Committee and Pensions Panel in their efforts to incorporate appropriate material responsible investment and engagement factors into the investment process across relevant asset classes.

The Fund's pooling company, LGPS Central has previously provided training on responsible investment (including stewardship), as well as present the Fund's Climate Risk Management Report to the Fund's Committee on an annual basis, including brief training on the climate metrics included with the report.

The Fund's Committee members and senior officers are invited to LGPS Central's annual Responsible Investment Summit, in which industry leaders speak on a range of RI-related topics in an all-day online event. Attendees are given the opportunity to ask questions at each session, providing a valuable opportunity for the Fund's management to enhance their technical understanding of emerging risks and opportunities within RI.

The Fund's Pension Officers attend quarterly Responsible Investment Working Group meetings. These meetings are organised by LGPS Central and provide updates and training on a variety of ESG topics, including climate change, to the attendees. These meetings are attended by representatives from all eight of LGPS Central's Partner Funds, facilitating discussions and providing opportunities for attendees to deepen their knowledge of climate issues.

The Fund's actuary and investment adviser, Hymans Robertson has also delivered training to Committee Members on responsible investment and engagement and also provided Committee Members with access to their online training portal Aspire, which includes training on responsible investment in its investments module.



Cannock Chase, Staffordshire

¹⁰ [Staffordshire Pension Fund - Training Policy](#)



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 and opportunity 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 (listed equity and corporate bonds)	- 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

Although the Fund is diversified across asset classes, regions, and sectors, it is recognised that climate risk is systemic and is unlikely to be eliminated through diversification alone. The Fund's Climate Change Strategy sets out the Fund's approach to managing the impact of climate-related risks. The main management techniques within the Fund's investment strategy are below:

- 1) Integrate climate change considerations into the complete investment process through the selection, due diligence, monitoring, and stewardship of assets, either directly or through the Fund's appointed investment managers, with the aim of decarbonising the entire investment portfolio.
- 2) Access the best possible climate change data available, to be able to assess climate risks and opportunities and facilitate informed decision making.
- 3) Work collaboratively with other investors and organisations to improve the quality,

relevance and availability of climate-related data and encourage alignment with the 2015 Paris Agreement.

As most of the Fund's investments are managed externally, responsible investment and climate change considerations form part of the selection and appointment process and are regularly discussed with investment managers on an ongoing basis.

Description of Resilience of the Organisation's Strategy

Hymans Robertson, as the Fund's actuary, conducted climate scenario stress testing in the contribution modelling exercise for the local authority employers as part of the 2022 valuation.

The results of Hymans Robertsons sensitivity of funding position to climate change risk assessment can be found in the Fund's 2022 Actuarial Valuation Report.¹¹

Additionally, in 2020 and 2022, via LGPS Central, the Fund engaged the expertise of Mercer LLC (Mercer), to better understand the extent to



Staffordshire Countryside

¹¹ [Staffordshire Pension Fund Report on the actuarial valuation at 31 March 2022 report](#)



Strategy *(continued)*

which the Fund's risk and return characteristics could come to be affected by a set of plausible climate scenarios.

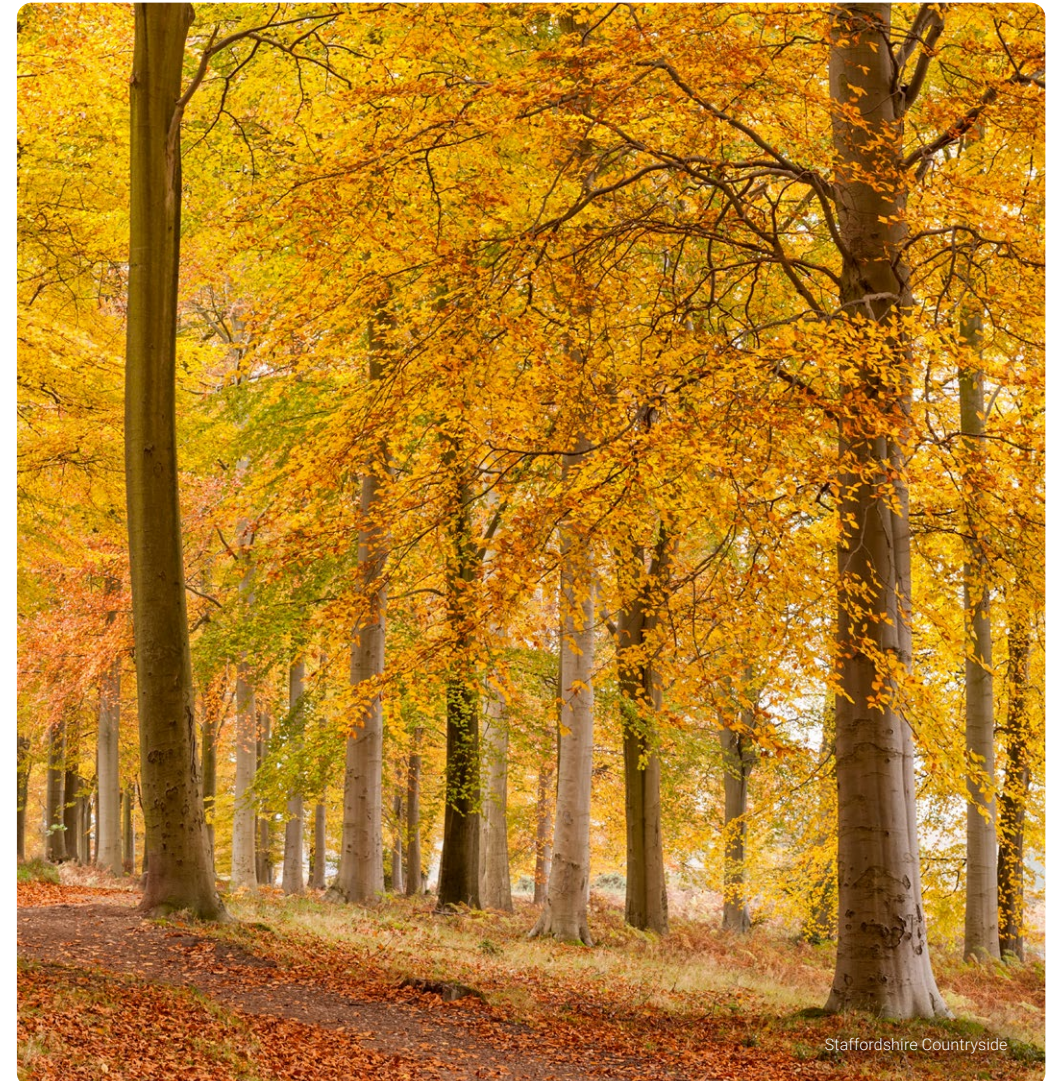
In the 2022 iteration, this included an estimation of the annual climate-related impact on returns (at the Fund and asset-class level) across three different climate scenarios including all asset classes. The three climate scenarios considered were Rapid Transition, Orderly Transition and Failed Transition. 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 2023 Climate-Related Disclosures Report.¹²

It should be noted here that translating climate scenario analysis into an investment strategy is a challenge for several reasons.

- 1) There is a wide range of plausible climate scenarios with significantly different and far-reaching consequences.
- 2) The probability of any given scenario is hard to determine, and especially so when considering longer time horizons.

- 3) 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.
- 4) Finally, 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.



¹² [Staffordshire Pension Fund Climate-Related Disclosures March 2023](#)



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 Management Report to assess financially material risks in support of the Fund's Climate Change 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 and, 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 LGPS Central, EOS at Federated Hermes (EOS), and Local Authority Pension Fund Forum (LAPFF). Based on the findings of the Fund's climate reports, the Fund is devising a Climate Stewardship Priority List in order to focus engagement resources on the investments most relevant to the Fund.



Alton Towers, Staffordshire



Risk Management *(continued)*

Managing Climate Risks and Opportunities

The Fund manages climate risk in different ways according to the nature, duration, magnitude, and time horizon of the risk itself. As set out in the Fund's Climate Change Strategy,¹³ the main management techniques are integrating climate change considerations, accessing the best possible climate change data available, and working collaboratively with other investors.

A key element of the Fund's approach to the management of climate risk is the ongoing monitoring of its external managers. For all funds managed by LGPS Central, climate change and other environmental, social and governance considerations form a major part of the selection and due diligence process. With ongoing monitoring of existing managers.

Engagement and shareholder voting are important aspects of the Fund's approach to managing climate risk. The Fund expects all investee companies to manage material risks, including climate change, and 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+ (CA100+) initiative, which aims to ensure that companies adopt the appropriate governance structures to effectively manage climate risk, decarbonise in line with the Paris Agreement and disclose effectively using the TCFD recommendations. In September 2020, CA100+ introduced a benchmark framework which identifies ten key indicators of success for business alignment with a net zero carbon emissions future and goals of the Paris Agreement. This benchmark framework was updated during March 2023 to the Benchmark 2.0, providing additional company assessments, including assessments on each company's Just Transition credentials.

Either through its own membership or indirectly through LGPS Central, the Fund has several engagement partners that engage investee companies on climate risk, as per Table 2.

TABLE 2: THE FUND'S STEWARDSHIP PARTNERS

Organisation	Remit
	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.
	EOS at Federated Hermes is engaged by LGPS Central to expand the scope of the engagement programme, especially to reach non-UK companies.
	SPF is a long-standing member of LAPFF. LAPFF conducts engagements with companies on behalf of local authority pension funds.

¹³ [Staffordshire Pension Fund Climate Change Strategy June 2024](#)



Risk Management *(continued)*

The instruction of shareholder voting opportunities is an important part of climate stewardship. The Fund delegates responsibility for voting to LGPS Central or the Fund's directly appointed external investment managers. For Fund assets managed by LGPS Central, votes are cast in accordance with 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. For Fund assets managed by appointed external investment managers, votes will be cast in line with their own voting and responsible investment policies and in-line with industry best practice as set out in accepted governance codes.

The results of engagement and voting activities by all the Fund's external investment managers are reported to the Fund and reviewed quarterly by the Pensions Panel through a specific Responsible Investment and Engagement Report. LGPS Central's activities are reported in Quarterly Stewardship Updates and also reported quarterly to the Pensions Panel.

Based on the findings of previous Climate Risk Management Reports, the Fund has developed a Climate Stewardship Priority List for climate engagements. The companies on the Priority List are chosen following an assessment of issuer contributions to financed emissions and the Fund's capacity to leverage change through engagement. The Climate Stewardship Priority List builds upon the Fund's previous CSP, which was excluded from the previous iteration of this report. Cemex is the only new proposed addition to this list, based on the issuer's contributions to financed emissions and the Fund's capacity to leverage change.



Stoke-on-Trent, Staffordshire



Risk Management *(continued)*

TABLE 3: CLIMATE STEWARDSHIP PRIORITY LIST

Company Name	Weight	Financed Emissions	Contribution to Total Financed Emissions
RWE AG	<0.1%	6,524	3.80%
LINDE PLC	0.3%	4,577	2.70%
THE SOUTHERN COMPANY	0.1%	3,845	2.20%
HOLCIM AG	<0.1%	3,065	1.80%
SHELL PLC	0.1%	2,934	1.70%
GLENCORE PLC	0.1%	1,819	1.10%
CEMEX SAB	<0.1%	1,638	0.90%
NEXTERA ENERGY, INC.	0.1%	1,348	0.80%

Previously, BP Plc, CRH Plc and Rio Tinto Ltd were included in the Fund's CSP. However, LGPS Central have recommended the removal of these companies from the Fund's Climate Stewardship Priority List. Recommendations for changes to the Climate Stewardship Priority List 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.

In the past, BP Plc, CRH Plc, and Rio Tinto Ltd were major contributors to the Fund's financed emissions. They are currently not among the top 30 contributors of financed emissions for the Fund.



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 Priority List.





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 2024, LGPS Central measure the carbon footprints of the Fund's equities, corporate bonds, sovereign debt, and private market investments managed by LGPS Central were measured, on the Fund's behalf.

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 Department for Levelling Up, Housing, and Communities' (DLUHC) consultation.¹⁴ They also align with the FCA's requirements on climate reporting, as set out in the December 2021 policy statement.¹⁵ These requirements are largely in line with the TCFD's recommendations.
- 3) **Data and methodology availability:** LGPS Central prioritise sourcing appropriate data from reputable sources and adhere

to the methodology prescribed by the Partnership for Carbon Accounting Financials (PCAF).¹⁶

A selection of headline metrics and other metrics are utilised to measure the Fund's climate risks and opportunities. LGPS Central 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, they 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). LGPS Central utilised data that was downloaded from MSCI on 30 July 2024. LGPS Central gain comfort from the quality of MSCI's data through their own assessment of MSCI's methodology and their 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.

¹⁴ DLUHC, Local Government Pension Scheme (England and Wales): Governance and reporting of climate change risks. Consultation can be accessed on DLUHC's [website](#).

¹⁵ FCA, Enhancing climate-related disclosures by asset managers, life insurers and FCA-regulated pension providers. Policy Statement can be accessed on FCA's [website](#).

¹⁶ PCAF, The Global GHG Accounting and Reporting Standard for the Financial Industry. The report can be accessed on PCAF's [website](#).



Cannock Chase, Staffordshire



Metrics and Targets *(continued)*

Headline Metrics

The headline metrics in Table 4, 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 LGPS Central 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 ₂ e	tCO ₂ e / £m invested ¹⁷	tCO ₂ e / \$m sales ¹⁸
Comparability	No; does not take size into account	Yes; adjusts for fund size	Yes

¹⁷ Normalised financed emissions uses GBP as the base currency as this is the currency used for the Fund’s investments.
¹⁸ 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

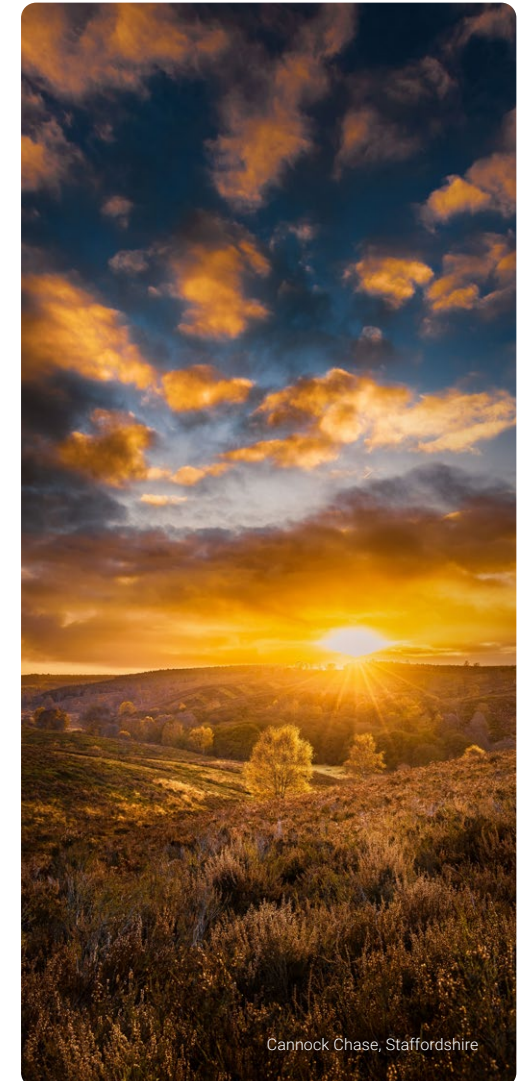
or

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.



Cannock Chase, Staffordshire



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 towards those targets.

TABLE 5: THE FUND'S CLIMATE TARGETS

Target	Progress
Listed Equity	
Reduce the WACI of the Fund by 50-60% by 2030.	The Fund is on track to exceed this target, as the WACI of the Fund's equity holdings has reduced by 61.9% .
	2020 baseline (restated) ¹⁹ 2024
	WACI170.2 tCO ₂ e/\$m sales64.9 tCO ₂ e/\$m sales
Reduce the proportion of the Fund invested in fossil fuels reserves to less than 4% by 2030.	The Fund's exposure to fossil fuels reserves has decreased by 1.7 percentage points (pp). Apportioned by revenue, the Fund's exposure to fossil fuels decreased by 0.5pp . The Fund is therefore on track to achieve this target.
	2020 baseline (restated)2024
	Fossil Fuel Exposure5.2%3.5%
	Fossil Fuel Exposure Apportioned by Revenue2.0%1.5%
Reduce the proportion of the Fund invested in thermal coal to below 1% by 2030.	The Fund's exposure to thermal coal decreased by 1.4pp .
	2020 baseline (restated)2024
	Thermal Coal Exposure2.8%1.4%
Increase the proportion of investments where carbon metrics are reported to over 95% by 2030.	2024
	Carbon Metrics Reported92.6% ²⁰

¹⁹ Previously reported carbon metrics are restated as data quality and availability improves. Due to this data previously included in the Fund's reporting may be revised in later reports in the interest of providing the most accurate data available. Please see further information on page 28.

²⁰ With the introduction of the data quality metric, LGPS Central are able to report progress on this target more accurately. The value above reflects the proportion of the net asset value in listed equity assets which is associated reported data. Please see pages 29 and 32 for further information regarding the data quality metric, and SPF's listed equities NAV distributed by data quality score respectively.



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 30 September 2024. It includes holdings in listed equity and fixed income funds including government debt. The Fund's private market holdings, which are managed by LGPS Central, have been newly incorporated into this report as of 2024. Private market carbon metrics can be found in Appendix 1 and are reflective of holdings as of Q1 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 £6.1 billion as of that date, with the specific funds outlined in Figure 6. This figure includes the Fund's approximate £436.6 million private market commitment managed by LGPS Central. The Fund's private market climate metrics can be found in Appendix 1.

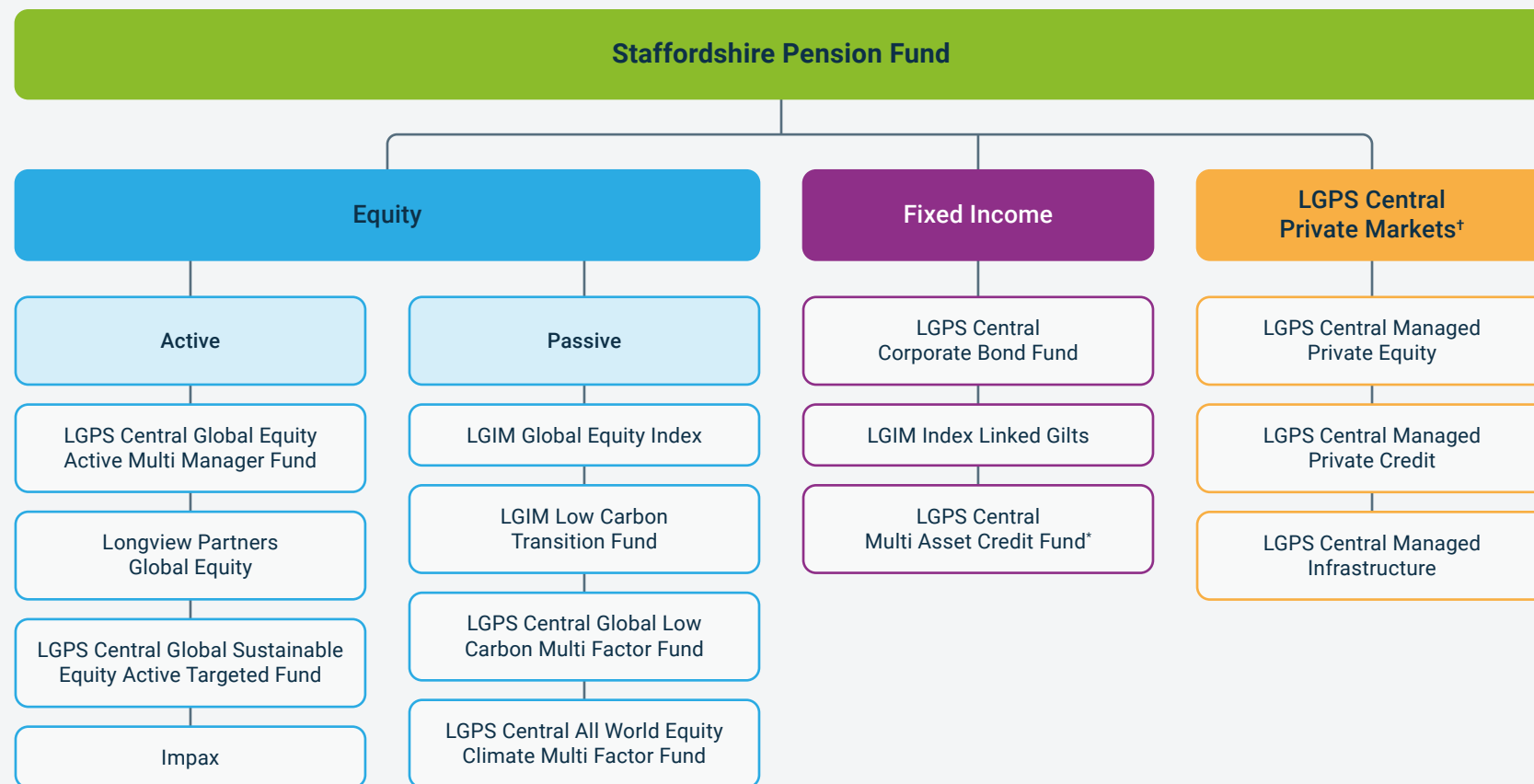
LGPS Central has been calculating carbon footprint metrics for the Fund since 2019. The scope of the footprinting exercise has expanded over time as the Fund effected asset allocation decisions and new data for additional asset classes were added during this period. This report summarises the evolution of the Fund's carbon footprint up to 30 September 2024.





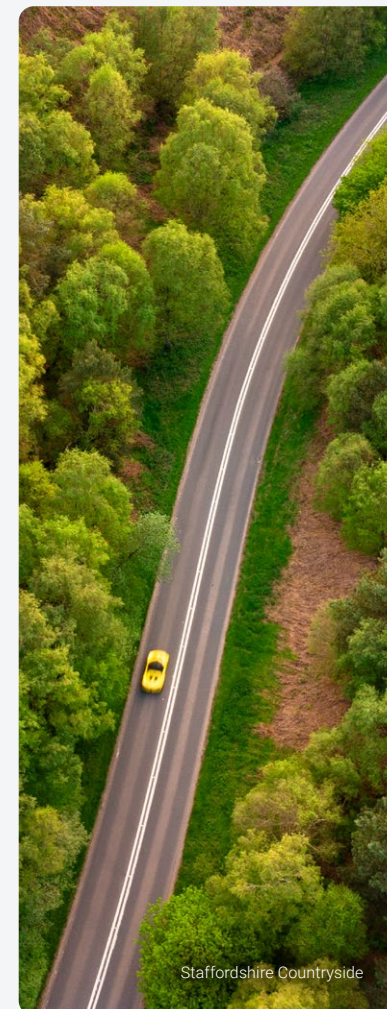
Metrics and Targets *(continued)*

FIGURE 6: BREAKDOWN OF FUNDS INCLUDED IN THE ANALYSIS



* Portfolio does not meet 60% corporate data coverage threshold.

† 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 LGPS Central's data provider (MSCI) undergoes frequent revisions as estimated data gets replaced by reported data, estimations are refined for greater precision, and data coverage expands.

LGPS Central recalculate the Fund's emissions annually and may revise previously reported greenhouse gas (GHG) data to incorporate the most current information. When possible, LGPS Central align the Fund's 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. LGPS Central's 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	2023 Reported Portfolio Value	2023 Reported Reference Index Value	2024 Restated Portfolio Value	2024 Restated Reference Index Value	Change from Restatement (Portfolio)	Change from Restatement (Reference Index)
2023	Equities	WACI	76.4	136.5	68.1	122.1	-10.9%	-10.5%
		Financed Emissions	159,723	282,391	138,753	254,851	-13.1%	-9.8%
	Fixed Income	WACI	155.7	156.1	136.0	135.8	-12.6%	-13.0%
		Financed Emissions	21,980	24,013	22,687	22,379	3.2%	-6.8%



Metrics and Targets *(continued)*

Data Quality

TABLE 7: DATA QUALITY OF PUBLIC ASSETS

Asset Class	Reported	Estimated	Missing/ Unavailable
Equity	92.6%	3.1%	4.3%
Fixed Income	35.7%	57.5%	6.8%

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



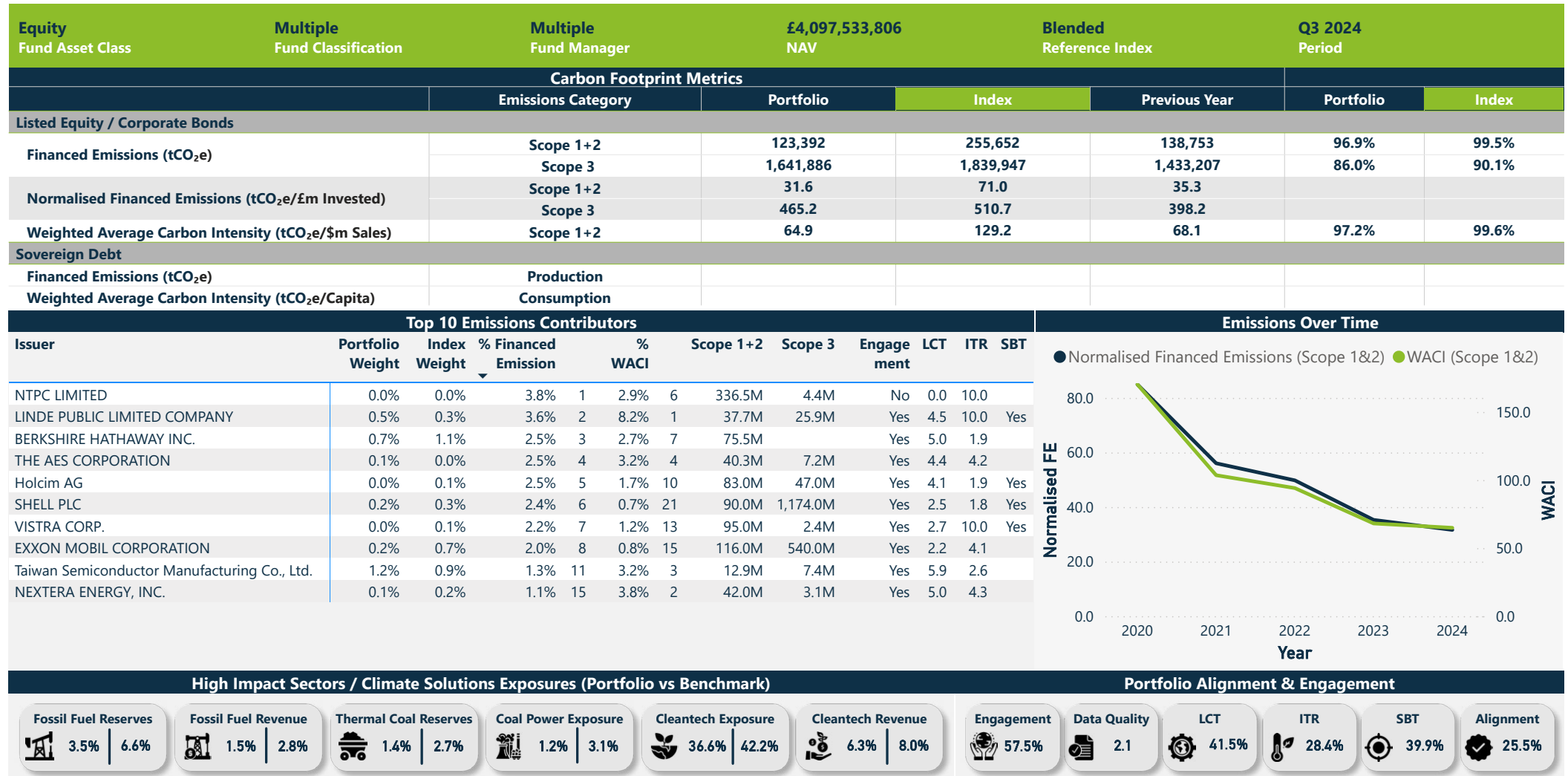
Cannock Chase, Staffordshire



Metrics and Targets *(continued)*

Equity

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





Metrics and Targets *(continued)*

LGPS Central analysed eight equity portfolios totalling approximately £4.1 billion as of 30 September 2024.

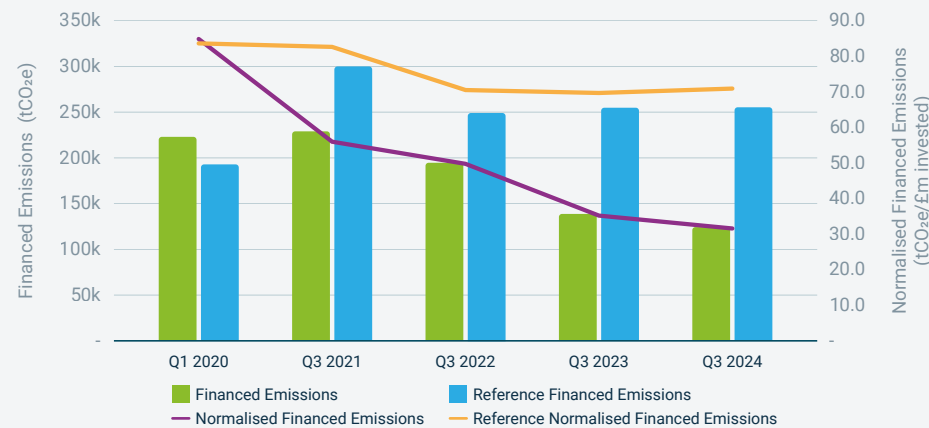
Each fund's carbon footprint is evaluated in comparison to the primary market index in which it predominantly invests. The table below summarises the reference indices that LGPS Central utilised.

TABLE 8: REFERENCE INDICES

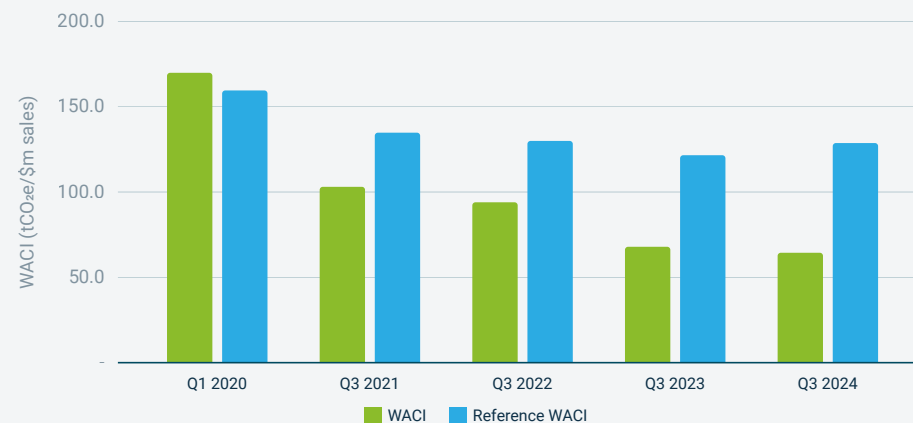
Investment Universe (Most Predominant)	Reference Index
UK Equities	FTSE UK All Share Index
Developed Markets	FTSE All-World Index
Emerging Markets	FTSE Emerging Index

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 44.7% from 2020, despite NAV within scope increasing by 41.6% over the same period. Accounting for fluctuations of the NAV within scope, normalised financed emissions decreased by 62.8% from 2020. This decarbonisation can be associated with the Fund's asset allocation decisions over the period. Considering active equities, the Fund exited a UK Equity portfolio after Q1 2020, which had higher carbon metrics relative to the Fund's current active equity investments. The Fund also exited a global equity portfolio after Q3 2023, which had relatively volatile carbon metrics due to the changes in the portfolio's holdings year-on-year. In addition to these exits the portfolio entered the LGPS Central GSE Active Targeted Fund which has notably low carbon metrics relative to the reference index.

Examining the Fund's passive holdings, the Fund entered the LGPS Central All World Equity Climate Multifactor Fund and the LGIM Low Carbon Transition Fund, which both incorporate climate considerations within the Fund's composition. Between Q3 2022 and Q3 2024 the LGPS Central Global Multifactor Fund began



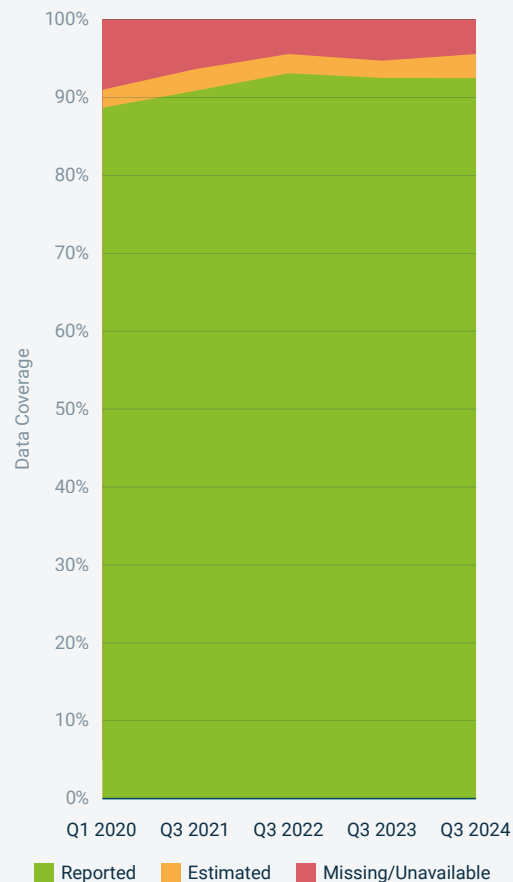
Metrics and Targets *(continued)*

incorporating climate considerations and was renamed the LGPS Central Global Low Carbon Multi Factor Fund. These climate considerations resulted in a 69.5% reduction in the portfolio's normalised financed emissions.

As illustrated by Graph 2, the Fund has also reduced its exposure to carbon intensive companies, demonstrated by the 61.9% decrease in WACI from 2020. Notably, the portfolio's sectors with the highest WACIs during 2020, the Utilities, Materials and Energy sectors experienced WACI reductions of 25.2%, 63.6% and 46.3% respectively. This was compounded by portfolio weight reductions in these sectors of 2.4pp, 2.1pp and 0.5pp respectively.

Data

GRAPH 3: EQUITY DATA AVAILABILITY OVER TIME



While data availability for the equity asset class has been relatively strong since LGPS Central 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 data availability therefore tend to be skewed towards companies with greater emissions, which can inflate the portfolio's carbon emissions.

LGPS Central have had access to a substantial amount of equity data since they began calculating carbon footprint metrics. LGPS Central's current primary focus is to enhance the quality of the data used in these calculations. At present, the majority (92.6%) 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 7: EQUITY: SECTOR CONTRIBUTIONS TO FINANCED EMISSIONS

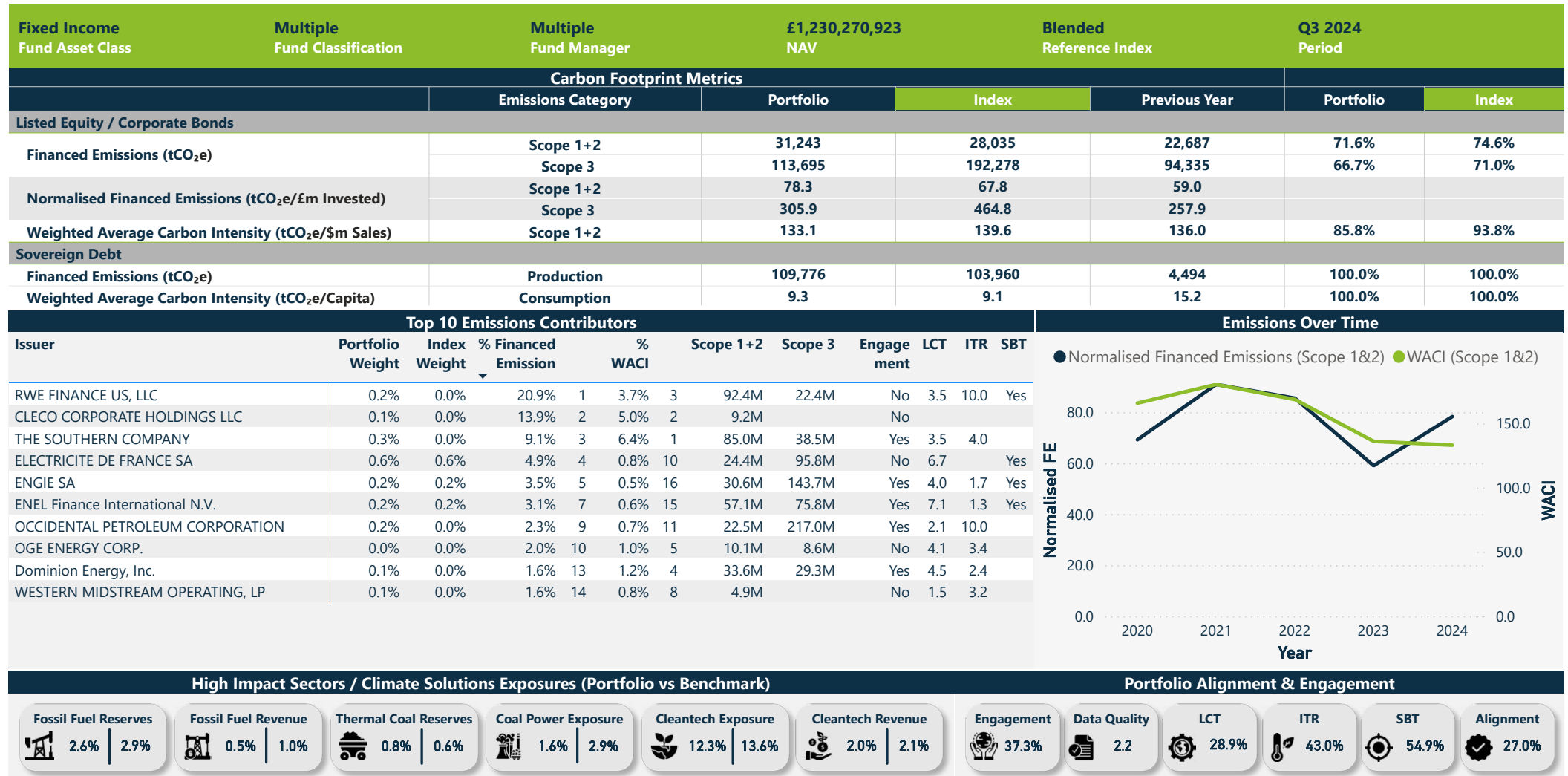




Metrics and Targets *(continued)*

Fixed Income

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



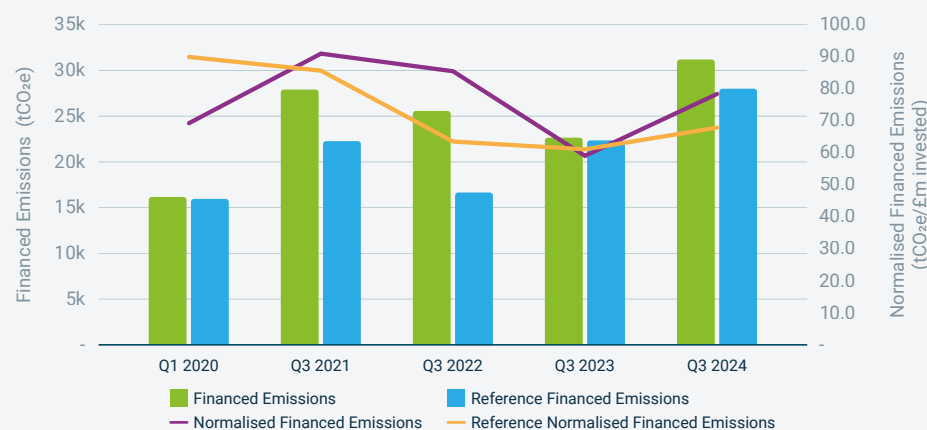


Metrics and Targets *(continued)*

The Fund holds two corporate bond funds and two sovereign debt funds accounting for approximately £1.6 billion in NAV. However, one of these portfolios has limited data coverage which falls beneath the 60% corporate data coverage threshold required for inclusion. The data associated with the LGPS Central Multi Asset Credit Fund is therefore not integrated into the dashboard above or the following analysis. Following the removal of this portfolio, the analysed fixed income NAV within scope becomes approximately £1.2 billion, split by £582.0 million and £648.2 million in corporate bonds and sovereign debt respectively.

Carbon Footprint Metrics

GRAPH 4: CORPORATE BOND FINANCED EMISSIONS



As illustrated in Graph 4, the portfolio's financed emissions have remained broadly aligned to that of the reference index. Currently the portfolio's financed emissions are 11.4% greater than that of the reference index. Greater financed emissions can be associated with the portfolio's greater exposure to the Utilities sector and selection of companies within the Financials sector.

Since 2021, the portfolio's WACI has decreased each year as illustrated in Graph 5, decreasing by a total of 19.7% from 2021. This indicates that the portfolio is less exposed to carbon intensive companies. Notably, the portfolio's WACI associated with the Utilities and Energy sectors, the most carbon intensive sectors in the portfolio as of 2020, has reduced by 58.7% and 40.7% respectively.

GRAPH 5: CORPORATE BOND WACI

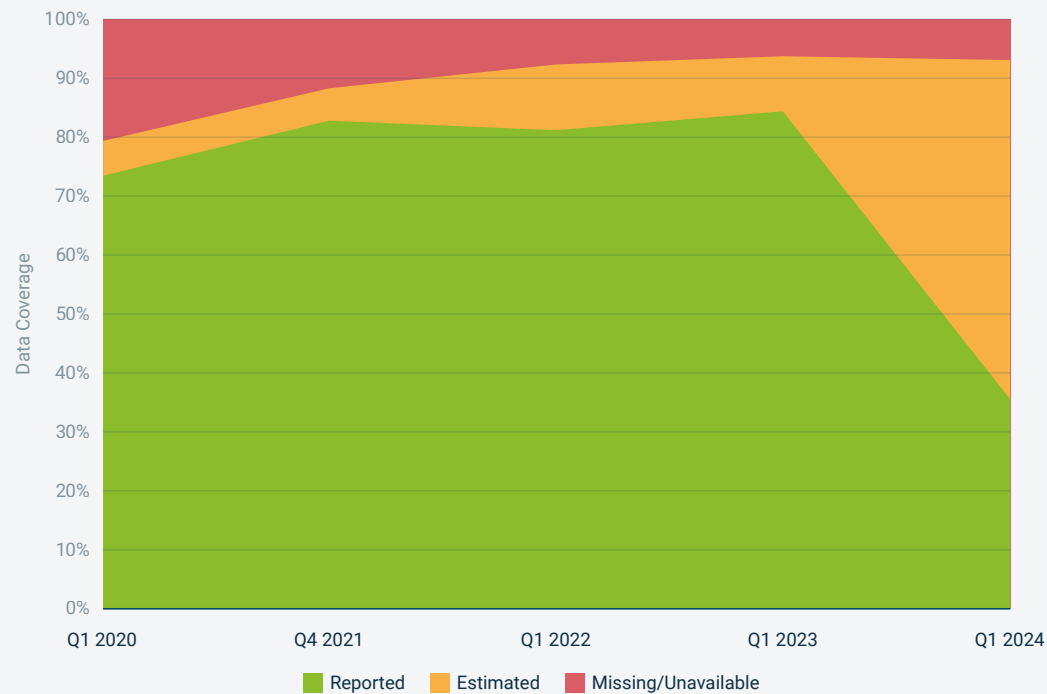




Metrics and Targets *(continued)*

Data

GRAPH 6: FIXED INCOME DATA AVAILABILITY



Unlike equities, data availability for fixed income assets has been notably weaker in prior years. However, since LGPS Central and the Fund began carbon footprinting there has been a notable improvement in data availability for the asset class, as illustrated in Graph 6, up to 2023.

The notable rise in estimated data for 2024 is due to the inclusion of the Fund's Gilt portfolios, which are now subject to carbon footprinting in this year's report.



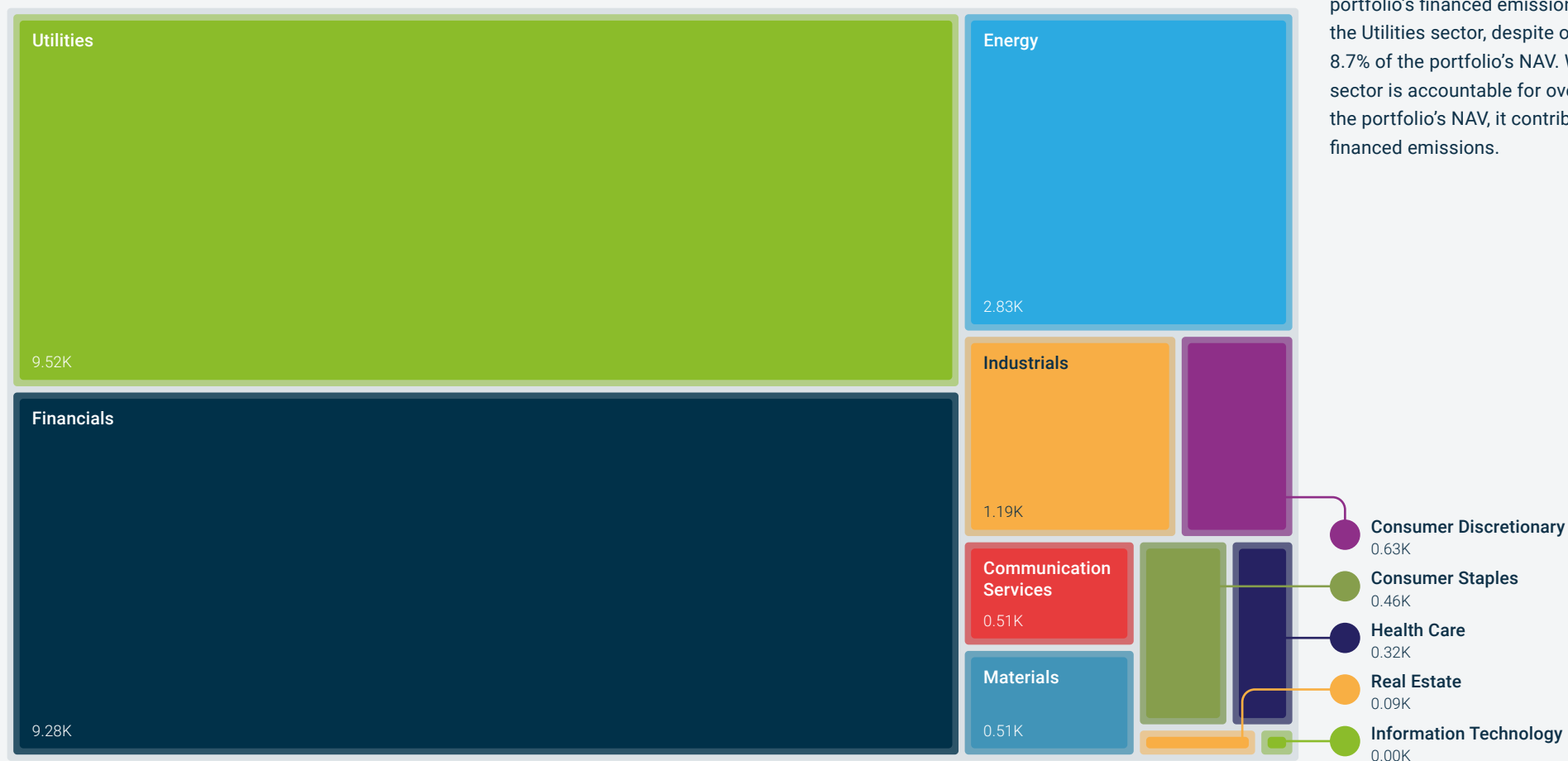
Cannock Chase, Staffordshire



Metrics and Targets *(continued)*

Sources of Emissions

FIGURE 8: CORPORATE BOND: SECTOR CONTRIBUTIONS TO FINANCED EMISSIONS





Appendix

Appendix 1: Private Market Carbon Metrics

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

The data shown in Appendix 1 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 LGPS Central believe reported data will be most accurate, this data is preferred over estimated. 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, LGPS Central believe the use of estimated data still provides a valuable insight into the carbon footprint of portfolio companies. LGPS Central expect the proportion of reported data to increase as they work with managers to pursue greater disclosures.



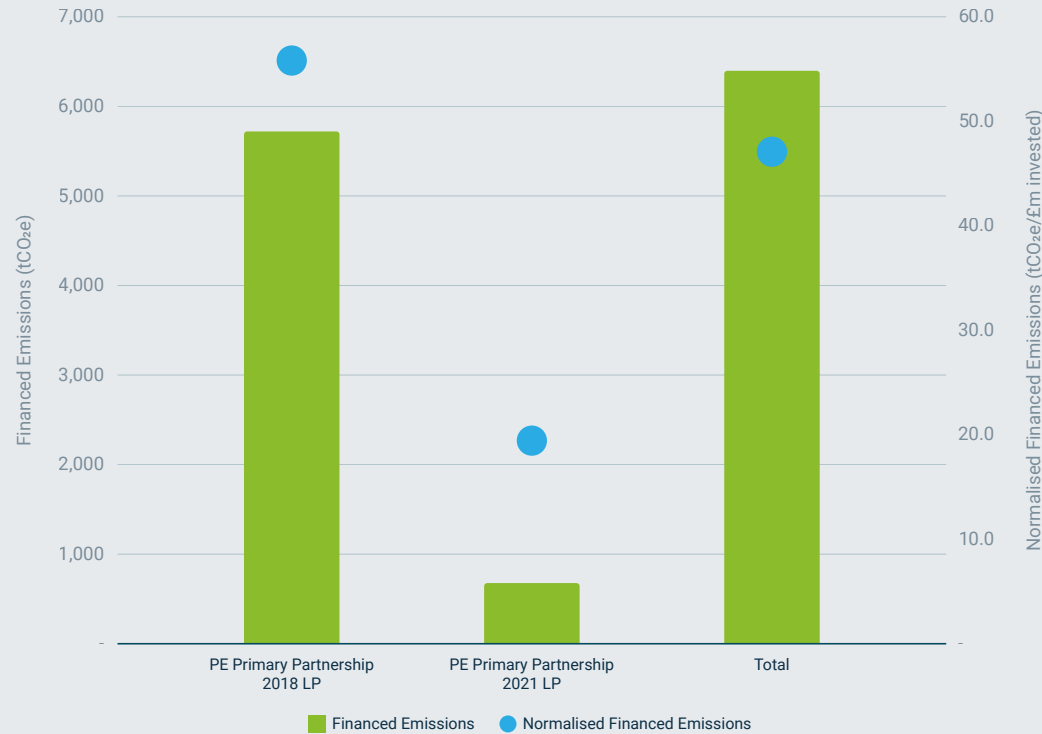
Cannock Chase, Staffordshire



Appendix *(continued)*

Private Equities

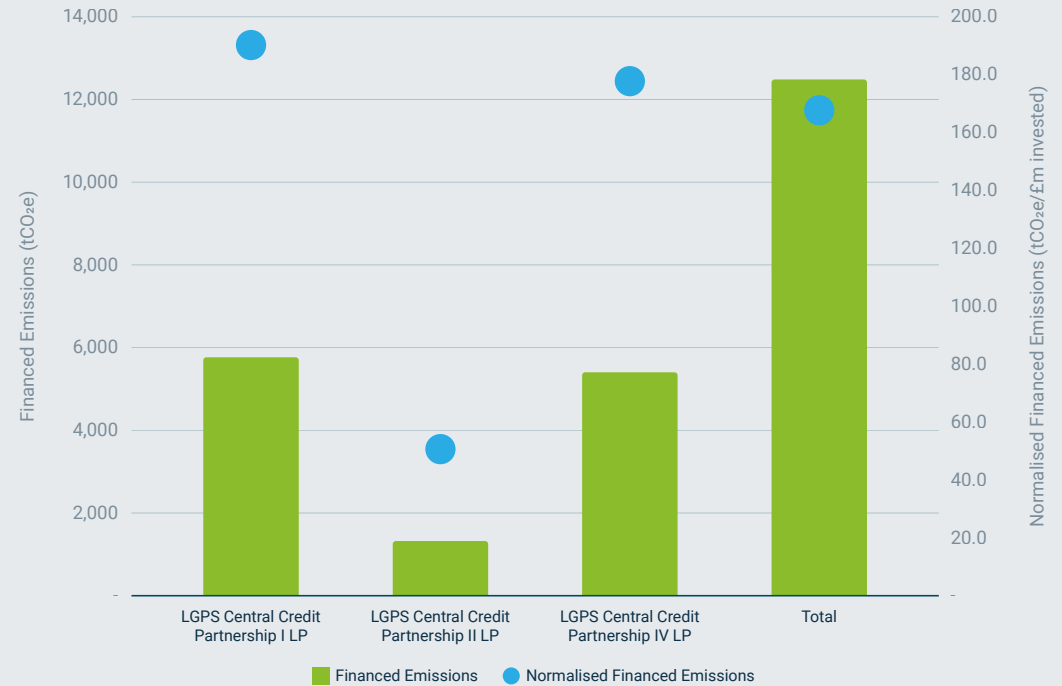
GRAPH 7: LGPS CENTRAL PRIVATE EQUITY PORTFOLIOS: FINANCED EMISSIONS



	PE Primary Partnership 2018 LP	PE Primary Partnership 2021 LP	Total
Financed Emissions (Scope 1&2)	5,721	679	6,400
Normalised Financed Emissions (Scope 1&2)	55.8	19.6	47.1
Financed Emissions (Scope 3)	15,440	5,620	21,060
Normalised Financed Emissions (Scope 3)	152.9	189.4	161.7
Proportion of Reported Data (Financed Emissions Scope 1&2)	43.6%	32.4%	40.9%

Private Credit

GRAPH 8: LGPS CENTRAL PRIVATE CREDIT PORTFOLIOS: FINANCED EMISSIONS



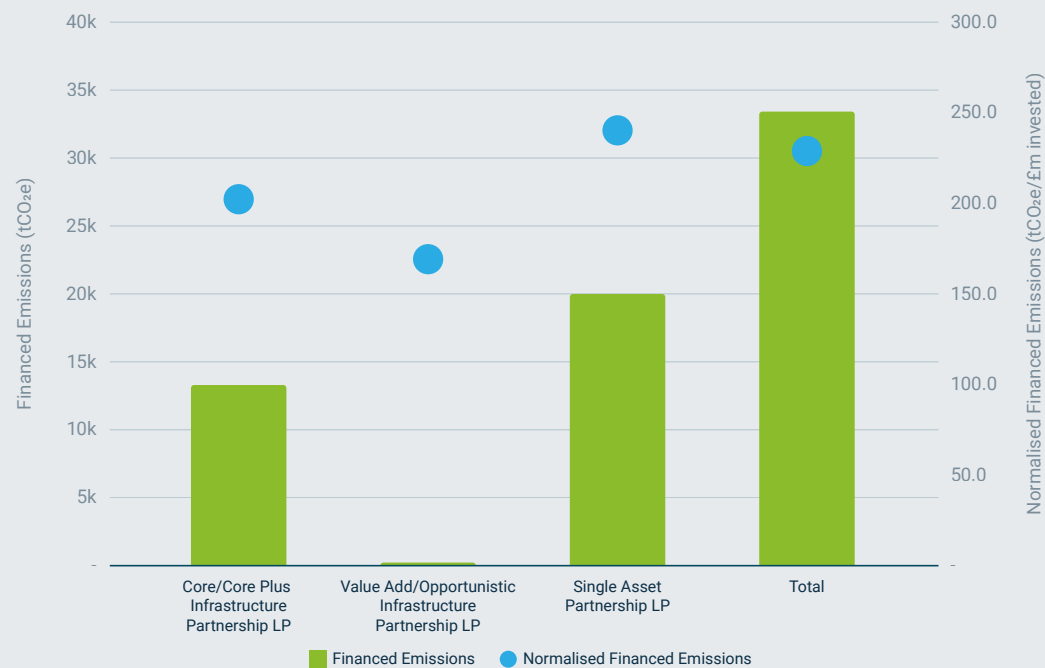
	LGPS Central Credit Partnership I LP	LGPS Central Credit Partnership II LP	LGPS Central Credit Partnership IV LP	Total
Financed Emissions (Scope 1&2)	5,765	1,328	5,402	12,495
Normalised Financed Emissions (Scope 1&2)	190.4	50.8	177.8	167.8
Financed Emissions (Scope 3)	47,069	11,366	7,326	65,761
Normalised Financed Emissions (Scope 3)	1,563.0	435.1	241.2	904.2
Proportion of Reported Data (Financed Emissions Scope 1&2)	4.2%	16.9%	0.0%	4.2%



Appendix *(continued)*

Infrastructure

GRAPH 9: LGPS CENTRAL INFRASTRUCTURE PORTFOLIOS: FINANCED EMISSIONS



	Core/Core Plus Infrastructure Partnership LP	Value Add/Opportunistic Infrastructure Partnership LP	Single Asset Partnership LP	Total
Financed Emissions (Scope 1&2)	13,301	204	19,952	33,456
Normalised Financed Emissions (Scope 1&2)	202.5	169.3	240.4	228.7
Financed Emissions (Scope 3)	10,317	212	33,221	43,750
Normalised Financed Emissions (Scope 3)	188.1	205.5	400.2	345.4
Proportion of Reported Data (Financed Emissions Scope 1&2)	19.4%	50.3%	0.0%	6.7%



