



# Gloucestershire County Council Carbon Metrics Report

Year ending 31 December 2023



# Contents

<b>Introduction</b>	<b>3</b>
<b>Executive summary</b>	<b>5</b>
<b>Gloucestershire Aggregate vs. Gloucestershire</b>	<b>7</b>
<b>Gloucestershire Equity Aggregate vs. Gloucestershire</b>	<b>8</b>
<b>Gloucestershire Active Equity Aggregate vs.</b>	<b>9</b>
<b>Dashboard</b>	<b>10</b>
<b>Introduction to climate-related disclosures</b>	<b>12</b>
<b>Absolute carbon emissions</b>	<b>18</b>
<b>Carbon to value intensity</b>	<b>19</b>
<b>Disclosure rates</b>	<b>20</b>
<b>Weighted Average Carbon Intensity (WACI)</b>	<b>21</b>
<b>Fossil fuel related activities</b>	<b>22</b>
<b>Fossil fuel reserves exposure</b>	<b>23</b>
<b>Potential emissions from reserves</b>	<b>24</b>
<b>Scenarios</b>	<b>25</b>
<b>Other metrics</b>	<b>27</b>
<b>Brunel Portfolios</b>	<b>30</b>
Global High Alpha Equities	30
Global Sustainable Equities	36
UK Active Equities	42
Emerging Markets Equities	48
Sterling Corporate Bonds	56
PAB Passive Global Equities	65
<b>Disclaimer</b>	<b>72</b>

## Introduction

### Our obligation under TCFD

Our Climate-related Product Reports provide information about the climate risks and impacts of our portfolios. They have been compiled in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and rules and guidance of the Financial Conduct Authority's (FCA).

Brunel has reported on climate-related metrics annually for a number of years, in our Carbon Metric reports, which can be found on our website. Further information about our approach to Responsible Investment (RI), strategy, governance and risks and opportunities can be found in our Climate Progress report, also available on our website.

The Climate-related Product report is designed to provide a better understanding of the impact our portfolios have on the climate. The report outlines various climate metrics for evaluating the potential risks and opportunities related to portfolios. Although we understand the limitations of some of the metrics and benchmarks used within the report, by adopting industry standards the reports offer a way to compare the performance of these portfolios with others across our whole offering, and the wider market.

### Climate risk

Brunel Pension Partnership's mission to invest for a world worth living is encapsulated in its commitment to build Responsible Investment into everything it does. Climate Change was and remains the highest priority of Brunel's RI agenda.

Climate change presents an immediate, systemic and material risk to the ecological, societal, and financial stability of every economy and country on the planet. It has direct implications for our clients and their beneficiaries.

Although we have always viewed climate change as a core part of our fiduciary duty, we are pleased to see the financial services industry's understanding of the nature of climate change develop significantly over the last few years. Most participants now regard it as a foreseeable and materially significant financial risk. Investors are acknowledged to be exposed to the risks and opportunities presented by climate change adaptation and mitigation - managing these impacts is an essential component of investor's fiduciary duty.

#### Our Climate beliefs:

- Climate change presents a systemic and material risk to the ecological, societal and financial stability of every economy and country on the planet and therefore will impact our clients, their beneficiaries and all portfolios.
- Investing to support the Paris goals that deliver a below 2°C temperature increase and pursuing efforts to limit the increase to 1.5°C, is entirely consistent with securing long-term financial returns and is aligned with the best long-term interests of our clients.
- For society to achieve a Net Zero carbon future by 2050 (or before) requires systemic change in the investment industry. Equipping and empowering our clients (and other investors) is central to this change. Given our strengths and our position in the market, we therefore believe that the key objective of our climate policy is to systematically change the investment industry so that it is fit for purpose for a world where temperature rise needs to be kept to well below 2°C, preferably to 1.5°C compared to pre-industrial levels.

## Introduction

### We manage more than we can measure

Brunel's approach to managing climate-related financial risks covers all our investments, and we have made considerable progress across all the asset classes we invest in. Demonstrating progress in all assets classes is complicated as many of the tools and techniques for measuring progress are dependent on publicly available information and are designed for corporate holdings rather than other asset types e.g., property or asset-backed securities.

Our approach to climate risk management is consistent across all our active equity and corporate bond portfolios. Global Sustainable Equities (GSE) differs in its approach to climate opportunities in that the portfolio has a specific objective to pursue such opportunities. GSE also has restricted exposure to certain activities, typical of a product of this kind.

We seek to manage climate risk in each and every portfolio, as well in our own operations, but we are not in a position to quantitatively measure and report progress in all these areas. We prioritise the disclosure metrics for our listed equities and corporate bonds, as this represents two thirds of our asset under management (AUM).

As such Brunel's Diversified Return Fund and Multi-asset Credit both embed climate risk requirements into their design and on-going monitoring. However, both funds contain significant exposure to asset classes where methodologies are still being developed. As Brunel's portfolios are often comprised of multiple funds from different providers, we have opted not including analysis for these portfolios at this time as the lack of consistency could be misleading.

The Climate-related Product report is designed to provide detailed metrics and information regarding individual portfolios. It is recommended that these reports are not read in isolation. It should be considered alongside the Brunel Climate Progress Report, which provides much more information about the approach Brunel takes to climate change matters and how the specifics within this report match up to the strategic objectives of the business.

## Executive summary

### The Gloucestershire Aggregate Portfolio

This report illustrates key Carbon Metrics for the Gloucestershire Aggregate Portfolio, as well as all the associated underlying Brunel Portfolios. The Gloucestershire Aggregate Portfolio is made up of Gloucestershire's share of Brunel Portfolios, weighted by investments as of 31 December 2023.

A custom Strategic Benchmark has been used so that the Gloucestershire Aggregate Portfolio can be measured against a meaningful comparator. This is made up of the individual benchmarks from the Brunel Portfolios and weighted accordingly, as of 31 December 2023.

### Performance Summary

- The Weighted Average Carbon Intensity (WACI) of the Gloucestershire Aggregate Portfolio is below its Strategic Benchmark, with a relative efficiency of +30%.
- Of the underlying Brunel Portfolios within the Aggregate, the highest intensity is the Brunel Emerging Markets Equities Portfolio (244 tCO<sub>2</sub>e/mGBP), while the lowest one is the Brunel Sterling Corporate Bonds Portfolio (92 tCO<sub>2</sub>e/mGBP).
- All underlying Brunel Portfolios within the Aggregate have lower levels of carbon intensity compared to their respective benchmarks.
- The Carbon to Value (C/V) Intensity metric is an aggregation of apportioned carbon emissions of constituents per 1 million invested. The Carbon to Value (C/V) Intensity of the Gloucestershire Aggregate Portfolio is below its Strategic Benchmark, with a relative efficiency of +37%.
- The Gloucestershire Aggregate Portfolio is less exposed to both fossil fuel revenues (0.88% vs 2.21%) and future emissions from reserves (1.30 MtCO<sub>2</sub> vs 3.52 MtCO<sub>2</sub>) than its Strategic Benchmark.
- The Gloucestershire Aggregate Portfolio has lower revenue exposure to fossil fuel related activities, by industry.
- The company disclosures rates are based on Scope 1 emissions, where the rate of companies in the Gloucestershire Aggregate Portfolio for which fully disclosed carbon data was available is 34% (GHG weighted) and 37% (value weighted), indicating scope for improved reporting among investees.
- The aggregate rate of 'full disclosure' for the investment weighted method is highest in the Brunel PAB Passive Global Equities (51%) and lowest in the Brunel Sterling Corporate Bonds (5%).

### For Noting

#### Methodology

Brunel's primary provider of climate and financial data for the product-report calculations is S&P Capital IQ. In preceding years, Brunel used S&P Trucost for the purpose of conducting our carbon metrics reporting. This year we have transitioned to utilising the data analytics services provided by S&P Capital IQ. There exist nuanced differences in each entity's methodology, which account for variances in certain metrics. These subtle yet significant methodological differences are essential in understanding the changes observed in specific metrics. In addition, Brunel has taken methodological decisions based on industry data quality and availability.

You can read more about these methodological changes in the Introduction to climate-related disclosures section.

#### Data Coverage

We found all Brunel equity portfolios to have an 85% coverage rate across all metrics, most in the high 90% range. Our corporate bond portfolio exceeds the minimum coverage threshold of 50% across all metrics.

## The Gloucestershire aggregate portfolio and custom benchmark

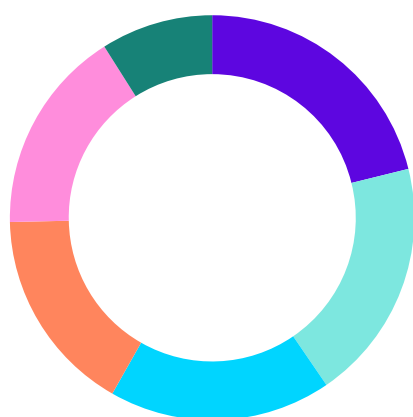
This report includes a variety of carbon metrics, including the weighted average carbon intensity (WACI), fossil fuel activities, fossil fuel reserves, carbon data disclosure rates, absolute emissions and carbon-to-value intensity for each of the Gloucestershire Active and Passive Portfolios.

We also report on the Gloucestershire Aggregate Portfolio. This consists of each of the underlying Gloucestershire Portfolios weighted by investments as of 31 December 2023. Details of this Portfolio are illustrated below.

We have also created a series of Custom Benchmarks, directly proportionate to the portfolios they are assessing, in order to make a meaningful comparator.

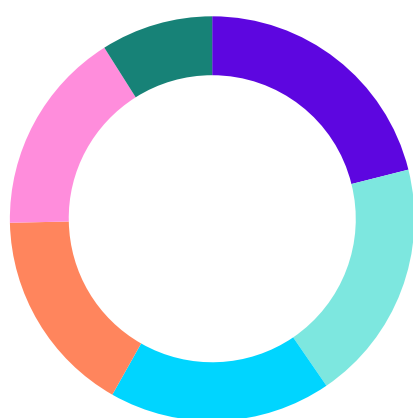
This Custom Benchmark consists of the benchmarks of the underlying Gloucestershire Portfolios.

### Gloucestershire aggregate portfolio



Global High Alpha Equities	21.10%
Global Sustainable Equities	19.35%
UK Active Equities	17.78%
Sterling Corporate Bonds	16.44%
PAB Passive Global Equities	16.36%
Emerging Markets Equities	8.97%

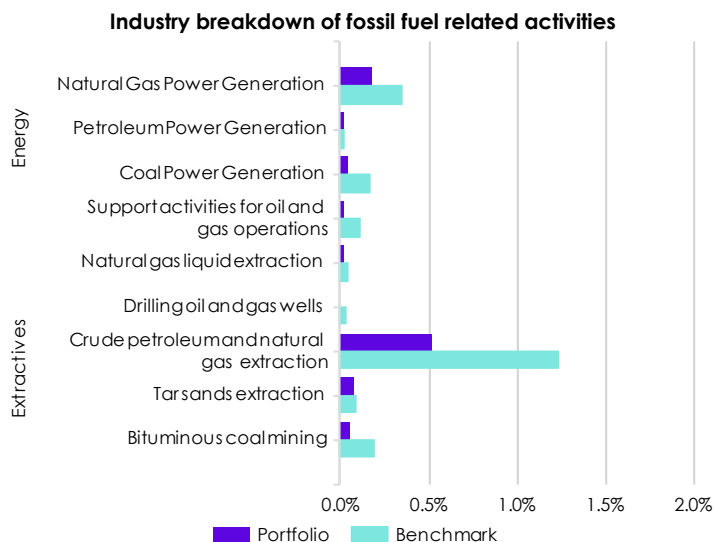
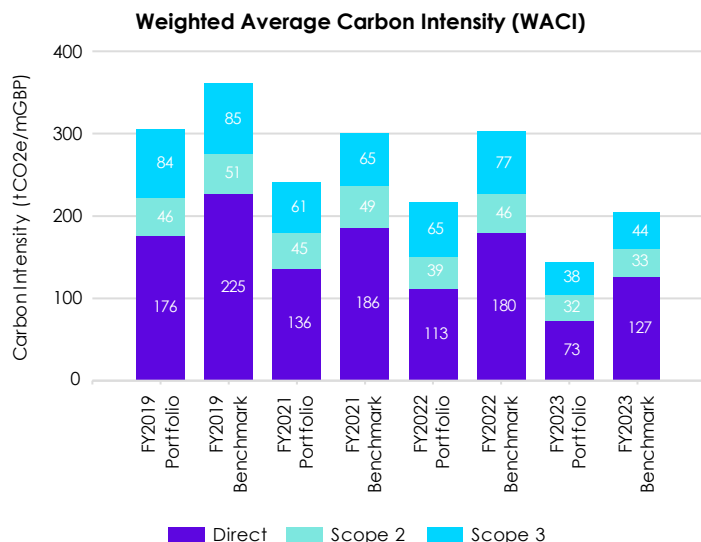
### Gloucestershire custom benchmark



MSCI World	21.10%
MSCI ACWI	19.35%
FTSE All Share ex Inv Tr	17.78%
iBoxx Sterling Non Gilt x	16.44%
FTSE Dev World TR UKPD	16.36%
MSCI Emerging Markets	8.97%



## Gloucestershire Aggregate vs. Gloucestershire Custom BM



### Current year top contributors to WACI

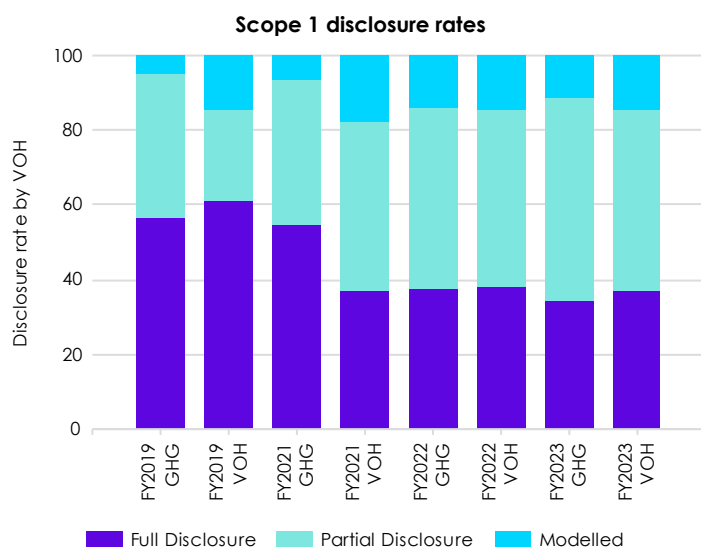
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	1,976	0.40%	-5.23%
NextEra Energy, Inc.	2,570	0.23%	-3.89%
Linde plc	1,483	0.34%	-3.17%
L'Air Liquide S.A.	1,612	0.24%	-2.44%
Republic Services, Inc.	1,934	0.19%	-2.40%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
Shell plc	1.03%	0.17%
BP p.l.c.	0.38%	0.12%
NextEra Energy, Inc.	0.23%	0.10%
Harbour Energy plc	0.09%	0.09%
MEG Energy Corp.	0.08%	0.07%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



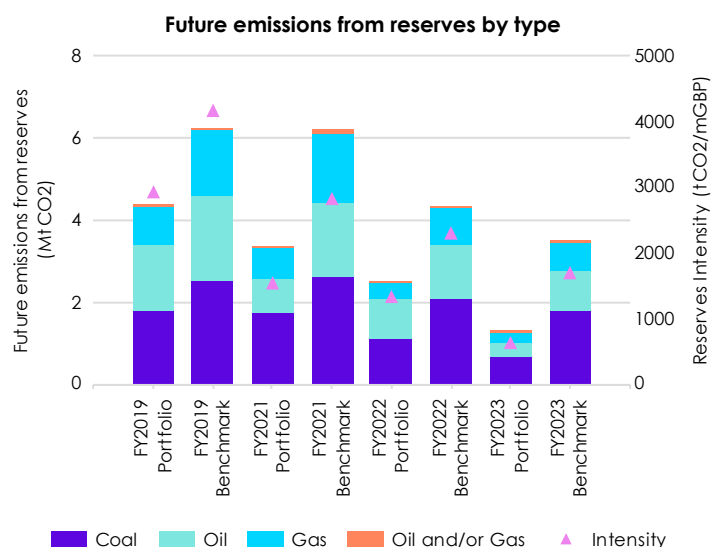
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	34%	37%
Modelled	11%	14%
Partial Disclosure	54%	49%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



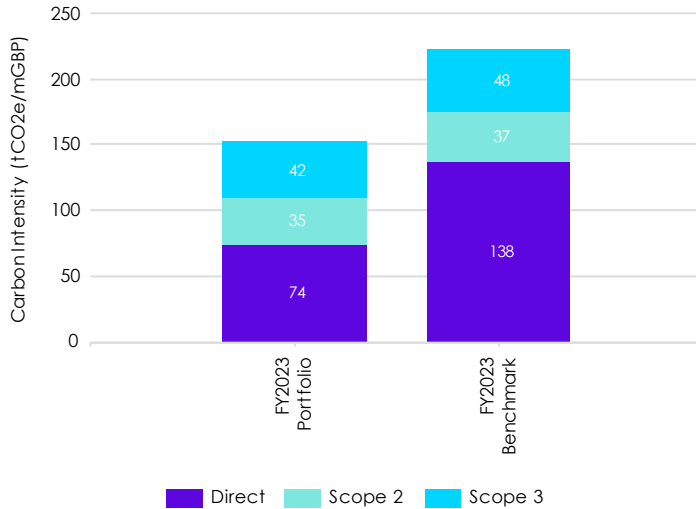
### Future emissions from reserves by type (MtCO)

Source	FY 2022 Port.	FY 2022 Ben.	FY 2023 Port.	FY 2023 Ben.
Coal	1.13	2.07	0.68	1.81
Oil	0.94	1.35	0.35	0.96
Gas	0.41	0.93	0.24	0.74
Oil and/or Gas	0.04	0.01	0.03	0.01

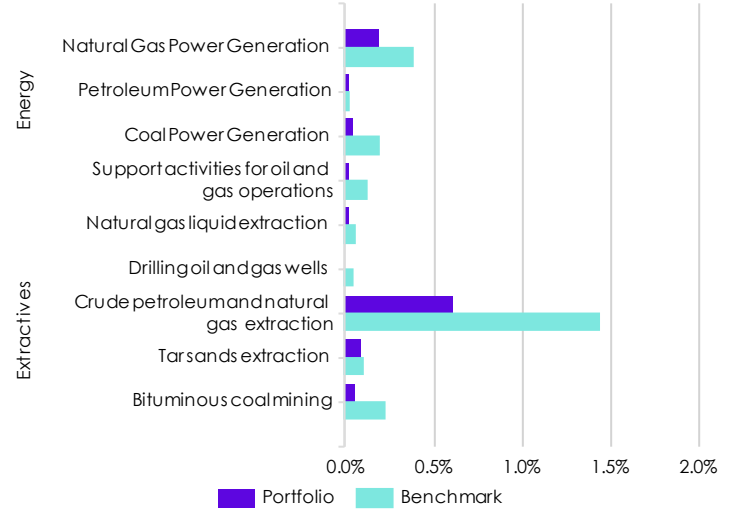
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Gloucestershire Portfolio.

## Gloucestershire Equity Aggregate vs. Gloucestershire Custom BM

Weighted Average Carbon Intensity (WACI)



Industry breakdown of fossil fuel related activities



Current year top contributors to WACI

Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	1,976	0.48%	-5.78%
NextEra Energy, Inc.	2,570	0.27%	-4.31%
Linde plc	1,483	0.40%	-3.50%
L'Air Liquide S.A.	1,612	0.28%	-2.69%
Republic Services, Inc.	1,934	0.23%	-2.66%

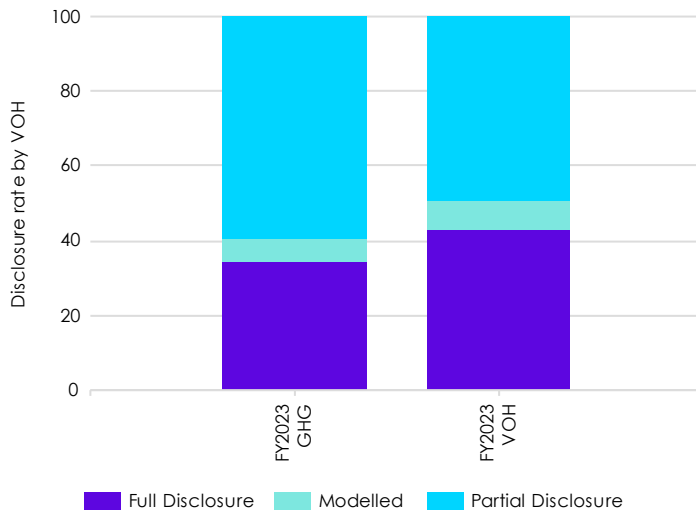
The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
Shell plc	1.22%	0.20%
BP p.l.c.	0.45%	0.14%
NextEra Energy, Inc.	0.27%	0.12%
Harbour Energy plc	0.11%	0.11%
MEG Energy Corp.	0.10%	0.08%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.

Scope 1 disclosure rates



Portfolio disclosure rates by method

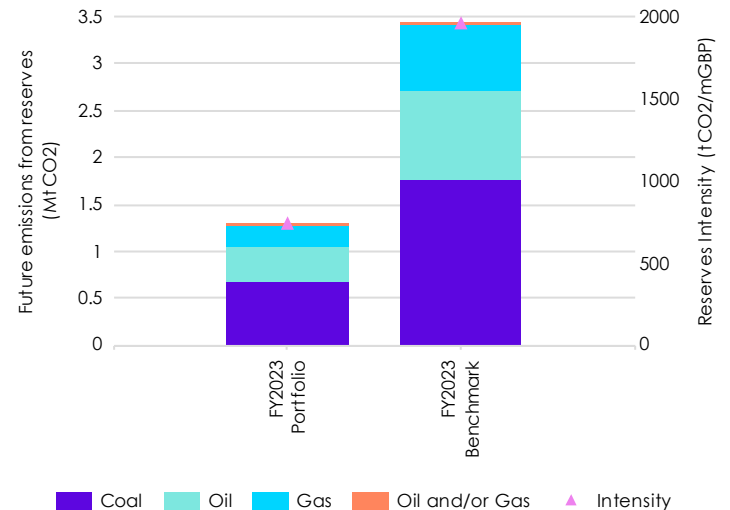
Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	34%	43%
Modelled	6%	8%
Partial Disclosure	60%	49%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

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Future emissions from reserves by type



Future emissions from reserves by type (MtCO2)

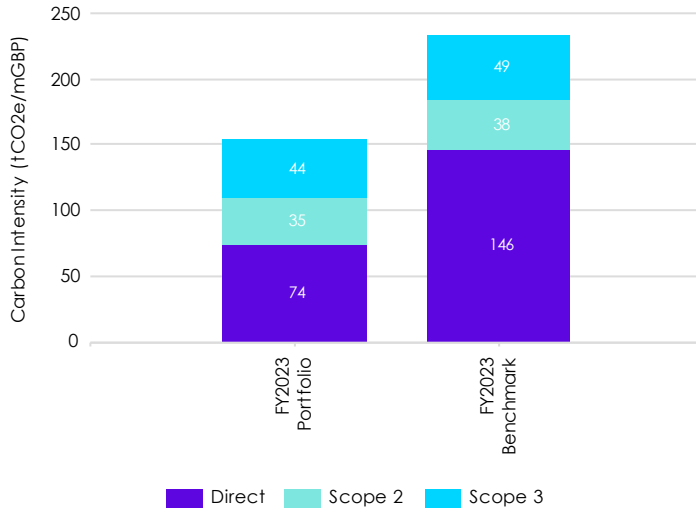
Source	FY 2023 Port.	FY 2023 Ben.
Coal	0.68	1.77
Oil	0.35	0.93
Gas	0.24	0.73
Oil and/or Gas	0.03	0.01

Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Gloucestershire Portfolio.

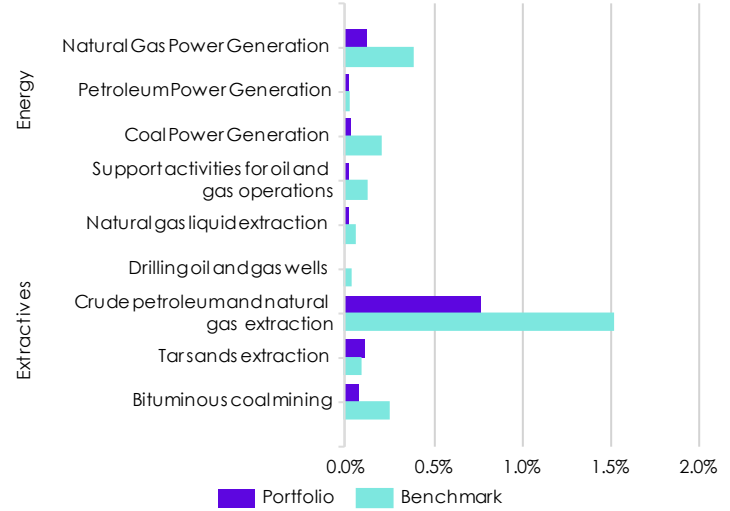


## Gloucestershire Active Equity Aggregate vs. Gloucestershire Custom BM

Weighted Average Carbon Intensity (WACI)



Industry breakdown of fossil fuel related activities



### Current year top contributors to WACI

Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	1,976	0.49%	-5.84%
L'Air Liquide S.A.	1,612	0.35%	-3.32%
Rio Tinto Group	808	0.74%	-3.19%
Republic Services, Inc.	1,934	0.26%	-3.04%
InterContinental Hotels Group	1,022	0.41%	-2.31%

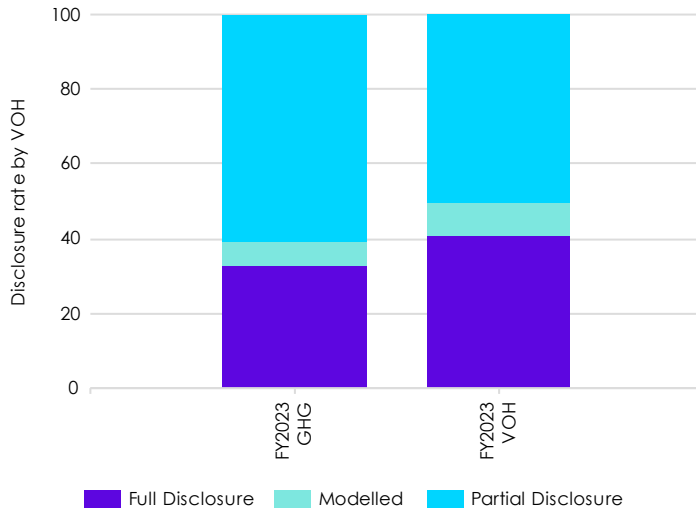
The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
Shell plc	1.52%	0.25%
BP p.l.c.	0.56%	0.18%
Harbour Energy plc	0.14%	0.14%
MEG Energy Corp.	0.12%	0.10%
ConocoPhillips	0.08%	0.08%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.

Scope 1 disclosure rates



### Portfolio disclosure rates by method

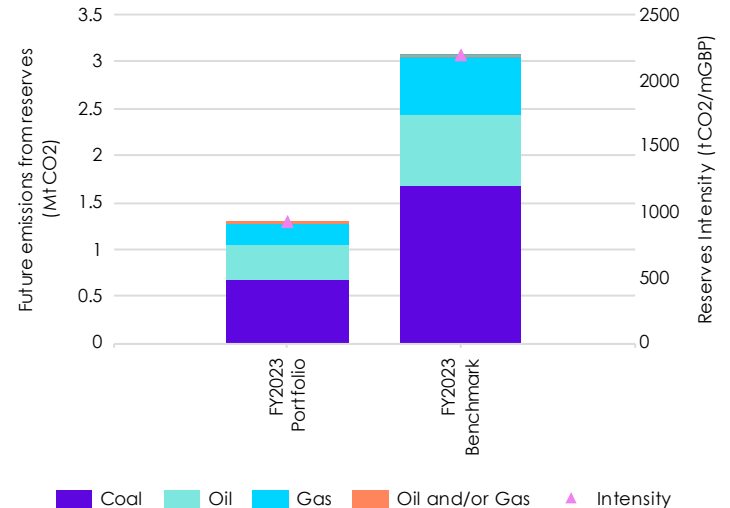
Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	33%	41%
Modelled	7%	9%
Partial Disclosure	60%	50%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.

Future emissions from reserves by type



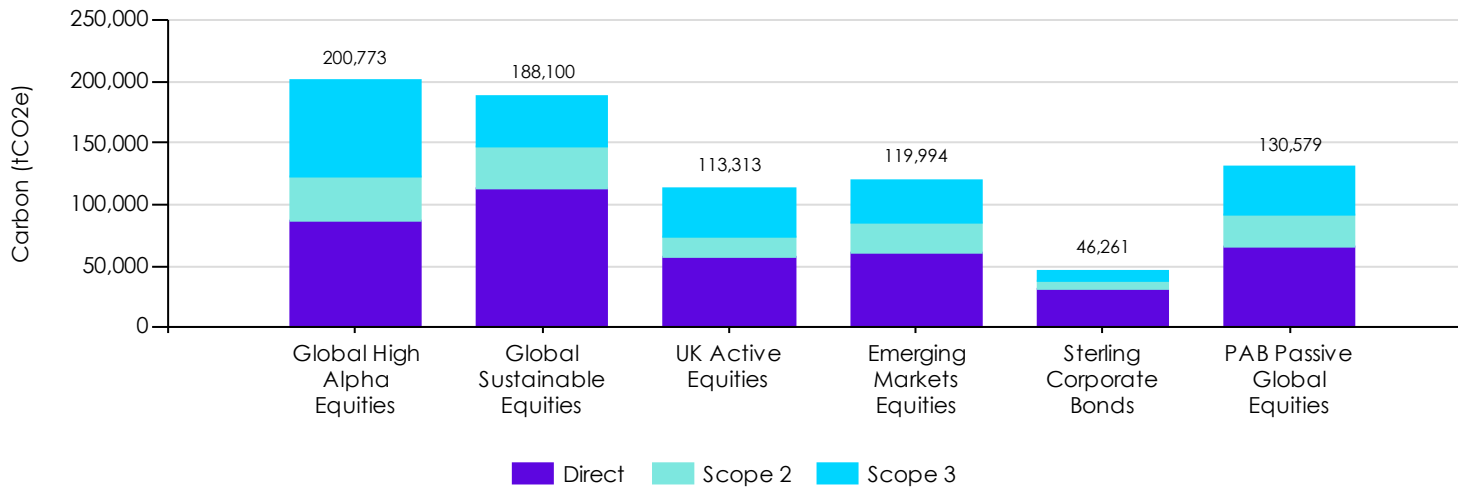
### Future emissions from reserves by type (MtCO2)

Source	FY 2023 Port.	FY 2023 Ben.
Coal	0.68	1.68
Oil	0.35	0.76
Gas	0.24	0.63
Oil and/or Gas	0.03	0.01

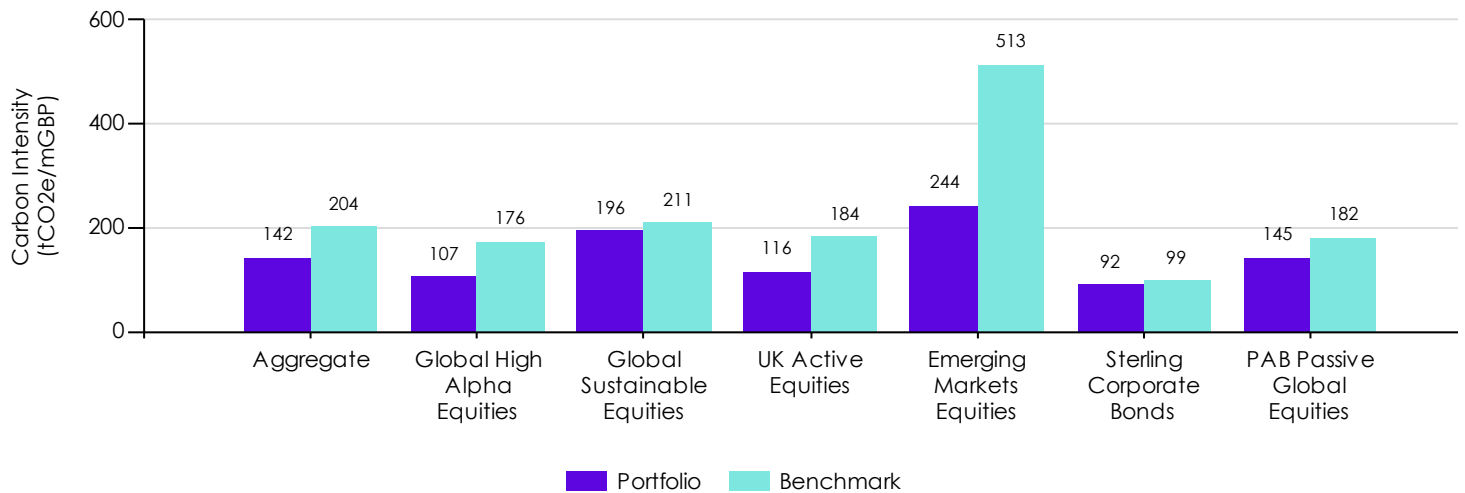
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Gloucestershire Portfolio.

## Dashboard

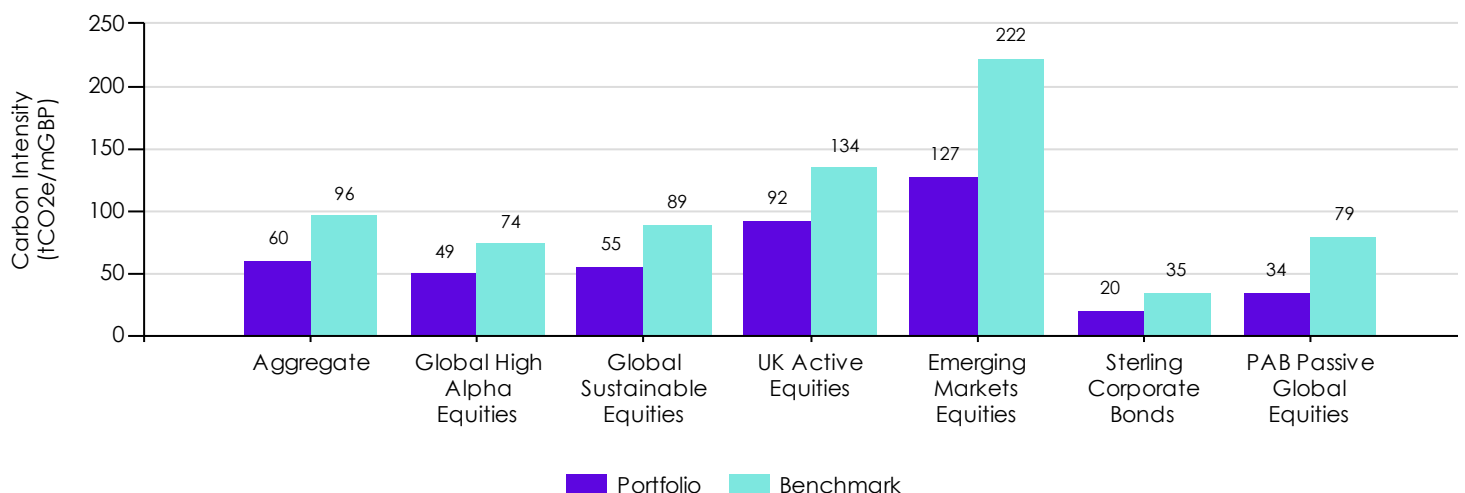
**Absolute carbon footprint by scope**



**Weighted Average Carbon Intensity (WACI)**

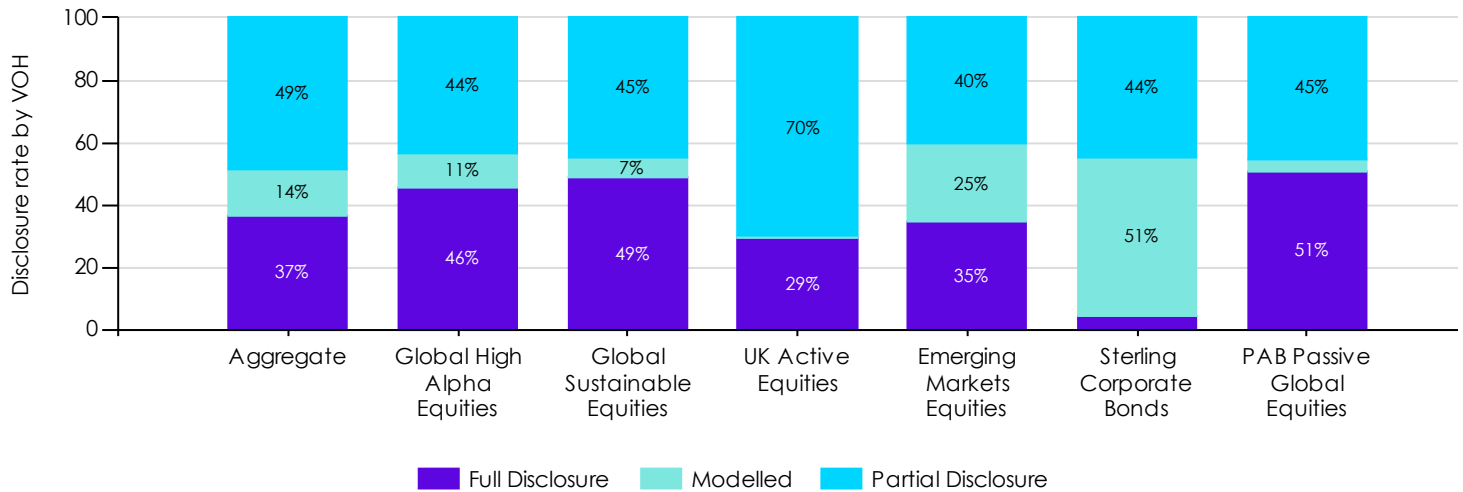


**Carbon to value invested (C/V)**

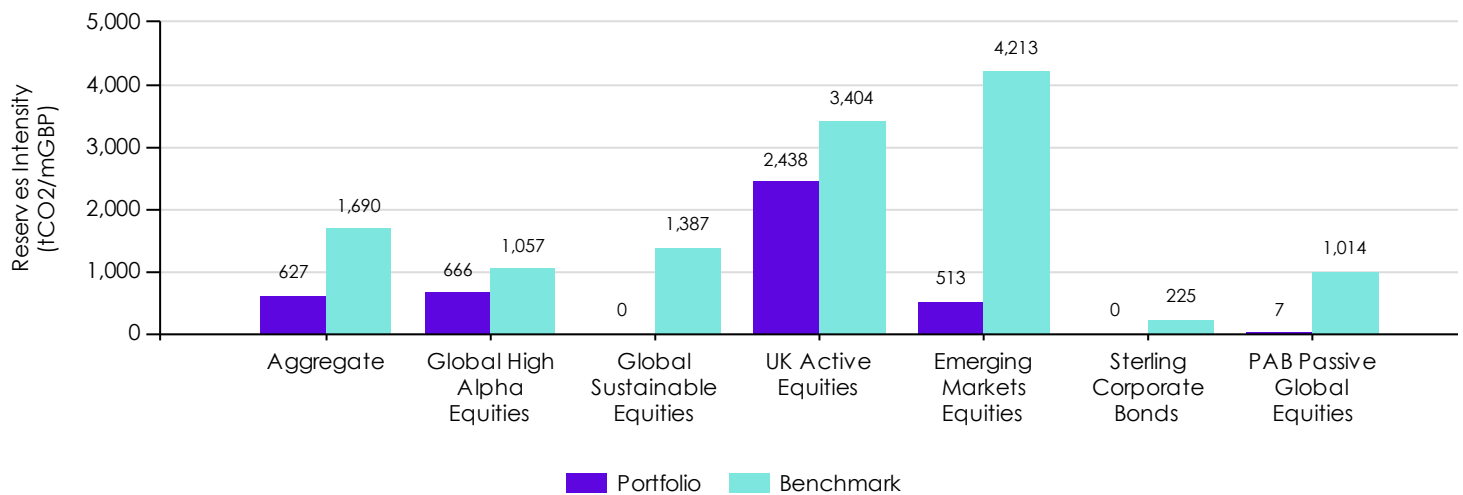


## Dashboard - cont.

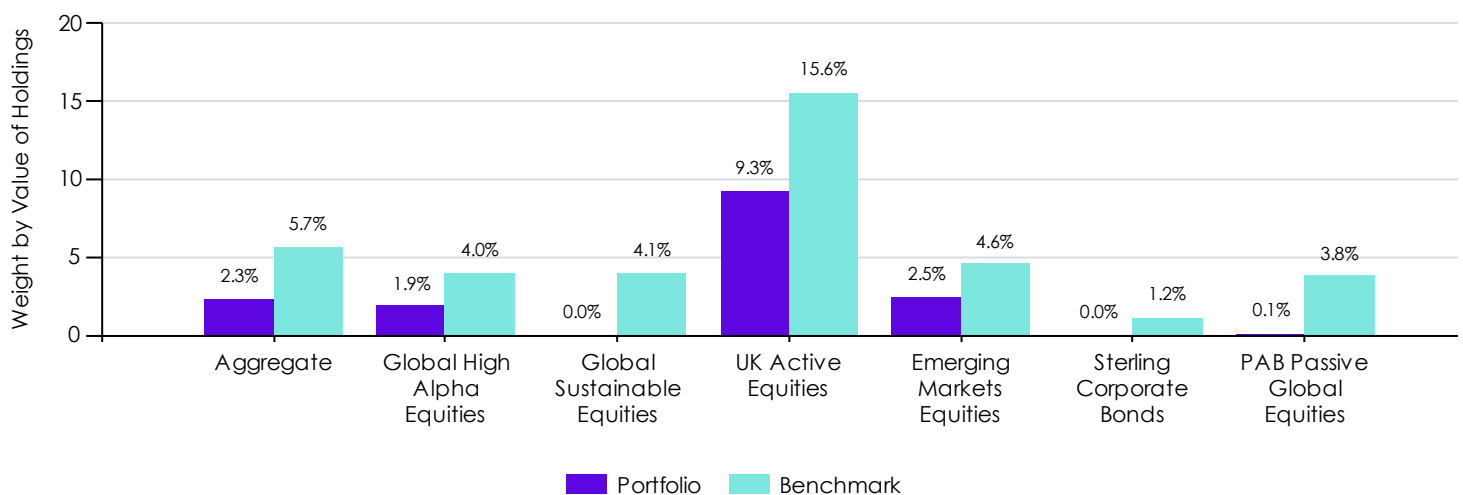
### Scope 1 disclosure rates



### Fossil fuel reserves intensity



### Fossil fuel reserves exposure



## Introduction to climate-related disclosures

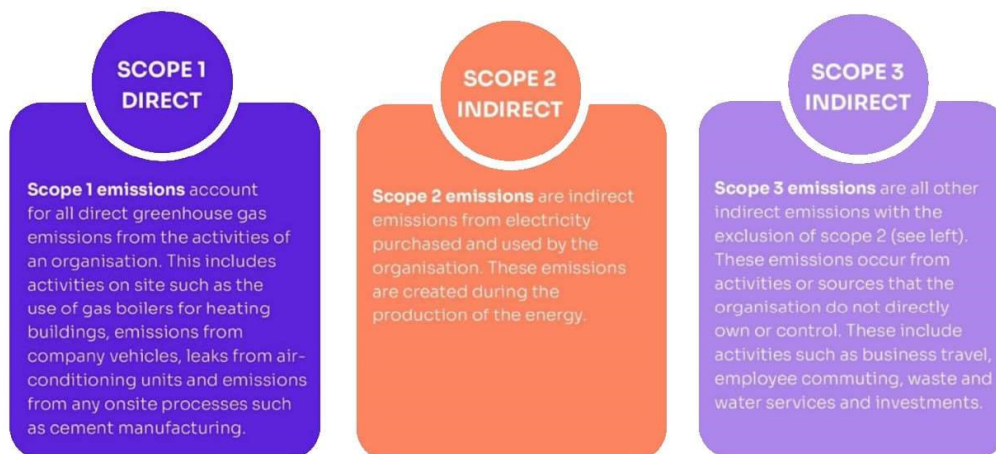
### The Why

Climate change is not only an environmental challenge but a significant financial risk on a global scale. As temperatures continue to increase, climate policies evolve, and new technologies emerge, it becomes crucial for financial markets to have transparent, comprehensive, and high-quality information. This information helps navigate the complexities of climate-related impacts, both in terms of risks and opportunities.

In our climate-related product reports we have disclosed the relevant metrics to meet the FCA content requirements, and further metrics we deem to be appropriate and useful when assessing a climate-related product report.

### Financed Emissions

The following sections will outline the metrics we have included in the product-report covering equities and corporate bonds, showcasing the results and discussing the methodology and limitations of the metrics. Equities and corporate bonds are currently the asset classes included due to the consensus on the applied methodologies. As agreement on approaches and data for more asset types grow, Brunel plans to include these asset categories in future reports.



The emissions boundary used for the product-reports, includes Direct and first-tier Indirect Emissions. "Direct Emissions" are defined as Scope 1 emissions in accordance with the Greenhouse Gas (GHG) Protocol, including additional emissions from a wider range of greenhouse gases relevant to a company's activities. "First-tier Indirect Emissions" are defined as Scope 2 emissions by the GHG Protocol, along with emissions stemming from the company's immediate upstream supply chain, specifically their direct suppliers. This methodology is designed to include important upstream Scope 3 emissions pertinent to the company, while also reducing the issue of double counting Scope 3 emissions.

Due to the timing of data used, we currently only incorporate Scope 2 Location-based data, with the intention of including Scope 2 Market-based data in future iterations of the report.

### Metrics: Not in Isolation

An extended range of climate data is considered throughout the report, including backward and forward-looking metrics. We analyse the overall climate performance of a portfolio through a range of metrics because each metric highlights a different perspective of a portfolios' climate performance.

## Introduction to climate-related disclosures

It is not suitable to view a metric in isolation as a company with a high weighted average carbon intensity (WACI), may be aligned to the Paris Agreement goals and supporting the transition in a hard to abate sector.

It is important to be aware of the shortcomings of climate metrics, in that they can be impacted by currency fluctuations and portfolio changes.

### Data coverage

In our approach, we have established distinct minimum data coverage thresholds for equities and corporate bonds, reflective of the varying degrees of data availability and recency. For equities, we mandate a minimum data coverage of 85% across all metrics. This threshold is informed by the broader availability and recentness of data, permitting the use of up to three years of backward-looking fiscal year data. The higher threshold ensures the reliability and relevance of our equity analysis, leveraging the extensive data accessible in public markets.

Conversely, corporate bonds are subject to a lower minimum data coverage threshold of 50% across all metrics. This adjustment acknowledges the challenges associated with data availability and recency in this asset class, stemming primarily from the inclusion of private companies. The mixed nature of data sources, combining public and private company information, introduces variability in reporting standards. Private companies often face less stringent reporting requirements, impacting both the recency and availability of comprehensive data. This necessitates a more conservative threshold to accommodate the disparate data quality and completeness in our analysis.

We found all equity portfolios to have an 85% coverage rate across all metrics, most in the high 90% range. Our corporate bond portfolio exceeds the minimum coverage threshold of 50% across all metrics.

To enhance our data coverage across these asset classes and emissions, we are implementing several strategies. These include intensifying our engagement with data providers to address gaps, investing in analytical tools, and reviewing our data sources to continuously improve our data coverage quality.

We are committed to transparency in our reporting process. Should any segment of our analysis fall below the set minimum data coverage thresholds, we will clearly denote these instances, outlining their potential implications on the reliability of our findings. This approach ensures our clients are fully informed of the data's scope and limitations impacting our analysis.

### Metrics Overview

Regulation requires the inclusion of metrics used in the assessment of climate-related risks and opportunities that we believe are useful to investors. The metrics include but are not limited to the Carbon Footprint, Weighted Average Carbon Intensity and Total Emissions of each portfolio, as required by the climate disclosure rules. These rules also require the inclusion of scenario analysis metrics where a portfolio has concentrated exposures or high exposures to carbon intensive sectors. Whilst we do not believe we are required to include these metrics, on the basis of the above description, we have chosen to do so voluntarily.

In addition, it is advised to consider providing other metrics we believe are useful for decision-making. As such we have chosen to include metrics related to fossil fuel reserves to evaluate both the immediate revenue exposure from fossil fuel activities and the associated risks from unextracted reserves. The metrics identify the potential risk of stranded assets, which may arise from regulatory changes or shifts in market dynamics favouring alternative energy sources. By highlighting the environmental risks, the fossil fuel reserve metrics helps to inform the investment decision-making process.

The summary table below gives a brief synopsis of each metric. A full description of each metric is included in the following pages.

## Introduction to climate-related disclosures

### Backward Looking Metrics

Metric	Unit	What does it tell me?	Benefits	Limitations	How we use it
<b>Absolute Emissions</b>	tCO <sub>2</sub> e	The absolute greenhouse gas emissions associated with a portfolio, expressed in tons of CO <sub>2</sub> e.	Investors ownership of emissions Consistent with the GHG Protocol	Size of portfolio can skew results Subject to market fluctuations	Portfolio and company level  (Equity and Corporate Bonds)
<b>Emissions Intensity</b>	tCO <sub>2</sub> e/mGBP	Emissions exposure per unit of revenue or value-of-holdings	Standard scope emissions data used Normalised for size, allowing comparability across portfolios.	Sensitive to market fluctuations	Portfolio and company level  (Equity and Corporate Bonds)
<b>Disclosure</b>	%	Percentage disclosure by value-of-holdings or greenhouse gas emissions	Standard scope emissions data inputs	Currently only based on CO <sub>2</sub> Scope 1 Disclosure	Portfolio and company level  (Equity and Corporate Bonds)

### Forward Looking Metrics

Metric	Unit	What does it tell me?	Benefits	Limitations	How we use it
<b>Paris Alignment</b>	°C	Climate warming scenario	Track goal of limiting global warming to below 2°C	SDA and GEVA approach used Volatility in underlying data Based on multiple assumptions	Portfolio and company level (Equity and Corporate Bonds)
<b>Carbon Earnings-at-Risk</b>	%	Unpriced Carbon Cost as % EBITDA	Impact to company earnings today if companies had to pay a future price	Present-day financials and emissions used Carbon prices are estimated based on hypothetical future scenarios	Portfolio and company level (Equity and Corporate Bonds)
<b>Physical Risk</b>	%	Annual weighted average asset value	Financial costs arising from changes in all hazard exposures vs the historical baseline	Based on assumed asset value of all known assets	Portfolio and company level (Equity and Corporate Bonds)
<b>Fossil Fuel Reserves</b>	Exposure (%) Intensity (tCO <sub>2</sub> e/mGBP)  Future emissions (MtCO <sub>2</sub> e)	Proven (>90%) and probable (>50%) reserves	Assess the potential risk of stranded assets	Based on disclosure	Portfolio and company level (Equity and Corporate Bonds)



# Introduction to climate-related disclosures

## Methodological Considerations

### Apportioning Denominator and Data Availability

Brunel's primary provider of climate and financial data for the product-report calculations is S&P Capital IQ.

In preceding years, Brunel used S&P Trucost for the purpose of conducting our carbon metrics reporting. This year, however, we have transitioned to utilising the data analytics services provided by S&P Capital IQ. Despite both Capital IQ and Trucost being integral components of the S&P product suite, there exist nuanced differences in their methodologies, which account for variances in certain metrics, such as the weighted average carbon intensity. In addition, Brunel has taken methodological decisions based on industry data quality and availability.

The methodological distinctions can be attributed to several factors, including:

- The level of data pertaining to the corporate tree of issuers.
- Variations in exchange rates.
- Averages specific to industry sectors.
- Proxies for the Enterprise Value Including Cash (EVIC) of private companies.

These subtle yet significant methodological differences are essential in understanding the changes observed in specific metrics.

Climate data is continuously updated to incorporate the latest relevant data publicly disclosed by companies. Therefore, the information available at a specific point in time may differ in subsequent updates due to historical revisions, new information, and enhancements in methodology.

When calculating an investor's 'ownership' of emissions, we use enterprise value including cash (EVIC) as the appropriate apportioning metric.

### Carbon Intensity

At present, we utilise Revenue as the denominator in our Weighted Average Carbon Intensity (WACI) metric, following the current recommendations the Partnership for Carbon Accounting Financials (PCAF Standard). However, in our future reports, we are considering presenting a WACI denominated by Enterprise Value Including Cash (EVIC) alongside our current Revenue-based WACI. This evolution in our reporting strategy is motivated by the necessity to align with the EU's defined WACI definition, which stipulate the use of EVIC, to ensure it is in accordance with the EU Paris-aligned benchmark criteria. By displaying both the EVIC and Revenue denominated WACIs, we aim to provide a more nuanced and comprehensive understanding of our carbon intensity, recognising that the different denominators may offer varied insights.

### Forward looking scenarios

This year's product report sees the addition of new forward looking metrics including Paris Alignment to show the climate warming scenario, and two types of climate value-at-risk metrics namely Physical Risk and Carbon Earnings-at-Risk that focuses more on transition risks.

We use Carbon Earnings at Risk and Physical Risk Financial Impact Composite Score as two types of Value-at-Risk metrics following S&P's methodology. The Carbon Earnings at Risk metrics focuses more on the financial implications of transitioning to a low-carbon economy, specifically regarding carbon pricing. This is crucial for understanding how policy changes, technological advancements, and shifts in consumer preferences towards more sustainable options might impact a company's financial performance. The Physical Risk Financial Impact Composite Score addresses the other side of the climate risk spectrum by quantifying the potential financial impacts of physical climate risks. These risks include the effects of extreme

## Introduction to climate-related disclosures

weather events and long-term shifts in climate patterns on company assets, supply chains, and overall business operations.

It's important to acknowledge that the industry is currently developing a variety of scenarios and portfolio temperature metrics. We recommend exercising care when comparing scores between different methodologies at this point in time.

### Paris Alignment

The Paris Alignment metrics describes the climate transition pathway or trajectory each company is expected to align to keep warming below 2°C, based on historic emissions trends and company targets.

In order to aggregate the Paris Alignment metric up to portfolio level and improve company coverage two methodologies are utilised. Namely the Sectoral Decarbonisation Approach (SDA) and GHG per Emissions of Value Added (GEVA).

The SDA targets companies engaged in high-emission, uniform business activities, leveraging defined carbon budgets for assessment as defined by the Science Based Target Initiative (SBTi).

Conversely, the GEVA method is suited for companies operating in sectors with lower emissions and more diverse activities, lacking a specific carbon budget.

The GEVA model broadens the scope of applicable companies, improving the overall issuer coverage. Nonetheless, given its reliance on gross profit for calculations and extensive use of modelling, it's important to acknowledge the possibility of misleading conclusions regarding scenario alignment, especially when employing the GEVA method.

The parameters for the SDA assessment offer an upper limit of 3°C warming, and for the GEVA method, the limit extends to 5°C. When these methodologies are combined, the highest level of climate warming scenario observable at the portfolio level is constrained to 3°C.

### Physical Risk

The Physical Risk methodology assesses the potential impact of climate change on a company's physical assets.

Companies exposed to extreme weather events and the physical impacts of climate change will likely see increasingly significant financial costs over the coming decades.

The physical risk metrics highlights the financial impact at the company level of the weighted average financial impact for all assets linked to the company, weighted by the estimated value of the assets.

Shared Socioeconomic Pathways (SSPs) are climate change scenarios of projected socioeconomic global changes up to 2100 as defined in the IPCC Sixth Assessment Report on climate change in 2021.

These projections are based on three climate scenarios:

- High Climate Change Scenario (SSP5-8.5): Low mitigation scenario in which total greenhouse gas emissions triple by 2075 and global average temperatures rise by 3.3-5.7 °C by 2100.
- Medium Climate Change Scenario (SSP2-4.5): Strong mitigation scenario in which total greenhouse gas emissions stabilise at current levels until 2050 and then decline to 2100. This scenario is expected to result in global average temperatures rising by 2.1-3.5 °C by 2100.
- Low Climate Change Scenario (SSP1-2.6): Aggressive mitigation scenario in which total greenhouse gas emission reduce to net zero by 2050, resulting in global average temperatures rising by 1.3-2.4 °C by 2100, consistent with the goals of the Paris Agreement.

# Introduction to climate-related disclosures

## Carbon Earnings at Risk

The Carbon Earnings-at-Risk metric gauges the potential financial consequences of carbon pricing at a company or portfolio level, across various possible future scenarios. It helps separate the specific risks related to carbon pricing from broader carbon-related risks, such as the physical impacts of climate change or the risk of assets becoming stranded.

It provides insight into the implications of future carbon pricing policies for a company using its present-day financials and emissions. Only the future carbon price is projected forward based on scenarios from the International Energy Agency (IEA) and current carbon prices (e.g. global emissions trading schemes, fossil fuel and carbon taxes).

Future carbon pricing looks at three scenarios:

- High: Represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C above pre-industrial levels by 2100 (the Paris Agreement).
- Medium: Assumes that policies will be implemented to reduce greenhouse gas emissions and limit climate change to 2°C in the long term, but with action delayed in the short term.
- Low: Represents the full implementation of country Nationally Determined Contributions under the Paris Agreement.

## The Entity Report

The product-report compliments the entity report, which outlines Brunel's overall approach to governance, strategy, and risk management under climate-related disclosures.

## What next?

As outlined above, we're set on enhancing the quality and completeness of our disclosures by including Scope 2 Market-based data in future iterations of the report. Recognising the current shortcoming of metrics, we also plan on adding EVIC alongside our current Revenue-based WACI, while improving data gathering and analysis, and keeping our practices under regular review to stay aligned with industry practice.

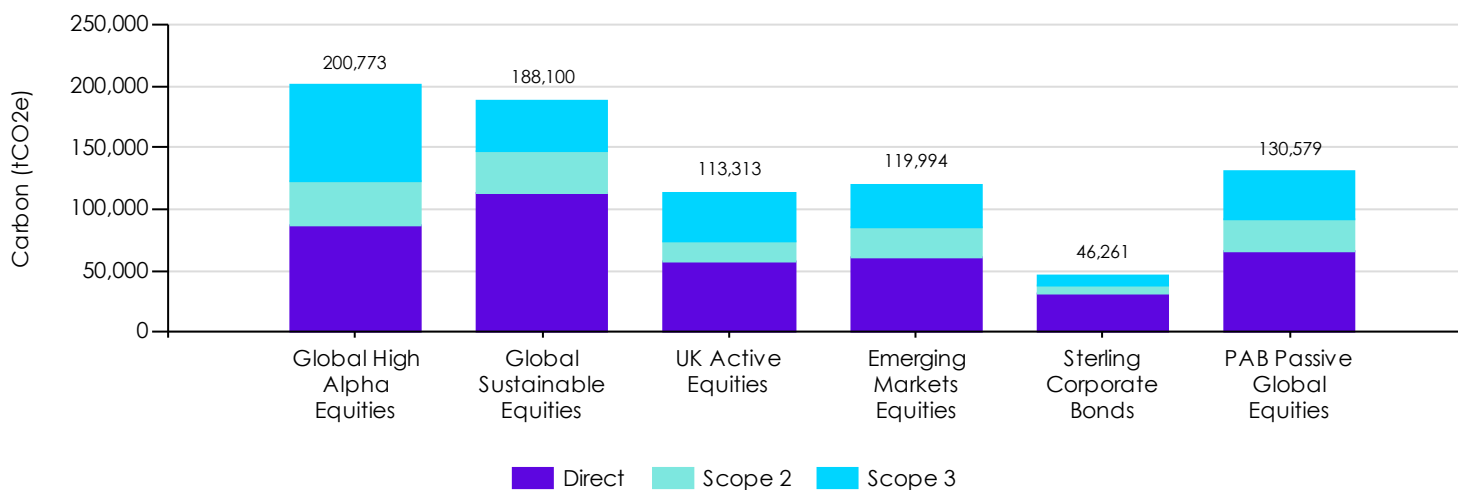
Our aim is more than just meeting expectations; we're committed to enhancing transparency and reliability. We will continue to work with our data partners to review and improve methodology, in line with data availability and regulatory requirements. This reflects our dedication to high standards of accountability and regulatory compliance, helping us improve our operations and strengthen stakeholder trust.

## Absolute carbon emissions

Absolute carbon emissions show a portfolio's overall contribution to global greenhouse gas (GHG) levels. It quantifies an investors responsibility for carbon emissions based on the level of capital invested in companies. The higher percentage holding in a company within a portfolio, the more of its emissions are 'owned'.

Absolute emissions for different portfolios cannot be compared on a like for like basis because size can skew the results. Year on year comparisons can be distorted by fluctuations in company value impacting the apportioned emissions.

**Absolute carbon footprint by scope**



**Direct (emissions)** - GHG Protocol's scope 1 emissions, plus any other emissions derived from a wider range of greenhouse gases relevant to a company's operations . Scope 1 emissions are those directly emitting sources that are owned or controlled by a company, for example, produced by the internal combustion engines of a trucking company's lorry fleet.

**Scope 2 (emissions)** - from the consumption of purchased electricity, steam, or other sources of energy generated upstream from a company's direct operations.

**First Tier Scope 3 (emissions)** - the company's first-tier upstream supply chain - the emissions of their direct suppliers.

## Carbon to value intensity

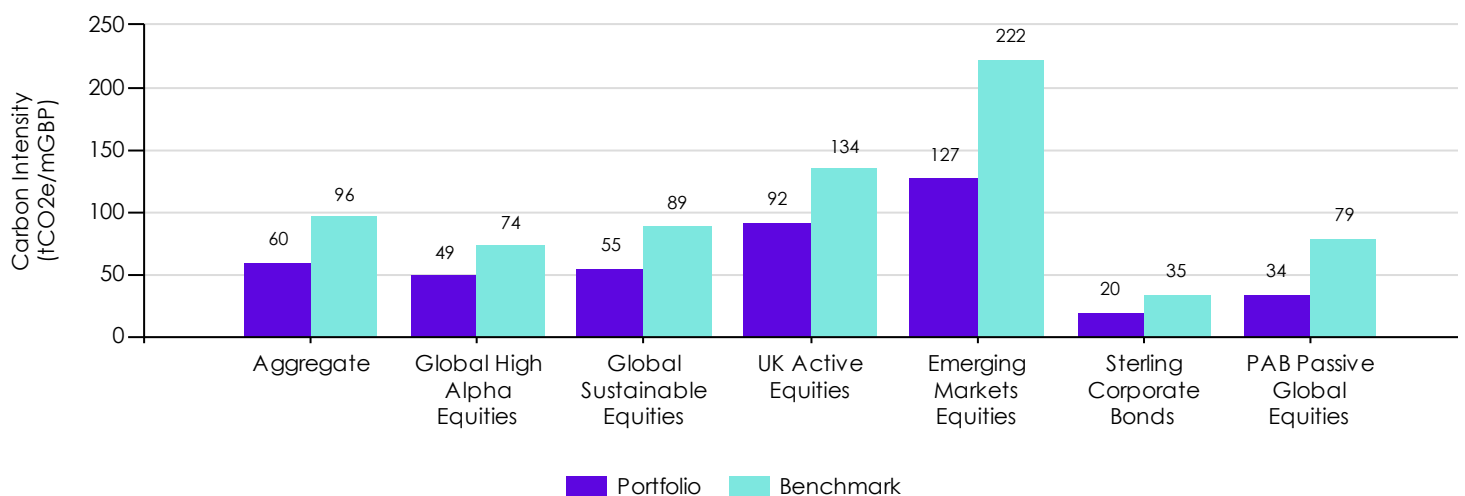
Carbon to value intensity shows the GHG emissions you own divided by the value of your holdings.

It allows for comparisons across investments of different sizes, time periods and indices, as it provides a figure for greenhouse gas impact per 1 million invested.

The picture painted by carbon to value intensity is similar to that of weighted carbon average intensity (WACI) but this metric is about the emissions you own within a portfolio, the WACI is an indicator of the carbon risk a portfolio is exposed to.

This metric is sensitive to swings in market capitalisation, which can limit the value of year-on-year comparisons.

**Carbon to value invested (C/V)**



## Disclosure rates

Disclosure rates categorise organisations based on their voluntary climate related disclosures. Disclosure is provided on an investment weighted (Value of Holdings) and greenhouse gas weighted basis (GHG).

Currently the disclosure analysis is based on scope 1 emissions only.

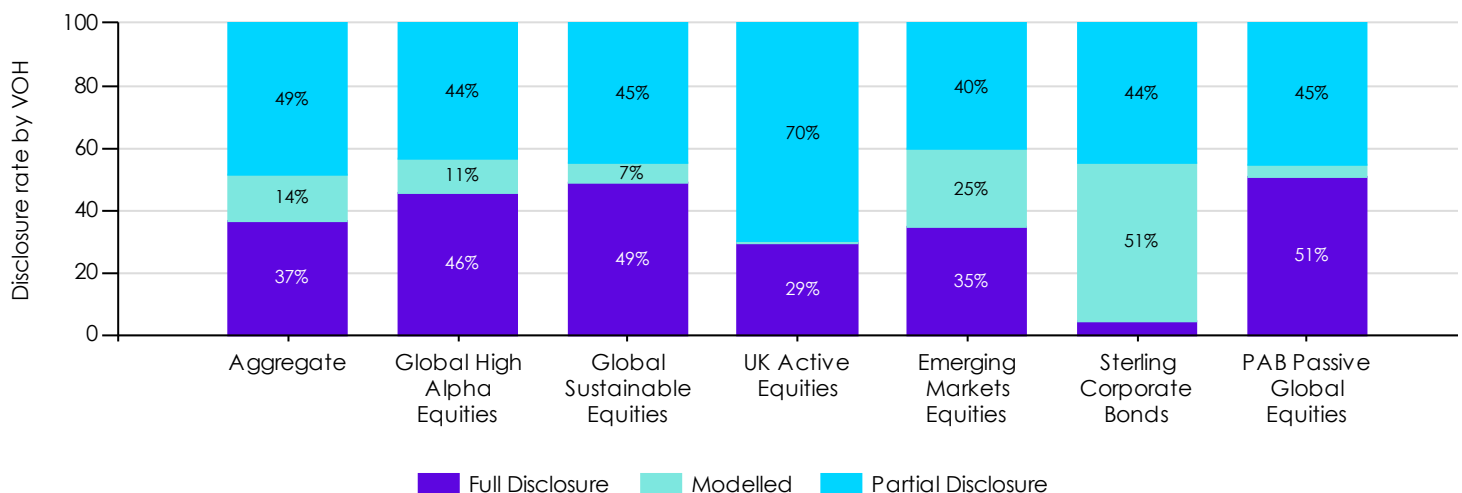
To determine the carbon footprints and associated metrics company information is collected such as disclosure around greenhouse gas emissions and business activities. A variety of sources are used to collect this data such as annual reports and financial statements, regulatory filings, Corporate Social Responsibility reports and information published on company websites.

In the absence of this data, S&P uses what is known as an 'input-output model' to estimate as best as possible the data for a particular company. This model combines industry-specific environmental impact data alongside macroeconomic data. Sometimes a company reports some carbon or business activity data; in which case S&P can partially model the company's footprints and metrics. In the absence of usable or up to date disclosures S&P fully models a company's footprint and metrics.

The methodology has been updated to reflect more granular disclosures. Companies must now be disclosing emissions across the different Kyoto protocol gases in order to be classified as 'full disclosure', whereas previously only an aggregate emissions figure was required.

Brunel's public policy position is to call for mandatory direct disclosure of scope 1, 2 and material scope 3 emissions data.

**Scope 1 disclosure rates**



**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.

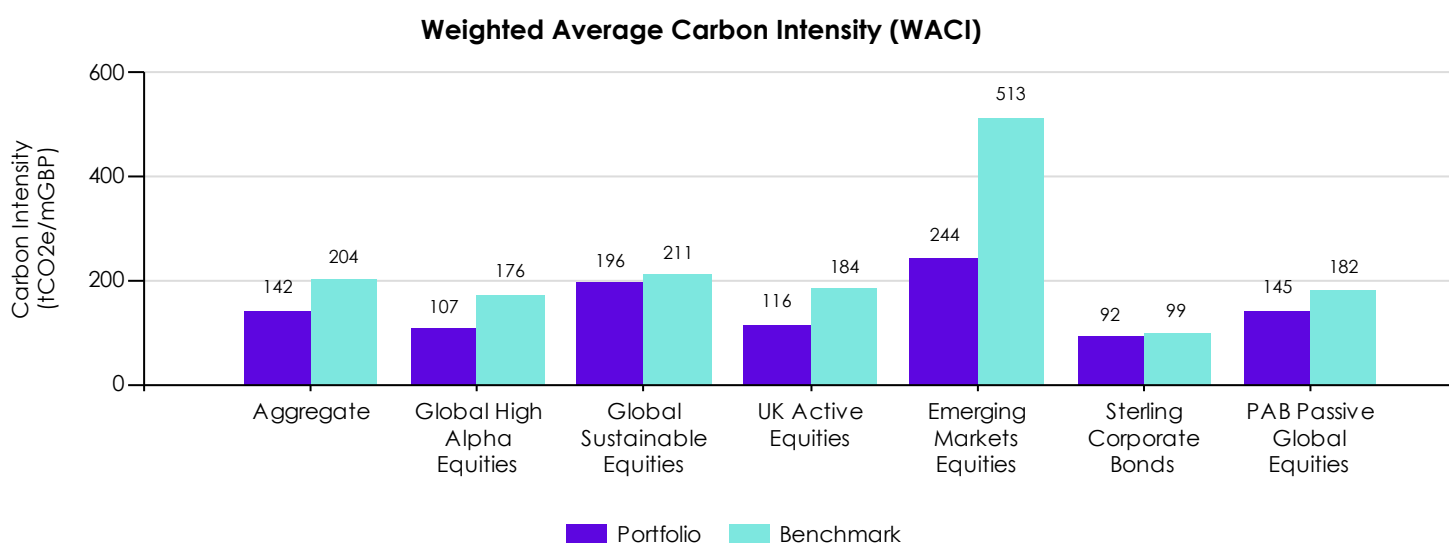


## Weighted Average Carbon Intensity (WACI)

WACI shows a portfolio's exposure to carbon intensive companies; it is an indicator of the carbon risk a portfolio is exposed to. This measure is determined by taking the carbon intensity of each company and weighting it based on its holding size within the portfolio. The relevant 2019 portfolio benchmark forms the baseline, unless otherwise stated.

WACI is one of the measures recommended by TCFD because carbon intensive companies are more likely to be exposed to potential carbon regulations and carbon pricing. It is a useful indicator of potential exposure to transition risks such as policy interventions and changing consumer behaviours relative to other portfolios or benchmarks.

As with all metrics there are limitations, WACI does not link to ownership, as revenue is used WACI favours those with high prices for service and products, it is also sensitive to currency exchange rate.



Portfolio	Reduction %	2023 Portfolio	2019 Baseline
Aggregate	60.57%	142	361
<b>Active Portfolios</b>			
Global High Alpha Equities	64.55%	107	301
Global Sustainable Equities	41.24%	196	334
UK Active Equities	58.71%	116	282
Emerging Markets Equities	57.16%	244	570
Sterling Corporate Bonds <sup>1</sup>	49.88%	92	184
<b>Passive Portfolios</b>			
PAB Passive Global Equities	52.24%	145	303

<sup>1</sup> This Portfolio has a baseline of 31 December 2021

## Fossil fuel related activities

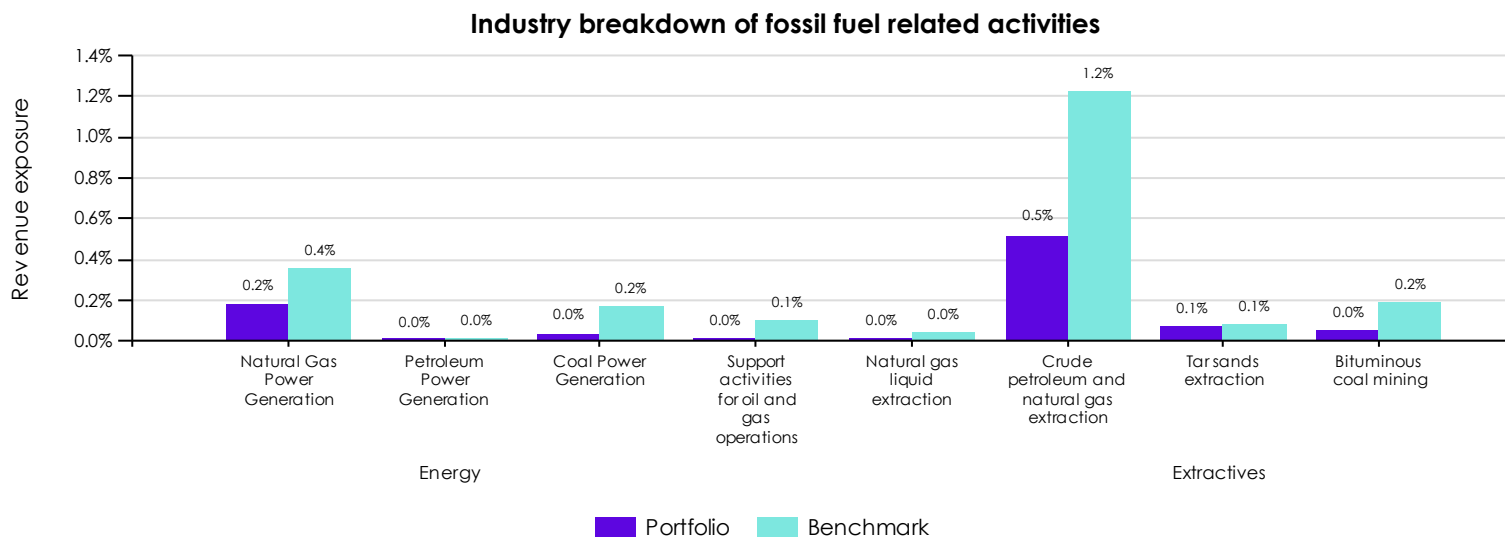
### Potentially Stranded Assets

It is important to identify exposure to business activities in extractives industries to assess the potential risk of 'stranded assets'. Stranded assets are assets that may suffer premature write-downs and may even become obsolete due to changes in policy or consumer behaviour. We can identify the exposure to stranded asset risk by considering the fossil fuel related activities of the underlying companies within our portfolios or, considering fossil fuel reserves.

The fossil fuel related activities metric shows the percentage of revenues that are engaged in fossil fuel related activities. It identifies companies with exposure to fossil fuel related energy generation (gas, petrol and coal power) and fossil fuel related extraction activities. This assesses the revenue exposure that each company has to these activities - and aggregates this to an overall portfolio assessment.

We illustrate this revenue exposure for all Gloucestershire Portfolios and their respective benchmarks. We also provide an assessment of the Gloucestershire Aggregate Portfolio.

This metric is liable to fluctuations of revenue.



**Proven reserves exposure** - have a > 90% chance of being present

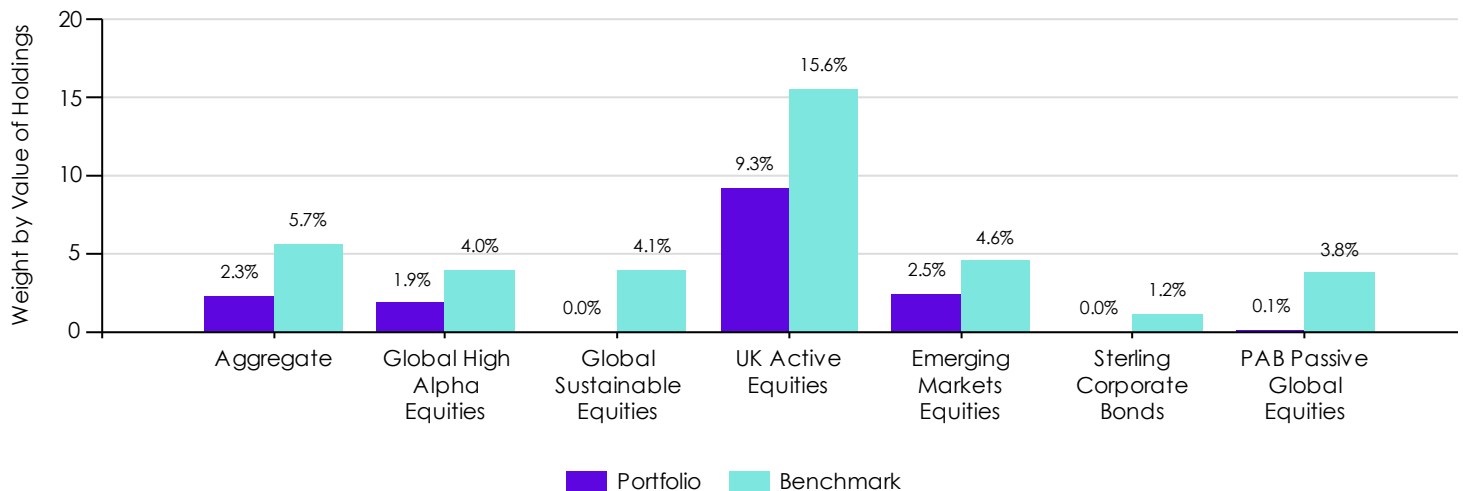
**Probable reserves exposure** - have a >50% chance of being present

## Fossil fuel reserves exposure

The fossil fuel reserves exposure metric looks at exposure to fossil fuels that have not been realised by an organisation. It supports the identification of potential stranded assets. Fossil fuel reserves exposure give us a measure of companies that have disclosed their 'proven' reserves, as well as capturing companies that have 'probable' fossil fuel reserves.

We identify companies that have both proven and probable reserves - and can look at the aggregate exposure within each of our portfolios, as well as the Brunel Aggregate Portfolio. Each portfolio is illustrated in this report against its respective benchmark.

**Fossil fuel reserves exposure**



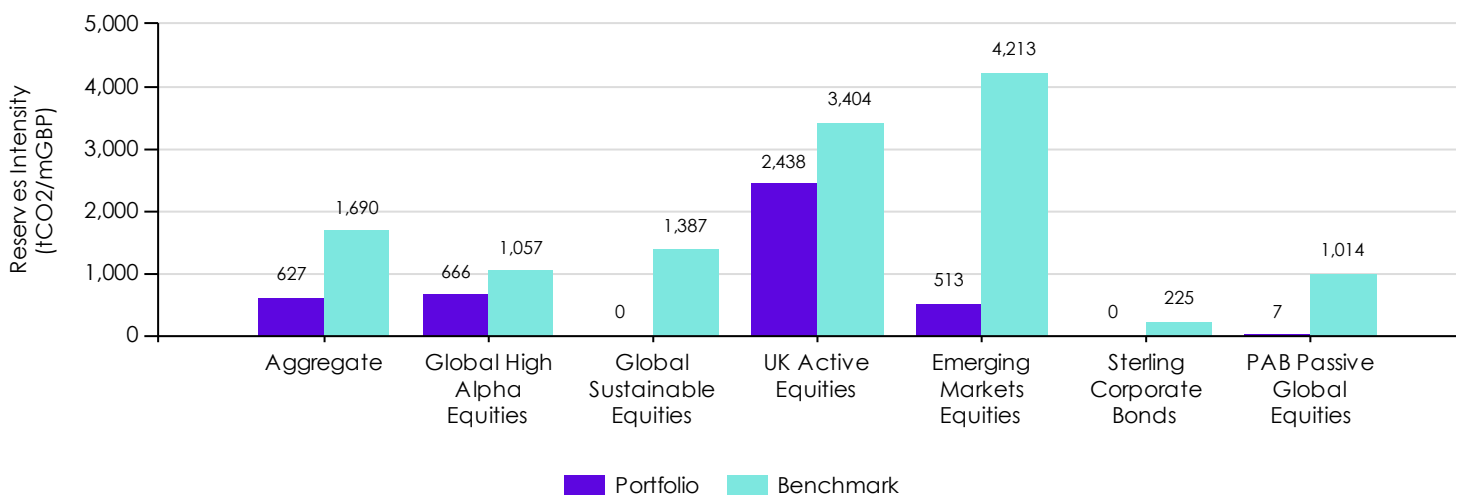
## Potential emissions from reserves

Taking the reserves exposures previously discussed, we can look at an assessment of potential future emissions that may incur from these reserves being realised. This metric is not included in the WACI figure (which focuses on current intensity) - and so it is an important assessment of company's potential contribution to emissions via its stockpile of fossil fuels.

We have been able to assess the potential emissions associated with the proven and probable reserves for companies within our portfolios, as well as an overall portfolio assessment. The reserves intensity highlights the risk of stranded assets across different portfolios, expressed on a basis of per GBP 1 million invested.

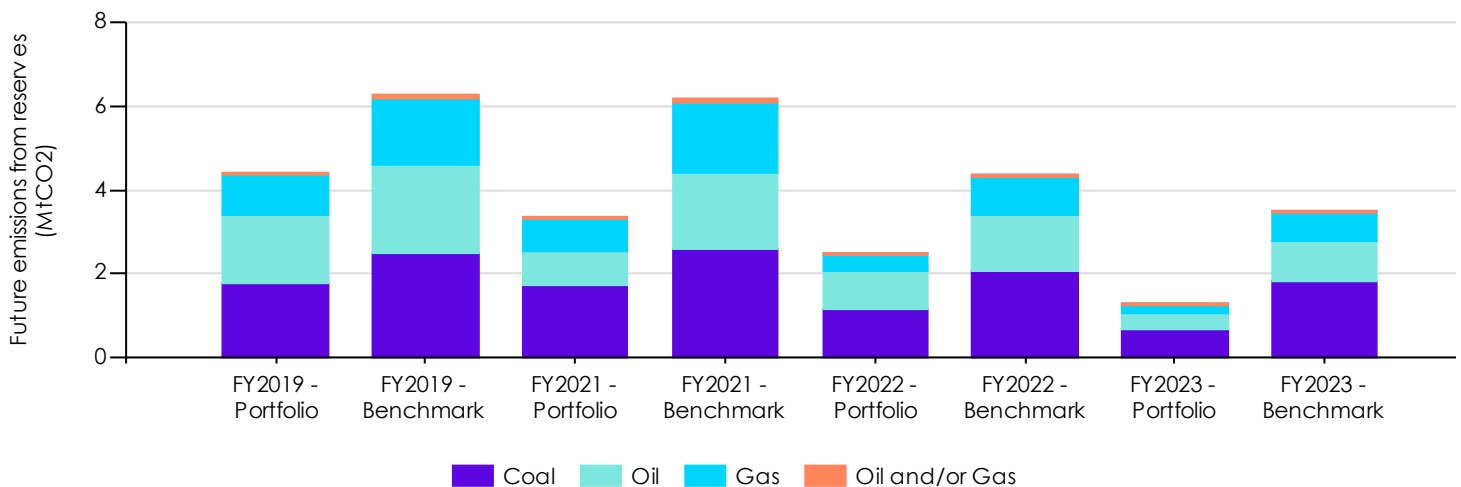
We illustrate the potential emissions from reserves for each of our portfolios and their respective benchmarks below, as well as the Gloucestershire Portfolio.

**Fossil fuel reserves intensity**



As well as an overall assessment of potential emissions from reserves, we are able to break these potential emissions down by fossil fuel type. We illustrate this analysis for the Gloucestershire Aggregate Portfolio and respective benchmarks, as well as how it has changed over time.

**Future emissions from reserves by type**



## Scenarios

In their nature scenarios are uncertain and not a precise science. The scenarios put forward will never come to pass as described, but also are also based on assumptions and often new and evolving data sets.

Scenarios are a useful tool for our portfolios managers to engage in dialogue and to ask the right questions about holdings, they are not a tool to use in isolation and investment decisions should never be based solely on them.

## Paris Alignment

The Paris Alignment tracks portfolios and benchmarks against the goal of limiting global warming to below 2°C from pre-industrial levels.

Two methods are used to calculate the Paris Alignment, to allow us to generate a metric for the whole portfolio. The sectoral decarbonization approach, which covers around 400 companies, and is used by the Transition Pathway Initiative (TPI), provides parameters consistent with three global warming scenarios (<1.5°C, 1.5°-2°C, 2°-3°C). Other companies within our portfolios are calculated using the 'greenhouse gas emissions per value added' or GEVA, provides parameters consistent with 2°C, 3°C, 4°C and 5°C.

**Paris Alignment or 'Alignment gap'** - this uses S&P's 2°C Alignment Assessment to track the portfolios against these benchmarks for each scenario.

**Apportioned tCO<sub>2</sub>e Expected Under/Over 2°C Carbon Budget** - this approach taken by S&P can be described as a transition pathway assessment, which examines the adequacy of emissions reductions over time in meeting a 2°C carbon budget.

**Worst and Top Portfolio Performers for Emission Reduction Goals** - provides an indication of company's absolute apportioned emissions above or below the 2°C pathway. Negative numbers mean a portfolio is aligned with a scenario (under budget or stronger performance). Positive numbers mean a portfolio is misaligned with a scenario (over budget or weaker performance).

Apportioned tCO<sub>2</sub>e for each company is calculated by taking the value of each holding in the portfolio and dividing that by the value of outstanding issuance (total value invested/enterprise value including cash) and multiplying that by the companies' emissions (under)/over the carbon budget. The final portfolio metric is the sum of apportioned aligned emissions for all companies, to either give a negative figure (aligned) or positive figure (misaligned). This is calculated separately for all years from base to horizon year.

There are limitations of Paris Alignment, the results are sensitive to the chosen baseline year, there are advantages to including a longer time horizon in the scenario analysis. Volatility in the underlying data, especially in the GEVA method can contribute to differences, as can non-disclosure, double counting. Both scope of emissions considered and avoided emissions mean this is an imperfect science. Methodologies around Paris Alignment are embryonic.

## Physical Risk

Physical risk shows, on a weighted basis, the annual cost incurred as a percentage of the company assets.

**Physical impact composite score** - this shows us the costs a company would be expected to incur, due to physical risk, if a future climate scenario were to manifest now. For this metric a low 'score' is a good thing, as it means that the physical hazards that will happen will have a much lower impact on the company or asset.

The financial impacts are calculated for each climate hazard under each scenario and time period, and these are summed to a combined 'Financial Impact' metric covering all hazards.

## Scenarios cont.

The combined Financial Impact metric is the sum of estimated financial costs arising from changes in all hazard exposures vs the historical baseline, expressed as a percentage of the value of a given asset type (asset level).

For example, if the chart shows 3% for a 2050 High Scenario it means, on a market-weighted basis, if the future climate scenario were to manifest now, the average portfolio company would expect to incur costs equal to 3% of company assets annually.

**Financial impact by Risk Type** - calculated in the same way as the physical impact composite score, but this is broken down by the different hazard exposure types.

**Top Contributors to Portfolio-Level Physical Risk** - identifying the top contributors at a portfolio level, broken down into:

- Asset count – the number of assets in the S&P database mapped to the company.
- Portfolio Financial Impact composite score – the sum of the estimated financial costs arising from changes in all hazard exposures vs the historic baseline (expressed as a percentage of the value of the asset type).
- Composite score – ranging from 1 – 100 it represents the combined exposure to all eight climate change hazards.
- Sensitivity adjusted composite score – the composite score for each physical risk indicator adjusted to reflect the sensitivity of a company to each risk indicator and its impacts.

Limitations to the Physical Risk analysis include modelling uncertainty, uncertainty around asset locations, hazard correlation as well as imperfections in the sensitivity framework. Limitations to data sources come from company asset coverage and spatial resolutions.

## Carbon Earnings-at-Risk

Carbon Earnings-at-Risk assess the potential impact to a company's earnings today if it had to pay a future price for their greenhouse gas emissions. This indicates which companies are facing more significant carbon price risk.

It looks at the percentage of a company's core corporate profitability, calculated using earnings before interest, taxes, depreciation, and amortization (EBITDA), that contains unpriced carbon risk under specific scenarios.

Future carbon pricing looks at three scenarios:

- High: Represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C above pre-industrial levels by 2100 (the Paris Agreement).
- Medium: Assumes that policies will be implemented to reduce greenhouse gas emissions and limit climate change to 2°C in the long term, but with action delayed in the short term.
- Low: Represents the full implementation of country Nationally Determined Contributions under the Paris Agreement.



## Other metrics

Corporations globally are making commitments, setting targets and laying out plans to transition their business to align with the objectives of the Paris Agreement. We assess the adequacy of the corporation's response currently undertaken using the TPI and CA100+ benchmark, as well as data from other sources. We are aware that these tools are still evolving to provide more nuanced data for investment decision-making. Whilst acknowledging the limits of assessment methodologies we have; we will use these to engage with managers to challenge the investment case of controversial holdings.

Brunel Portfolio Managers have provided portfolio specific commentary for the metrics included in this report. In addition to the metrics described on previous pages there may also be reference to TPI Management Quality and Carbon Performance' and CA100+ Net Zero Corporate Benchmark. We use these tools on a ongoing basis in our internal investment governance committees.

### The TPI Tool

The Transition Pathway Initiative (TPI) is a global, asset-owner led initiative which assesses companies' preparedness for the transition to a low carbon economy. The TPI tool uses publicly available company information to assess:

**Management quality** - The quality of companies' management of their greenhouse gas emissions and of risks and opportunities related to the low carbon transition.

**Carbon performance** - How companies' carbon performance now and in the future might compare to the international targets and national pledges made as part of the Paris Agreement.

**Companies' management quality** - is assessed annually across 17 indicators. Companies are placed on one of five levels:

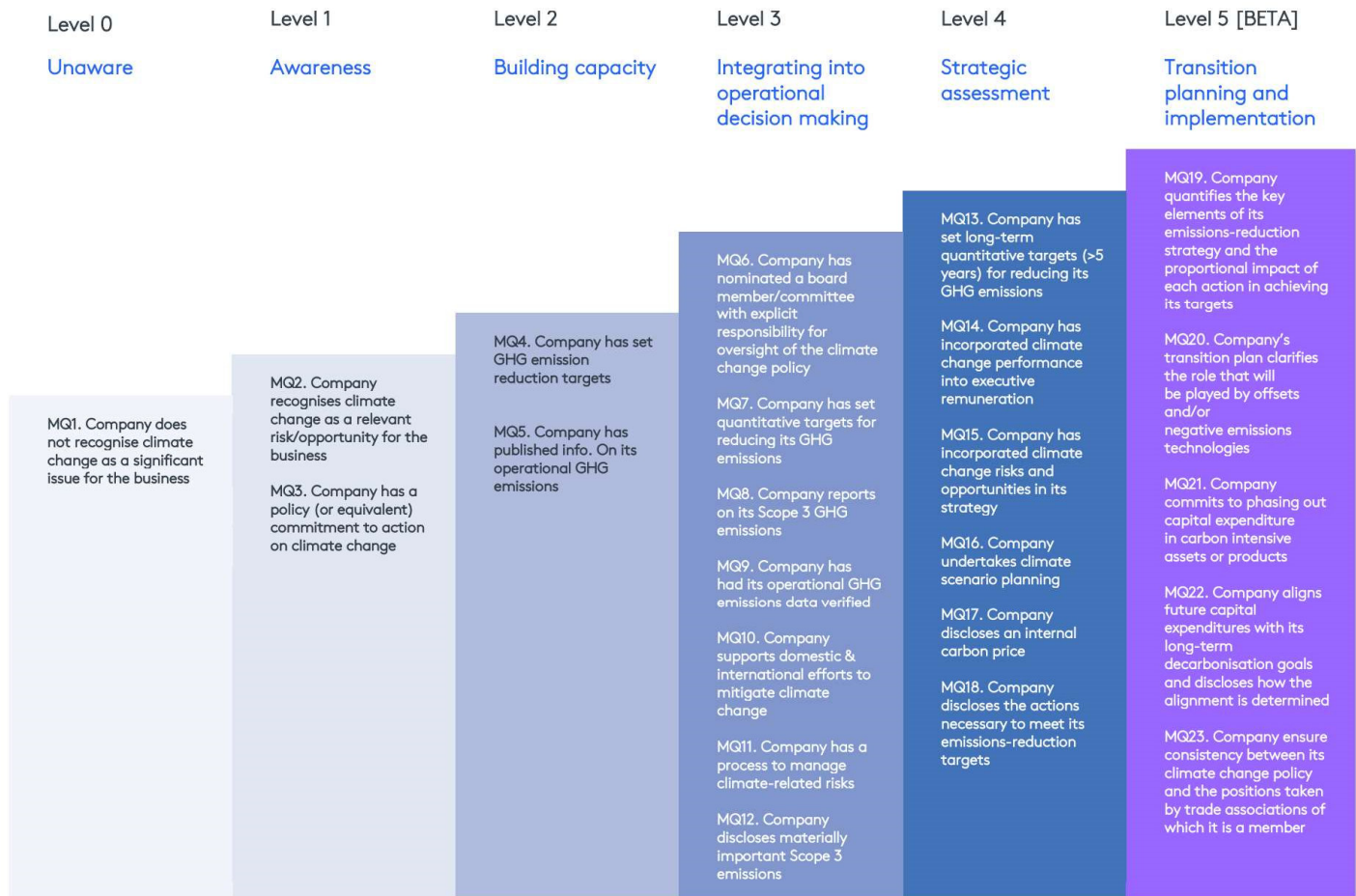
- Level 0 – Unaware of (or not Acknowledging) Climate Change as a Business Issue.
- Level 1 – Acknowledging Climate Change as a Business Issue: the company acknowledges that climate change presents business risks and/or opportunities, and that the company has a responsibility to manage its greenhouse gas emissions. This is often the point where companies adopt a climate change policy.
- Level 2 – Building Capacity: the company develops its basic capacity, its management systems and processes, and starts to report on practice and performance.
- Level 3 – Integrating into Operational Decision-Making: the company improves its operational practices, assigns senior management or board responsibility for climate change, and provides comprehensive disclosures on its carbon practices and performance.
- Level 4 – Strategic Assessment: the company develops a more strategic and holistic understanding of risks and opportunities related to the low-carbon transition and integrates this into its business strategy.
- Level 5 – Transition Planning and Implementation: The company uses its strategic understanding of climate and transition risk/opportunity to create a detailed and actionable transition plan which aligns business practices and capital expenditure decisions with their decarbonisation goals.

For more information see the <https://www.transitionpathwayinitiative.org/publications/uploads/2023-methodology-report-management-quality-and-carbon-performance-version-5-0>

<https://www.transitionpathwayinitiative.org/>

## Other metrics cont.

### The Management Quality (MQ) staircase



Source - TPI's methodology report: Management Quality and Carbon Performance Version 5.0, November 2023

## Climate Action 100+ Net-Zero Company Benchmark

The Climate Action 100+ Net Zero Company Benchmark assesses the performance of focus companies against the initiative's three high-level goals: emissions reduction, governance, and disclosure on and implementation of net zero transition plans.

The Benchmark is not a disclosure mechanism or database itself. Rather, it is an evaluation tool for investor engagement that can be used by investors, all of whom will have differing mandates and starting points together with considerations of jurisdiction, regulation and best practice, from which they make their own decisions.

1. Ambition: A long term 2050 goal
2. Targets: Short- and medium-term; scope 1, 2 and material scope 3 emissions
3. Emissions performance relative to targets
4. Disclosure of emissions
5. Decarbonisation strategy: A quantified plan to deliver GHG targets, green revenues targets

## Other metrics cont.

6. Capital Allocation Alignment: capital expenditures consistent with Net Zero by 2050
7. Climate Policy Engagement: Paris Agreement- aligned climate (direct and indirect) lobbying
8. Climate Governance: Oversight of transition planning and executive remuneration linked to targets and transition
9. Just transition: Consideration of transition on workers and communities
10. Climate risk and accounts: Transition risk TCFD disclosures and incorporating risks into financial accounts

## Global High Alpha Equities

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£3,742m	£4,148m	271,059	200,773	74	49

### Portfolio Objective

To provide global equity market exposure together with excess returns from accessing leading managers.

### Portfolio Approach

The portfolio comprises global equities (primarily developed), diversified by sector and geography. The portfolio holds assets in currencies other than sterling and this currency exposure will not be hedged.

### Carbon Emissions

The WACI is materially lower than the benchmark as a result of the portfolio's underweight exposure to carbon intensive sectors such as Utilities, Energy and Materials. Three of the top five contributors to WACI are Materials companies: Steel Dynamics (metals and mining), UPM-Kymmene (paper and forest products), and Holcim (construction materials). As a cement manufacturer, Holcim has by far the largest carbon to revenue intensity of any company held in the portfolio. Holcim is investing in carbon reduction projects in Europe, while targeting a 15% reduction in product-level carbon intensity by 2030 compared to a 2020 baseline. To address the longer-term challenges of sustainable infrastructure, the company is also developing low-carbon concrete and cement. The company has a strong TPI Management Quality score of 4, and a below two-degree alignment assessment.

### Disclosures

Scope 1 disclosure rates are high with full and partial disclosures accounting for 90% on a value of holdings basis and 97% on the GHG weighted method. Both measures show less reliance on modelled data than last year.

### Fossil Fuels

The portfolio is underweight both Energy and Extractives activities in aggregate. Within extractives, the portfolio has an overweight to Tar sands extraction driven by the holding in MEG Energy (with a small contribution from Conoco Phillips). This has reduced since last year following the sale of Suncor Energy after a change in focus at the company resulted in the investment manager changing their assessment of Suncor to 'not aligned' as set out in the Brunel Climate Policy. MEG is the largest contributor to Fossil Fuel revenue exposure in the portfolio and has a challenging route to net zero alignment. The investment manager is engaging with the company on an ongoing basis with the objective of driving progress towards net zero alignment and has set clear milestones for monitoring progress towards this in the short and medium term.

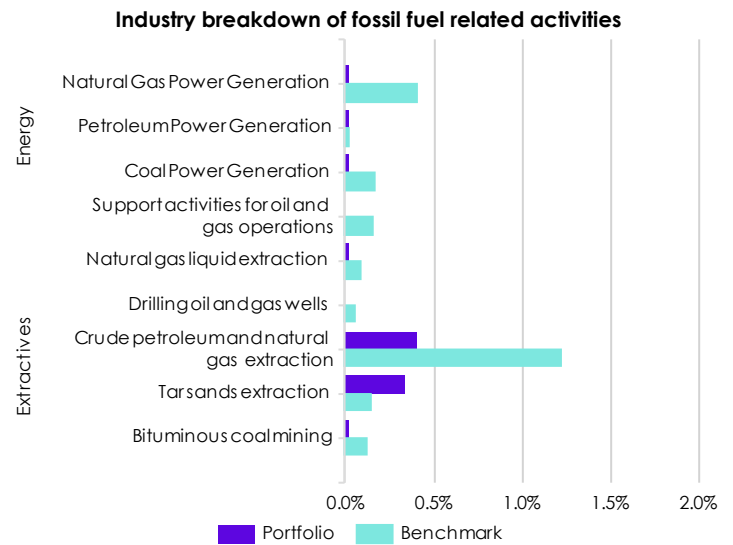
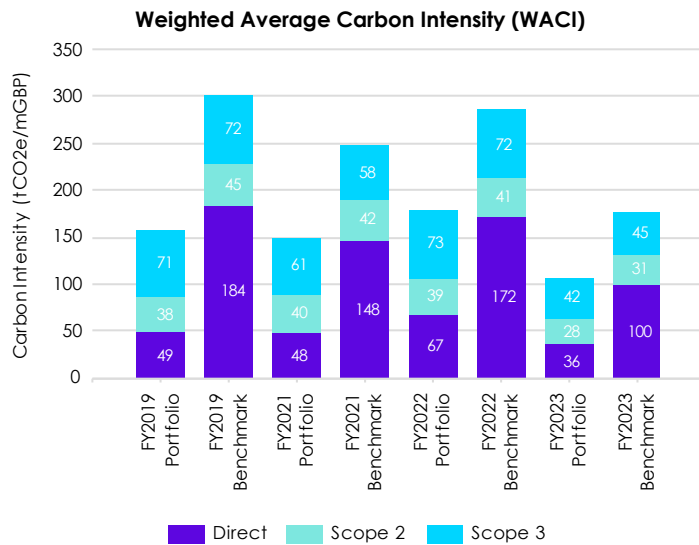
## Global High Alpha Equities

### Introduction

MEG have a TPI management score of 3, and the company represents the potential to effect real world change through its opportunity to divert product to the asphalt market (thereby significantly reducing scope 3 emissions), however, the carbon risks remain significant and therefore the company remains an engagement priority.

The portfolio's future emissions from reserves are below benchmark having reduced significantly since last year due to the reduction in Coal and Oil reserve exposures. Two of the five largest contributors to Fossil Fuel emissions from reserves from last year, Suncor and Anglo American, were removed from the portfolio during 2023 and are therefore not reflected in this data, dated end December 2023.

## Global High Alpha Equities v MSCI World



### Current year top contributors to WACI

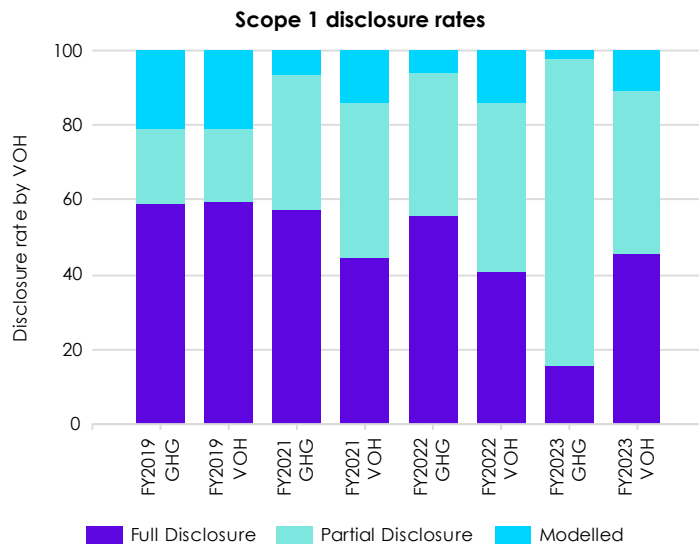
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Steel Dynamics, Inc.	837	1.12%	-7.76%
UPM-Kymmene Oyj	1,327	0.59%	-6.73%
InterContinental Hotels Group	1,022	0.76%	-6.55%
Delta Air Lines, Inc.	884	0.78%	-5.71%
Holcim AG	4,033	0.13%	-4.87%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
MEG Energy Corp.	0.40%	0.32%
ConocoPhillips	0.26%	0.26%
Shell plc	1.04%	0.17%
Glencore plc	0.22%	0.02%
UPM-Kymmene Oyj	0.59%	0.01%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



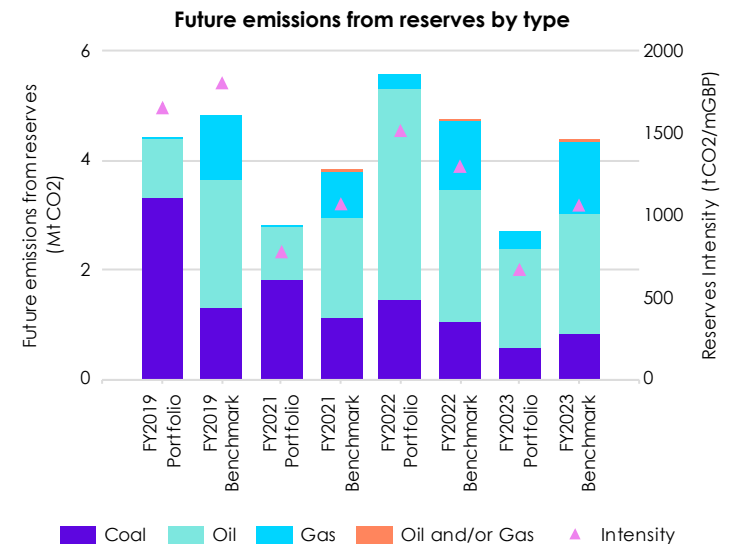
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	15%	46%
Modelled	2%	11%
Partial Disclosure	82%	44%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO2)

Source	FY 2022		FY 2023	
	Port.	Ben.	Port.	Ben.
Coal	1.46	1.05	0.57	0.85
Oil	3.85	2.42	1.79	2.19
Gas	0.26	1.30	0.36	1.34
Oil and/or Gas	0.00	0.00	0.00	0.00

Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.



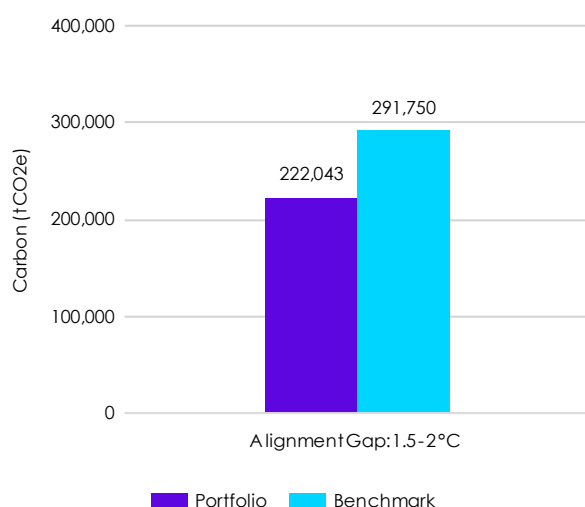
## Global High Alpha Equities

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	2-3°C	2-3°C
Alignment Gap: <1.5 °C	373,209	781,583
Alignment Gap: 1.5 - 2 °C	222,043	291,750
Alignment Gap: 2 - 3 °C	-49,172	-145,851

**Absolute apportioned tCO<sub>2</sub>e expected  
(Under)/Over 2°C carbon budget**



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment	(Under)/over budget	
Bottom	Weight (%)	apportioned emissions Total emissions (2012-2030)
Steel Dynamics, Inc.	1.12%	186,712 34,124,719
Shell plc	1.04%	77,317 879,091,558
Phillips 66	0.16%	40,180 192,628,604
UPM-Kymmene Oyj	0.59%	30,826 70,140,635
Glencore plc	0.22%	24,724 519,921,027
MercadoLibre, Inc.	0.78%	15,537 2,241,288
ConocoPhillips	0.26%	14,164 245,652,282
Old Dominion Freight Line, Inc.	0.70%	10,051 10,713,560
InterContinental Hotels Group PLC	0.76%	7,726 34,115,753
HCA Healthcare, Inc.	1.12%	7,494 41,583,959

#### Top portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment	(Under)/over budget	
Top	Weight (%)	apportioned emissions Total emissions (2012-2030)
MEG Energy Corp.	0.40%	-64,302 55,331,880
Amazon.com, Inc.	4.01%	-53,684 468,817,029
Holcim AG	0.13%	-49,527 2,689,430,497
Delta Air Lines, Inc.	0.78%	-12,367 707,087,367
Kamigumi Co., Ltd.	0.19%	-12,358 5,205,557
Bayer Aktiengesellschaft	0.35%	-7,371 125,392,610
DSV A/S	0.10%	-7,187 93,004,169
The Kroger Co.	0.25%	-4,952 133,105,014
Reliance, Inc.	0.76%	-4,862 6,656,921
NIKE, Inc.	0.96%	-3,887 18,789,013

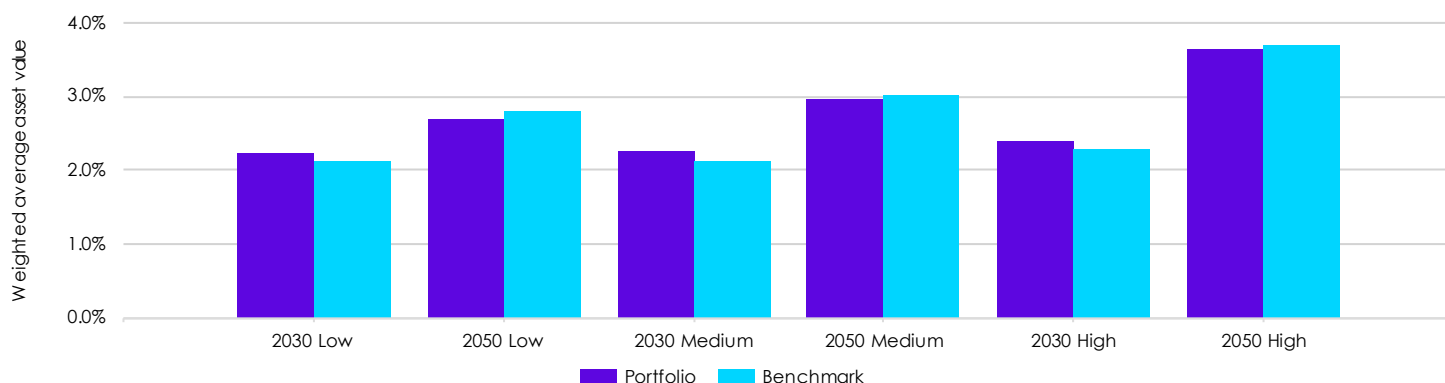
The portfolio is not currently aligned to the Paris agreement, with a warming estimate of 2-3°C. However, the portfolio is closer to alignment than the benchmark, as demonstrated by the absolute apportioned tCO<sub>2</sub>e alignment gap, which is c.23% lower than the benchmark.

The largest contributors and detractors to the portfolio's emissions reduction goals are highlighted in the tables. MEG is showing as the highest contributor to emissions reduction goals. MEG has had a consistent (and significant) carbon footprint over time. The company has an improved intensity measure over recent periods due to increased gross profits post Covid (the measure used is an intensity-based approach looking at how much a company emits relative to their profit). Given the high level of alignment risk with MEG, the investment manager continues to engage directly with the company to address these risks and has set milestones to assess transition alignment progress for the company over time (as referred to above). This illustrates some of the challenges with the methodologies used to assess Paris Alignment.

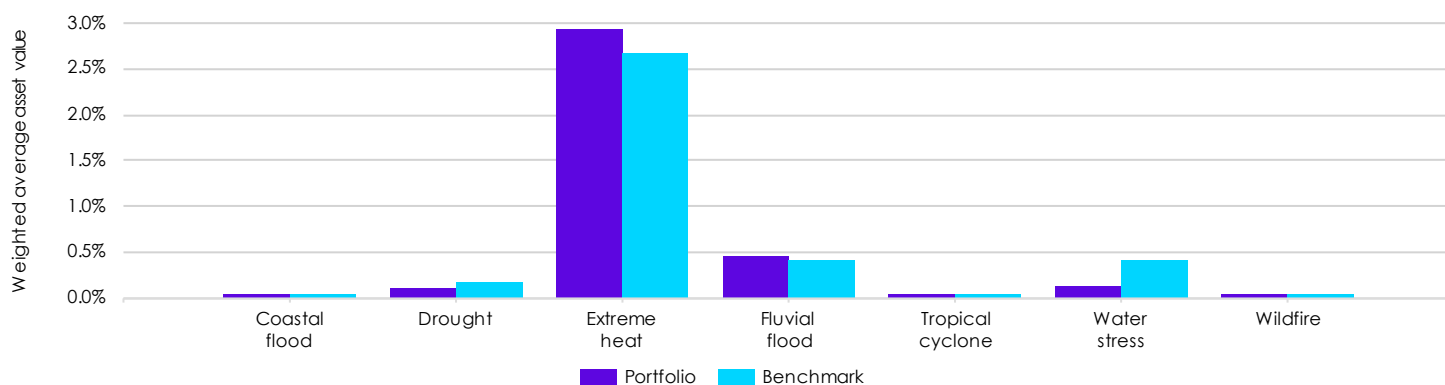
## Global High Alpha Equities

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Novartis AG	0.13%	127	7.75	72	52
Samsung Electronics Co., Ltd.	0.22%	4	7.29	73	42
ASML Holding N.V.	1.31%	12	7.19	85	17
Alphabet Inc.	2.76%	90	7.05	76	18
Novo Nordisk A/S	1.62%	22	6.84	73	28
Fresenius SE & Co. KGaA	0.37%	29	6.62	70	59
Daiichi Sankyo Company, Limited	0.27%	6	6.06	70	49
Charter Communications, Inc.	0.49%	29	5.99	71	24
Safran SA	0.92%	98	5.84	77	44
CNH Industrial N.V.	0.49%	27	5.82	67	25

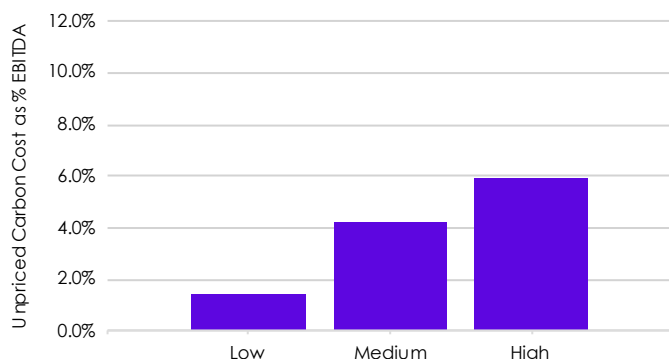
Physical risk analysis shows that the portfolio is in line with that of the benchmark and displays a similar composite score for both the 2030 and 2050 timeframes.

With regards to particular risks, at the 2050 timeframe there is a notable difference in water stress risk where the portfolio carries less risk than the benchmark. Conversely, the portfolio appears to be more exposed to extreme heat risk than the benchmark, with Novartis AG being the holding that has the largest financial impact.

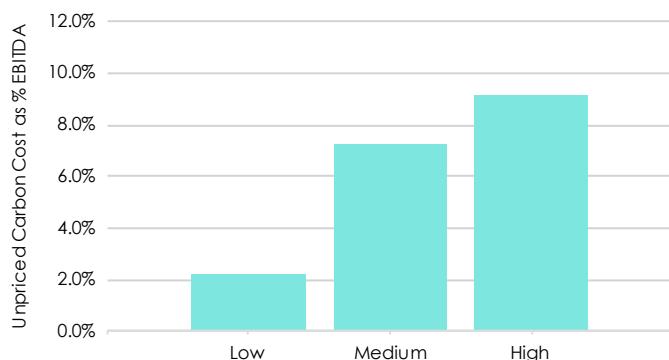
## Global High Alpha Equities

### Carbon earnings at risk

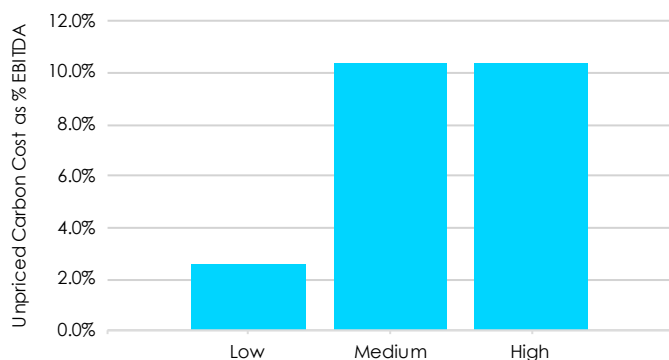
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Datadog, Inc.	0.18%	459.51%
Delta Air Lines, Inc.	0.80%	321.25%
Holcim AG	0.14%	151.22%
Phillips 66	0.16%	82.57%
InterContinental Hotels Group PLC	0.78%	44.59%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Datadog, Inc.	0.18%	675.23%
Delta Air Lines, Inc.	0.80%	498.88%
Holcim AG	0.14%	236.47%
Phillips 66	0.16%	119.01%
InterContinental Hotels Group PLC	0.78%	70.14%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Datadog, Inc.	0.18%	761.87%
Delta Air Lines, Inc.	0.80%	570.55%
Holcim AG	0.14%	270.23%
Phillips 66	0.16%	133.75%
InterContinental Hotels Group PLC	0.78%	79.87%

The charts show the percentage of company earnings at risk from unpriced carbon at the aggregate portfolio level across 3 scenarios. The companies with the largest amount of their earnings at risk in the 'High' scenario are shown in the tables and are the same names across all time periods.

On a relative basis, the unpriced carbon risk within the portfolio is less than that of the benchmark, and the portfolio would see a smaller reduction in EBITDA margin due to unpriced carbon costs across all periods.

## Global Sustainable Equities

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£3,185m	£3,470m	204,784	188,100	66	55

### Portfolio Objective

To provide exposure to the global sustainable equities market, including excess returns from manager skill and ESG considerations.

### Portfolio Approach

The portfolio uses a broader strategy consideration of environmental and social sustainability to identify companies and investment themes able to succeed long term through contributing to society. It builds on, but goes beyond, our active approach to corporate governance, and consideration of environmental and social factors, particularly when they represent potential risks to investor capital.

### Carbon Emissions

With regards to the WACI of the portfolio, we can see that it is marginally below that of the MSCI ACWI benchmark. The largest contributors to the portfolio's WACI are securities that mostly sit within Materials and Industrials sectors. However, we should note that the stocks themselves can be described as solution-based businesses that have a credible future transition pathways to de-carbonise themselves as well as the sectors in which they operate. For instance, two of the largest contributors to WACI are waste management companies, Waste Management Inc and Republic Services, which sit within the industrials sector. These companies are providing solutions by increasing resource recovery rather than landfill dumping. This helps avoid harmful emissions, a dimension of carbon intensity, which is not captured in the WACI calculation. It is therefore no surprise that you would often find these companies at the top of green revenue contribution reports.

### Disclosures

For scope 1 disclosures we to see that the portfolio is relatively well covered in terms of full disclosures and partial disclosures, with very little need for modelling.

### Fossil Fuels

With regards to the Fossil Fuel related activities the portfolio has no exposure to extractive business practices but does have exposure to Power Generation related to Fossil fuels. However, we should note that these companies are currently on a transition pathway and it is therefore important that we focus on their future trajectory. For instance, NextEra Energy has made and continues to make significant investments in renewable energy and storage projects; it is already the largest corporate generator of renewable

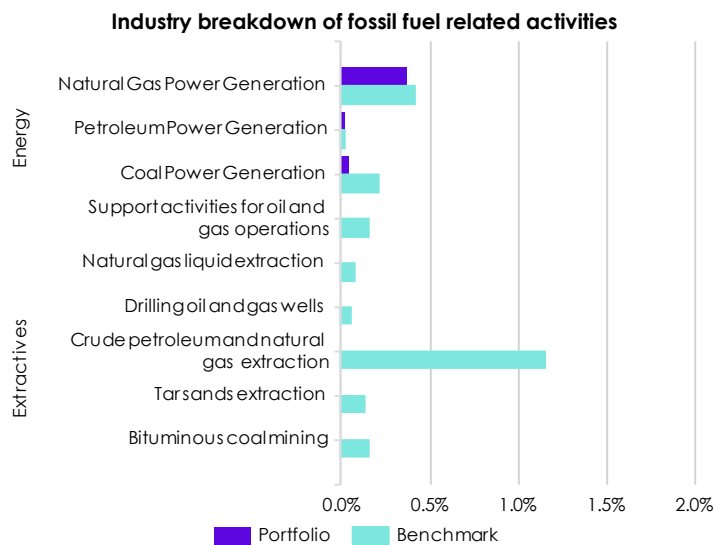
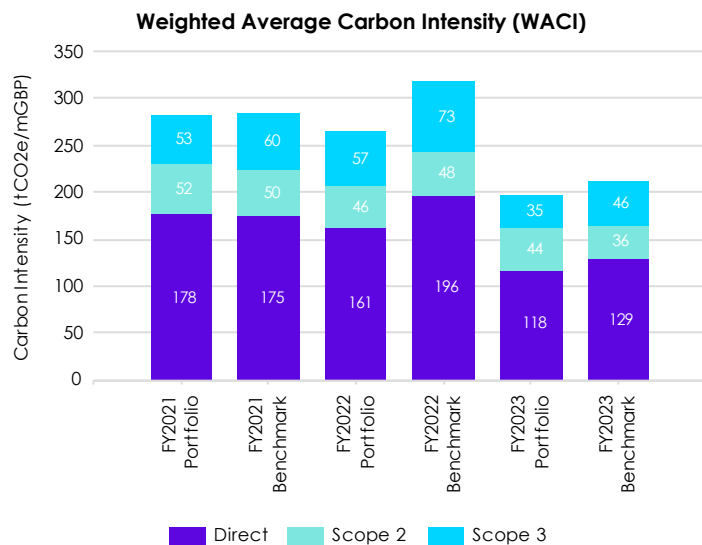
## Global Sustainable Equities

### Introduction

electricity in the world, implying substantial climate benefit. The majority of the company's capital expenditures are allocated to the development of low-carbon technologies, infrastructure or projects. Further, NextEra Energy stressed in 2021 it now aims to continuously reduce its CO2 emissions rate until it reaches zero by no later than 2045 and has released its Zero Carbon Blueprint. The company's decarbonization ambition appears consistent with the company's recent achievements and willingness to speed up renewable energy developments.

We should also note that the fund has no exposure to fossil fuel reserves.

## Global Sustainable Equities v MSCI ACWI



### Current year top contributors to WACI

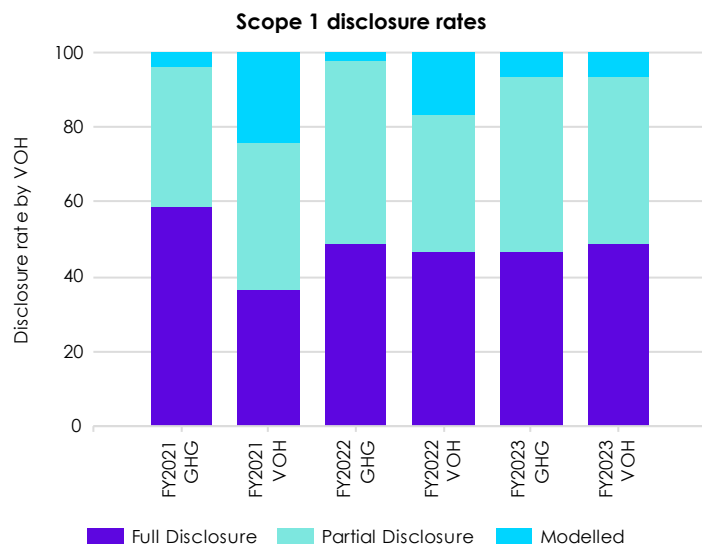
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	1,976	1.69%	-15.63%
L'Air Liquide S.A.	1,612	1.20%	-8.80%
Republic Services, Inc.	1,934	0.91%	-8.09%
Linde plc	1,483	0.91%	-6.03%
NextEra Energy, Inc.	2,570	0.46%	-5.63%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
NextEra Energy, Inc.	0.46%	0.21%
Fortis Inc.	0.58%	0.10%
L'Air Liquide S.A.	1.20%	0.06%
Edison International	0.46%	0.03%
Iberdrola, S.A.	0.62%	0.02%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



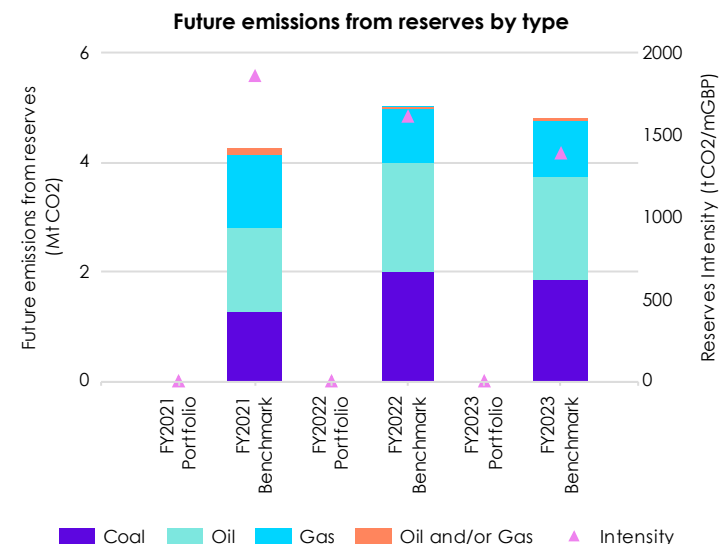
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	47%	49%
Modelled	6%	7%
Partial Disclosure	47%	45%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO2)

Source	FY 2022		FY 2023	
	Port.	Ben.	Port.	Ben.
Coal	0.00	1.99	0.00	1.87
Oil	0.00	1.99	0.00	1.86
Gas	0.00	1.02	0.00	1.07
Oil and/or Gas	0.00	0.01	0.00	0.01

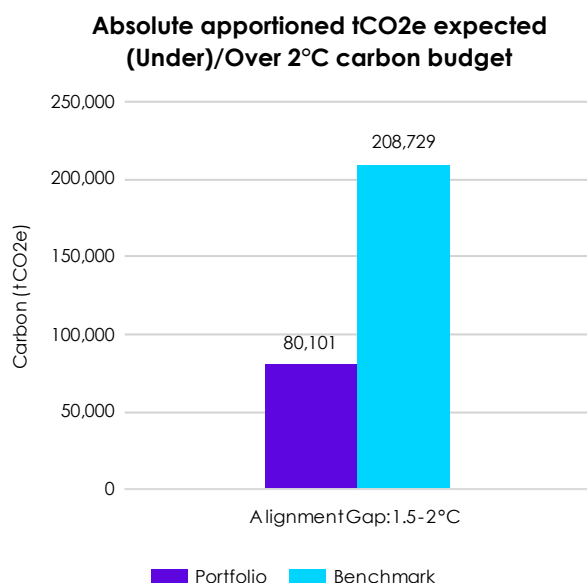
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.

## Global Sustainable Equities

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	2-3°C	2-3°C
Alignment Gap: <1.5 °C	206,246	660,888
Alignment Gap: 1.5 - 2 °C	80,101	208,729
Alignment Gap: 2 - 3 °C	-220,089	-299,122



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget	Total emissions (2012-2030)
Bottom	Weight (%)	apportioned emissions	
L'Air Liquide S.A.	1.20%	51,087	343,129,023
Linde plc	0.91%	24,100	400,508,543
WestRock Company	0.34%	19,145	94,295,669
Cleanaway Waste Management Limited	0.24%	14,001	8,483,303
NextEra Energy, Inc.	0.46%	13,974	661,912,507
First Quantum Minerals Ltd.	0.12%	13,552	15,359,852
Fortis Inc.	0.58%	10,818	113,674,583
East Japan Railway Company	0.34%	8,630	25,065,280
GFL Environmental Inc.	0.48%	8,421	50,953,275
National Grid plc	0.56%	7,127	107,608,306

#### Top portfolio performers to emissions reduction goals

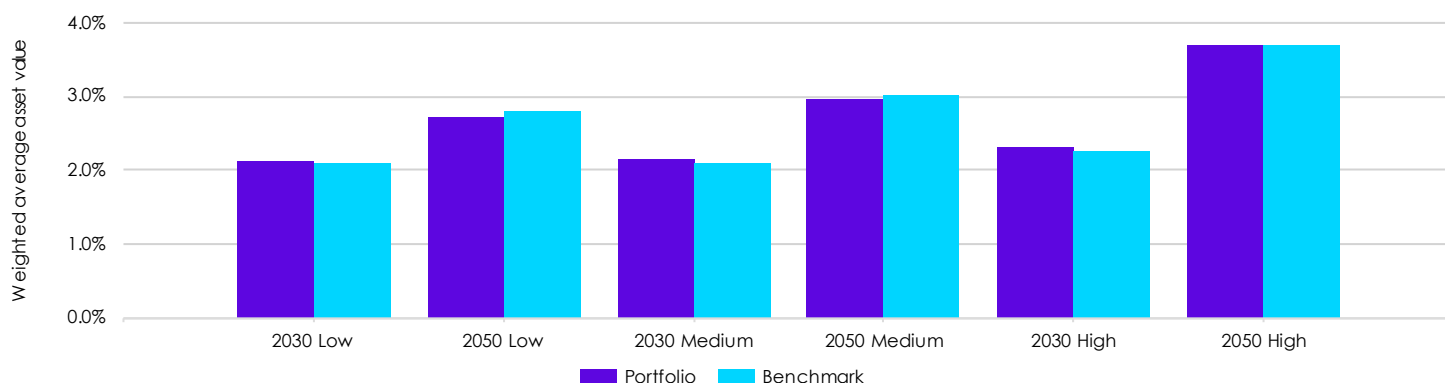
GHG emissions WRT 2 degree alignment		(Under)/over budget	Total emissions (2012-2030)
Top	Weight (%)	apportioned emissions	
Iberdrola, S.A.	0.62%	-34,210	555,670,764
Edison International	0.46%	-26,448	136,171,335
Micron Technology, Inc.	0.30%	-15,678	238,623,151
Eversource Energy	0.55%	-14,171	46,312,927
Republic Services, Inc.	0.91%	-13,791	255,458,021
DSM-Firmenich AG	0.39%	-13,009	57,762,855
Amazon.com, Inc.	1.14%	-12,758	468,817,029
Neste Oyj	0.31%	-8,801	71,637,677
Tractor Supply Company	0.38%	-4,189	8,317,856
Vestas Wind Systems A/S	1.23%	-2,641	3,487,719

The fund and the benchmark are aligned to 2-3°C, however the fund is much closer to 2°C alignment than that of the benchmark, and has half the apporportioned CO<sub>2</sub> absolute emissions before it meets the 2°C alignment threshold. As per previous Carbon emissions metrics, the alignment of the portfolio is negatively affected by securities within the Materials and Industrials sectors. The modelled outcomes do not take into consideration the transition plans of the mis-aligned companies, which gives us confidence we will see better real-world results than those shown above.

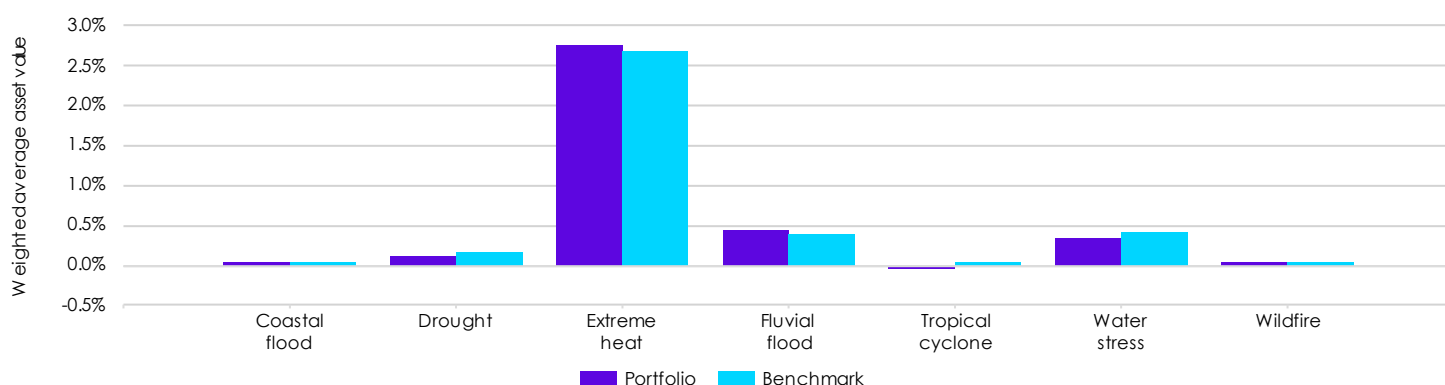
## Global Sustainable Equities

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Hexagon AB (publ)	0.26%	25	18.97	79	56
Iberdrola, S.A.	0.62%	9,938	8.17	77	68
The Home Depot, Inc.	0.51%	1,753	7.40	75	45
ASML Holding N.V.	1.85%	12	7.19	85	17
Alphabet Inc.	1.03%	90	7.05	76	18
Novo Nordisk A/S	1.28%	22	6.84	73	28
Siemens Aktiengesellschaft	0.25%	321	6.60	74	43
Münchener	0.68%	128	6.50	76	4
TE Connectivity Ltd.	0.27%	41	6.13	84	52
Svenska Handelsbanken AB (publ)	0.14%	751	6.10	68	19

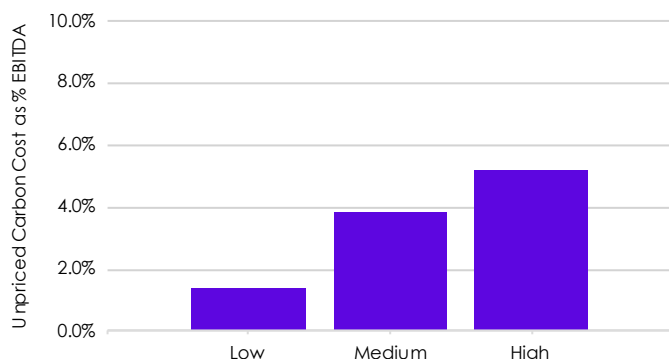
Physical risk analysis displays that the portfolio is in line with that of the benchmark and displays similar composite score and sensitivity to each potential risk event.



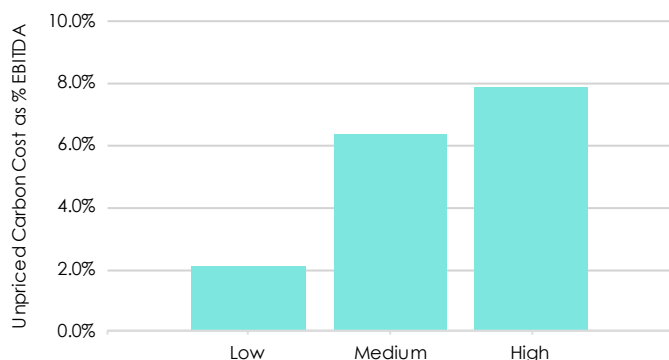
## Global Sustainable Equities

### Carbon earnings at risk

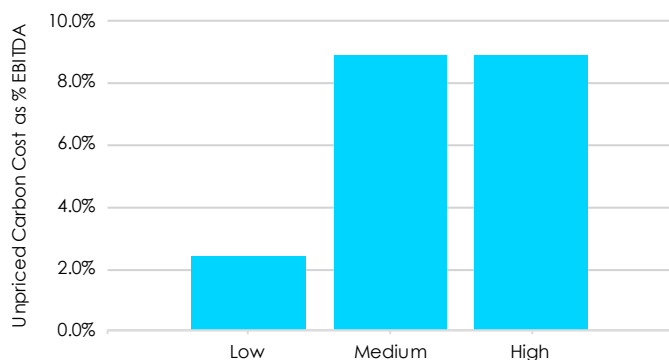
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Republic Services, Inc.	0.91%	56.02%
Cleanaway Waste Management Limited	0.24%	49.86%
NextEra Energy, Inc.	0.46%	48.62%
GFL Environmental Inc.	0.48%	48.45%
L'Air Liquide S.A.	1.20%	48.00%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Republic Services, Inc.	0.91%	79.32%
NextEra Energy, Inc.	0.46%	78.19%
L'Air Liquide S.A.	1.20%	77.35%
Cleanaway Waste Management Limited	0.24%	70.60%
InterContinental Hotels Group PLC	0.58%	70.14%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
NextEra Energy, Inc.	0.46%	89.72%
L'Air Liquide S.A.	1.20%	88.96%
Republic Services, Inc.	0.91%	88.73%
InterContinental Hotels Group PLC	0.58%	79.87%
Cleanaway Waste Management Limited	0.24%	78.98%

The unpriced carbon risk of the portfolio is in line with that of the benchmark, which is not highlighted above. As per the previous metrics, EBITDA at risk is being largely driven by securities within the Industrials and Materials sectors. However, we should note, similar to WACI, carbon at risk numbers do not take into consideration future projections and targets of those solution-based businesses, who are on a transition pathway, but the calculations focus on where the company is today. The above calculations do also not consider emissions avoided that may also be acknowledged in the future.

## UK Active Equities

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£1,382m	£1,259m	189,219	113,313	142	92

### Portfolio Objective

To provide exposure to UK equities, together with enhanced returns from manager skill.

### Portfolio Approach

Investing in the UK equity market avoids direct currency risk, benefits from the high standards of governance and transparency in the UK, and provides access to a wide range of companies with UK and global exposure. However, the market is somewhat imbalanced from a sector perspective and concentrated in a relatively small number of leading names. These aspects of the UK market create opportunities for skilled managers to add long term value through better portfolio construction and stock selection. Managers may invest in an “unconstrained” fashion paying little or no attention to the benchmark constituents or weights.

### Carbon Emissions

The WACI is materially lower than the benchmark as a result of the portfolio's underweight exposure to the most carbon intensive sectors such as Utilities, Energy and Materials. The top three contributors (Rio Tinto, Shell, and BP) are all held underweight versus the benchmark.

### Disclosures

Scope 1 disclosure rates are high with full and partial disclosures accounting for nearly 100% on both value of holdings and GHG weighted methods. Both measures show less reliance on modelled data than last year.

### Fossil Fuels

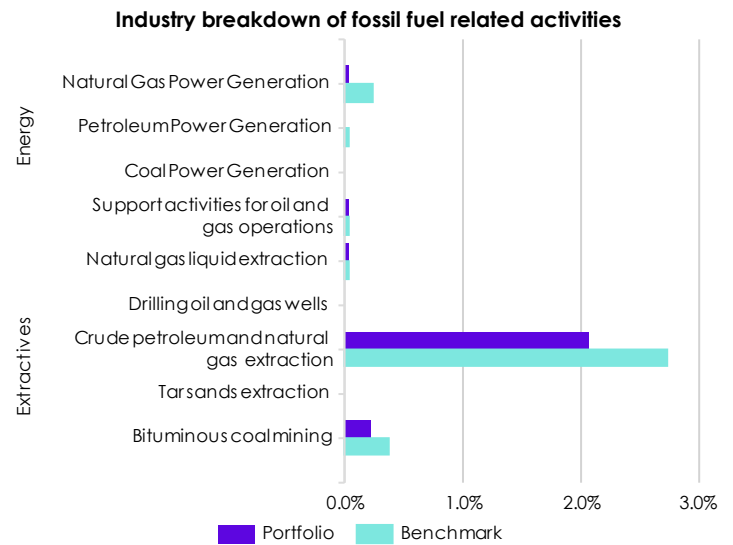
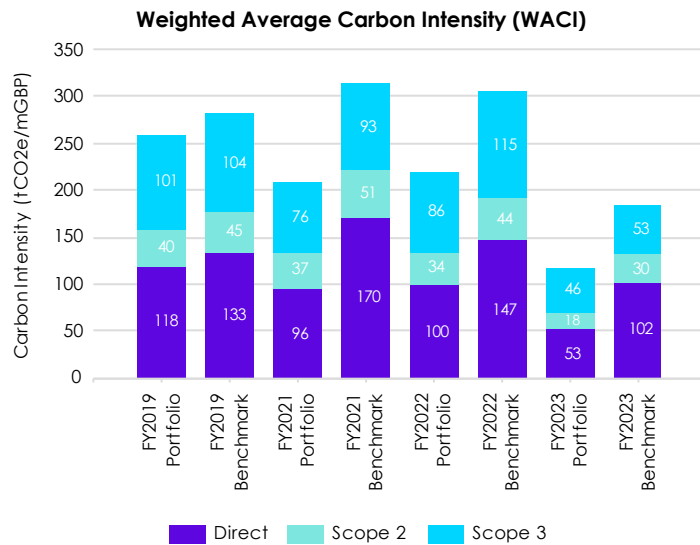
The portfolio is underweight both Energy and Extractives activities in aggregate. Shell is the largest contributor to fossil fuel revenue exposure on a weighted basis. Shell has committed to achieving Net Zero emissions by 2050 or sooner and has a positive TPI management score of 4. Although the company represents the potential to effect real world change, the carbon risks are significant. Extensive engagement through Brunel's internal team, engagement provider Federated Hermes, and Climate Action 100+, aims to hold Shell accountable to its targets. In response to perceived weakening in climate positioning after last year's announcements at Shell's capital markets day, Brunel has escalated engagement with the company by co-filing a shareholder resolution in 2024 led by Follow This. The resolution calls for Shell to set medium-term targets for scope three greenhouse gas emissions consistent with efforts to limit global warming to 1.5°C above pre-industrial levels.

## UK Active Equities

### Introduction

Future emissions from reserves are significantly below benchmark. Both the benchmark and the portfolio have reduced emissions from reserves across the board compared to 2022. One of the largest five contributors to Fossil Fuel emissions from reserves from last year left the portfolio during 2023 (Anglo American). Glencore is the single remaining contributor to fossil fuel emissions from coal reserves within the portfolio.

## UK Active Equities v FTSE All Share ex Inv Tr



### Current year top contributors to WACI

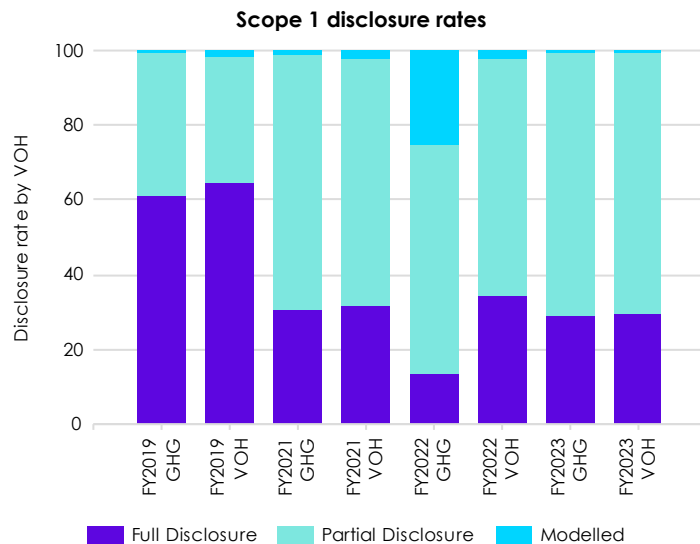
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Rio Tinto Group	808	2.80%	-17.13%
Shell plc	263	4.52%	-5.97%
BP p.l.c.	394	2.13%	-5.20%
Breedon Group plc	1,417	0.41%	-4.60%
Unilever PLC	177	4.83%	-2.66%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
Shell plc	4.52%	0.75%
BP p.l.c.	2.13%	0.68%
Harbour Energy plc	0.53%	0.53%
Glencore plc	2.53%	0.22%
EnQuest PLC	0.13%	0.13%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



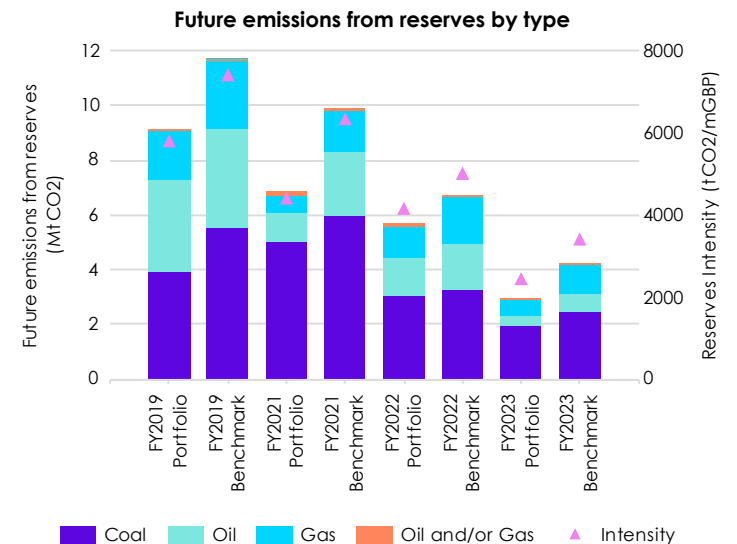
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	29%	29%
Modelled	0%	1%
Partial Disclosure	71%	70%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO)

Source	FY 2022		FY 2023	
	Port.	Ben.	Port.	Ben.
Coal	3.07	3.29	1.99	2.47
Oil	1.39	1.71	0.36	0.65
Gas	1.08	1.67	0.58	1.12
Oil and/or Gas	0.14	0.03	0.10	0.01

Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.

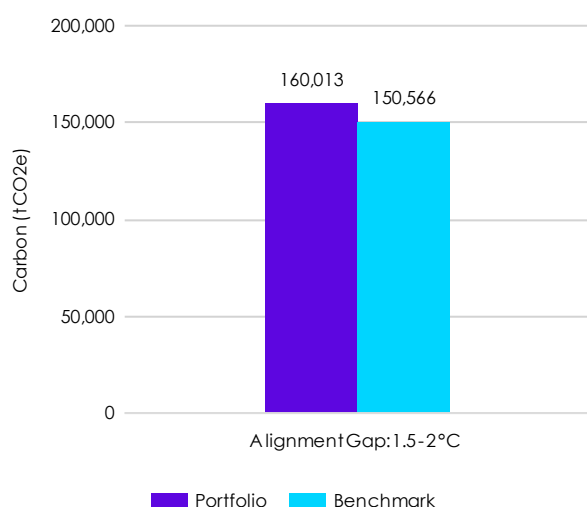
## UK Active Equities

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	2-3°C	2-3°C
Alignment Gap: <1.5 °C	212,504	292,277
Alignment Gap: 1.5 - 2 °C	160,013	150,566
Alignment Gap: 2 - 3 °C	-16,786	-81,611

**Absolute apporportioned tCO<sub>2</sub>e expected  
(Under)/Over 2°C carbon budget**



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment	(Under)/over budget		
Bottom	Weight (%)	apportioned emissions	Total emissions (2012-2030)
Shell plc	4.52%	102,322	879,091,558
Glencore plc	2.53%	86,592	519,921,027
BP p.l.c.	2.13%	31,849	744,379,118
DS Smith Plc	0.32%	17,372	9,588,634
Melrose Industries PLC	0.76%	9,968	2,146,104
Keller Group plc	0.23%	8,497	189,734
Tate & Lyle plc	0.10%	5,675	35,071,037
Associated British Foods plc	0.46%	4,834	37,144,731
Babcock International Group PLC	1.00%	4,533	2,443,523
The Weir Group PLC	1.17%	3,925	1,507,888

#### Top portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget	Total emissions (2012-2030)
Top	Weight (%)	apportioned emissions	
Rio Tinto Group	2.80%	-68,686	753,883,948
EnQuest PLC	0.13%	-16,235	30,038,647
Centrica plc	1.15%	-15,121	54,546,338
Genus plc	0.28%	-11,696	6,944,747
Aviva plc	1.28%	-8,685	11,233,589
Harbour Energy plc	0.53%	-2,888	27,530,787
Bodycote plc	0.49%	-2,296	5,958,896
Endeavour Mining plc	0.03%	-2,096	31,035,758
QinetiQ Group plc	0.09%	-1,925	4,601,237
Hill & Smith PLC	0.29%	-1,645	1,811,559

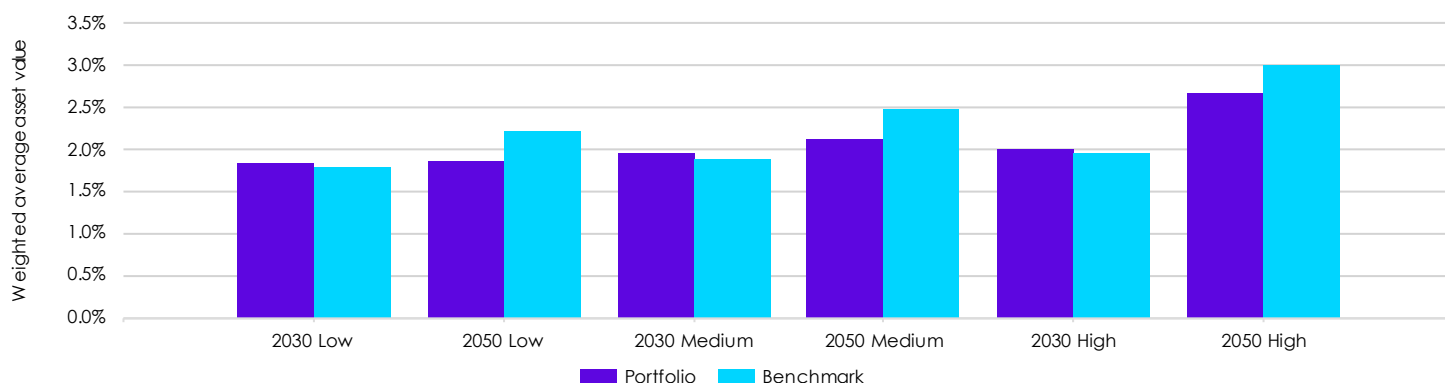
The portfolio is not currently aligned to the Paris agreement, with a warming estimate of 2-3°C. The portfolio has a similar alignment to the benchmark, as demonstrated by the absolute apporportioned tCO<sub>2</sub>e alignment gap.

The largest contributors and detractors to the portfolio's emissions reduction goals are highlighted in the tables.

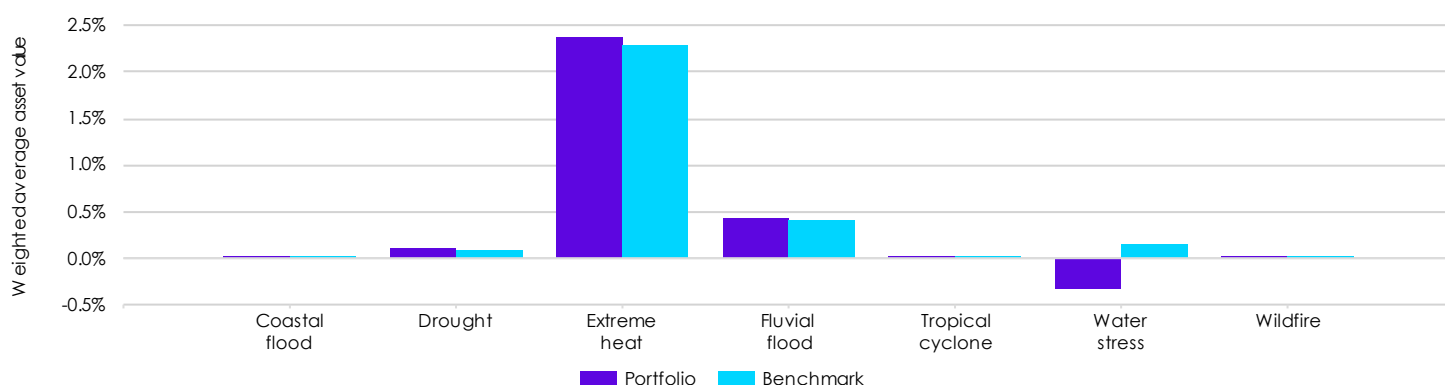
## UK Active Equities

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Network International Holdings plc	0.06%	1	8.48	76	40
Vodafone Group Public Limited	0.77%	457	8.45	69	13
TBC Bank Group PLC	0.09%	133	7.49	73	44
OSB Group Plc	0.26%	5	6.21	71	27
Reckitt Benckiser Group plc	1.10%	39	4.99	77	45
Marks and Spencer Group plc	1.99%	1,088	4.97	72	39
Tesco PLC	0.35%	2,817	4.92	71	42
J Sainsbury plc	0.06%	2,184	4.92	71	38
AstraZeneca PLC	5.72%	87	4.89	70	27
NEXT plc	0.48%	506	4.89	70	32

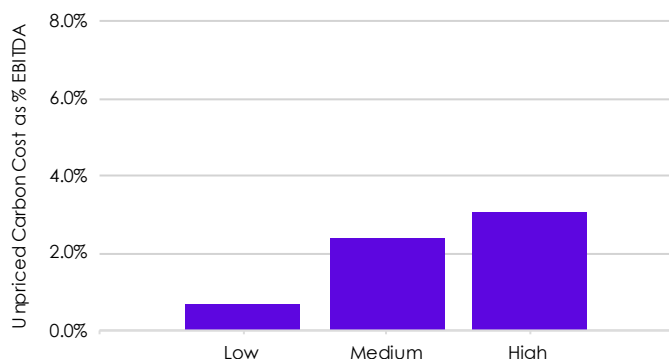
Physical risk analysis shows that the portfolio is roughly in line with that of the benchmark for 2030 composite score and below that of the benchmark for the 2050 measure.

With regards to particular risks at the 2050 timeframe, the largest financial impact for both benchmark and portfolio is extreme heat, impacting both portfolio and benchmark on a similar scale. There is a notable difference in water stress risk, where the portfolio carries less risk than the benchmark.

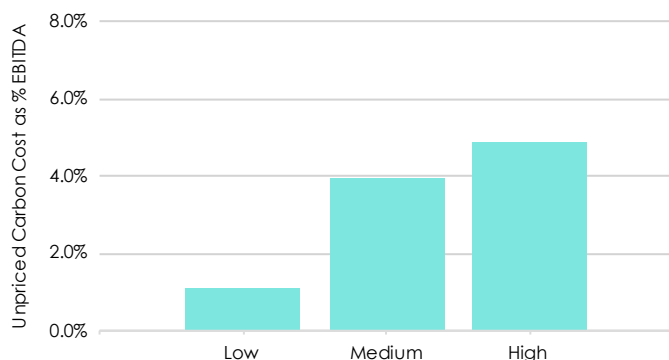
## UK Active Equities

### Carbon earnings at risk

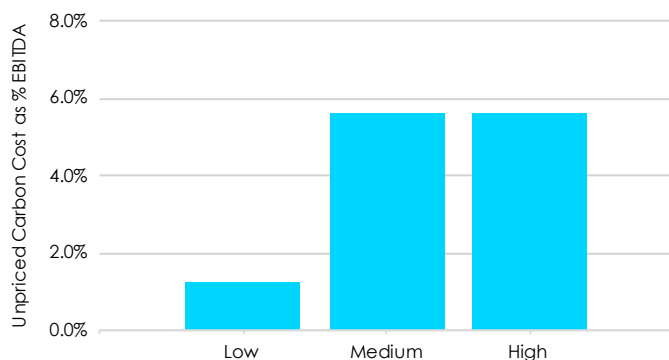
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
TUI AG	0.15%	64.56%
easyJet plc	0.07%	59.34%
Tate & Lyle plc	0.10%	54.96%
Ocado Group plc	0.19%	47.73%
Breedon Group plc	0.41%	33.40%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
TUI AG	0.15%	96.95%
easyJet plc	0.07%	87.39%
Tate & Lyle plc	0.10%	82.50%
Breedon Group plc	0.41%	70.44%
Ocado Group plc	0.19%	69.68%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
TUI AG	0.15%	109.84%
easyJet plc	0.07%	99.68%
Tate & Lyle plc	0.10%	93.63%
Breedon Group plc	0.41%	85.37%
Ocado Group plc	0.19%	78.46%

The charts show the percentage of company earnings at risk from unpriced carbon at the aggregate portfolio level across 3 scenarios. The companies with the largest amount of their earnings at risk in the 'High' scenario are shown in the tables and are the same names across all time periods.

On a relative basis the unpriced carbon risk within the portfolio is less than that of the benchmark, and the portfolio would see a smaller reduction in EBITDA margin due to unpriced carbon costs across all periods.

## Emerging Markets Equities

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£1,044m	£967m	165,115	119,994	163	127

### Portfolio Objective

To provide exposure to emerging markets equities, together with excess returns and enhanced risk control.

### Portfolio Approach

Emerging and frontier economies typically are expected to achieve higher long-term growth rates than developed economies, and, in many cases, are seeing the emergence of a middle class, rising education and improving institutions and infrastructure. Information and market inefficiencies with emerging markets should create opportunities for active managers. Opportunities can arise at both a macro and micro (company) level. Good managers, however, also need to be able to manage the increased risk and challenges of emerging markets.

### Carbon Emissions

The portfolio maintains a weighted average carbon intensity significantly below benchmark. The current discount vs benchmark is 52% when measured on a direct, scope 2 and scope 3 emissions basis. The discount is primarily driven by the portfolio's underexposure to Energy, Materials and Utilities. The collective underweight position in these sectors is currently -8.6% vs benchmark.

Cement producers and utilities dominate the top contributors to weighted average carbon intensity. China Longyuan – the largest wind producer in Asia – has legacy coal assets which make up most of the carbon intensity. Brunel are comfortable with this position given the company no longer provides capital expenditure to this part of the business and ultimately intends to phase coal out of its business. Ambuja Cements and Anhui Conch, which are cement producers in India and China respectively, contribute significantly to the portfolio WACI. Both names are held by the same manager, within their material allocation due to their sector neutral approach. Brunel are happy to hold both names given that Ambuja and Anhui Conch have satisfactory TPI management scores of 3 and 4 respectively. Anhui Conch has yet to disclose its scope 3 emissions, which will be a key point on engagement going forward.

### Disclosures

Emerging markets remain challenging for company disclosures. Full and partial scope 1 disclosures account for 41 and 40% respectively when measured on a GHG-weighted basis. The results are similar when weighted on a value weighted basis. There have been no material changes to note in coverage over the past year.



## Emerging Markets Equities

### Introduction

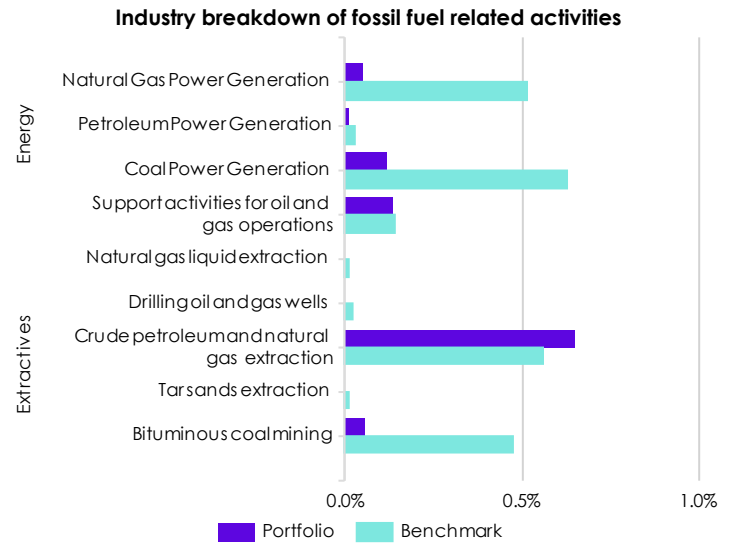
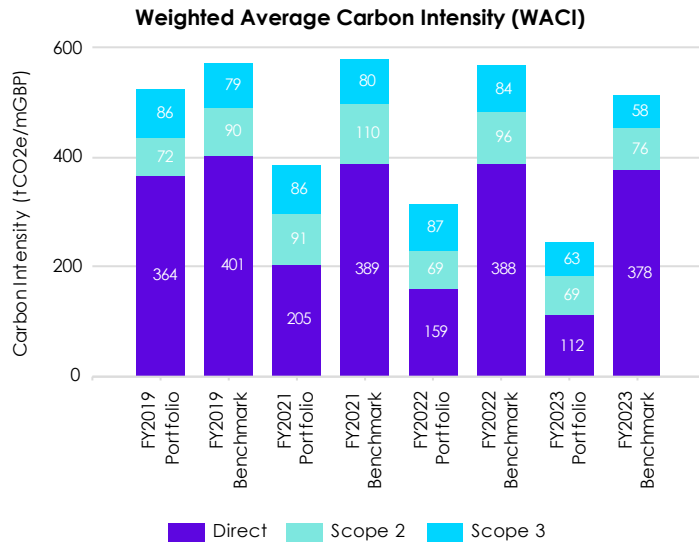
#### Fossil Fuels

The portfolio is typically underexposed to fossil fuel related activities compared to the benchmark due to the underweight positions in Energy and Materials. The most significant industries within fossil fuel activities were Crude Petroleum and Natural Gas Extraction, which have more exposure vs benchmark. This is entirely driven by Energy portfolio holdings, held by one manager. The manager is in the process of finalising their net zero framework, which may result in changes to composition within their Energy portfolio as they aim to comply with Brunel's Climate Change Policy.

Three out of the top five contributors to fossil fuel revenues are Oil companies held in the same manager's portfolio. Examples of this include PTT Exploration and Petrobras who show a lack of alignment today. However, both companies have above average transparency giving them potential to align. Petrobras also commands a strong TPI management score of 4, which means the company is undertaking a strategic assessment on alignment. Both names remain in scope for engagement.

Future emissions for the portfolio remain significantly below benchmark, with the most recent observations showing near zero reserves intensity and future reserves from emissions. Oil and Gas make up all the future emissions for the portfolio. The primary driver for these results is once again from the Energy portion of one manager, given that the other two managers currently have zero exposure to Energy.

## Emerging Markets Equities v MSCI Emerging Markets



### Current year top contributors to WACI

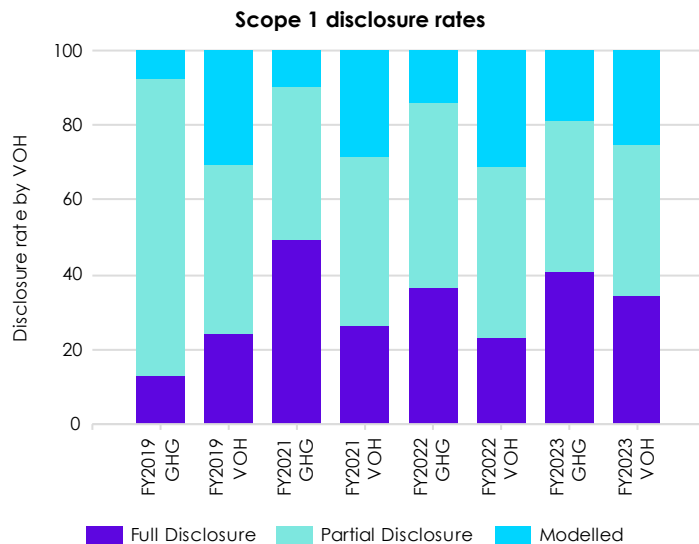
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
Ambuja Cements Limited	6,971	0.29%	-8.13%
Anhui Conch Cement	13,246	0.11%	-6.01%
LG Corp.	3,042	0.36%	-4.14%
China Longyuan Power Group	2,471	0.41%	-3.74%
Inner Mongolia Yili Industrial	943	1.20%	-3.48%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
PTT Exploration and Production	0.32%	0.32%
Parex Resources Inc.	0.27%	0.27%
China Longyuan Power Group	0.41%	0.12%
Samsung Engineering Co., Ltd.	0.24%	0.11%
Petróleo Brasileiro S.A. -	0.19%	0.07%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



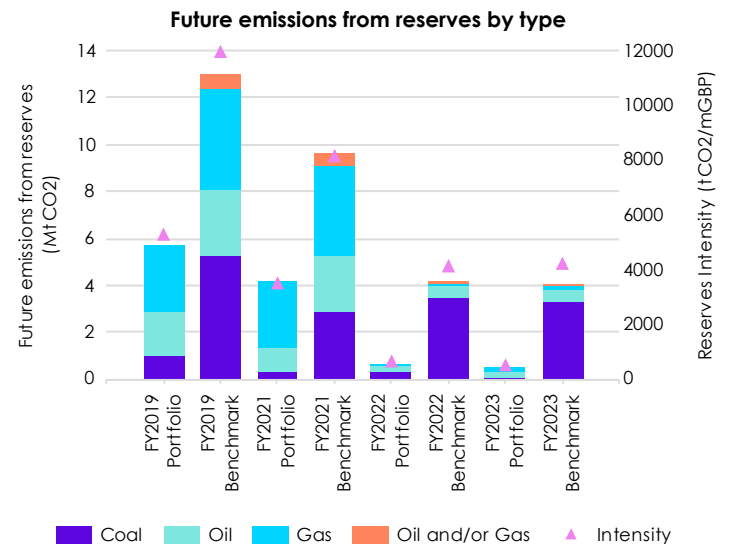
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	41%	35%
Modelled	19%	25%
Partial Disclosure	40%	40%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO)

Source	FY 2022		FY 2023	
	Port.	Ben.	Port.	Ben.
Coal	0.32	3.50	0.09	3.27
Oil	0.24	0.53	0.26	0.59
Gas	0.10	0.15	0.13	0.17
Oil and/or Gas	0.00	0.02	0.00	0.02

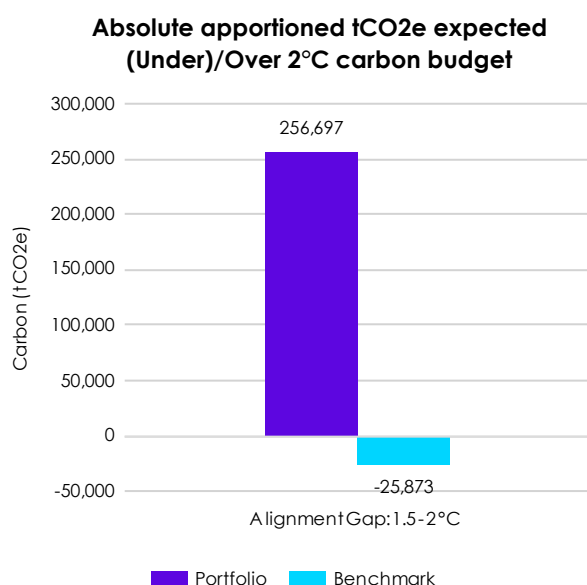
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.

## Emerging Markets Equities

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	>3°C	1.5-2°C
Alignment Gap: <1.5 °C	337,771	200,645
Alignment Gap: 1.5 - 2 °C	256,697	-25,873
Alignment Gap: 2 - 3 °C	61,919	-504,018



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget apporioned emissions	Total emissions (2012-2030)
Bottom	Weight (%)		
Anhui Conch Cement Company Limited	0.11%	106,985	1,613,490,523
Ternium S.A.	0.34%	40,704	651,932,995
OCI N.V.	0.23%	22,724	64,282,392
China National Building Material Company Limited	0.09%	21,654	3,529,894,473
Oil and Natural Gas Corporation Limited	0.21%	14,852	121,605,271
Guangdong Haid Group Co., Limited	0.38%	14,476	8,265,544
MOL Magyar Olaj- és Gázipari Nyilvánosan Muködo Részvénytársaság	0.16%	12,477	94,210,628
Harmony Gold Mining Company Limited	0.16%	10,493	46,949,962
Mobile World Investment Corporation	0.34%	9,251	4,145,796
Companhia de Saneamento Básico do Estado de São Paulo - SABESP	0.49%	8,672	18,512,767

#### Top portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget apporioned emissions	Total emissions (2012-2030)
Top	Weight (%)		
SK hynix Inc.	1.37%	-49,066	431,359,327
JD.com, Inc.	0.52%	-13,156	122,662,593
OCI Holdings Company Ltd.	0.07%	-10,734	64,886,395
CSPC Pharmaceutical Group Limited	0.48%	-9,577	29,632,474
SK Innovation Co., Ltd.	0.12%	-7,255	340,749,106
Anglo American plc	0.41%	-6,829	384,355,514
Ambuja Cements Limited	0.29%	-4,143	224,017,948
China Longyuan Power Group Corporation Limited	0.41%	-4,139	153,995,375
Gold Fields Limited	0.09%	-3,594	88,949,379
Nanya Technology Corporation	0.41%	-3,015	11,613,001

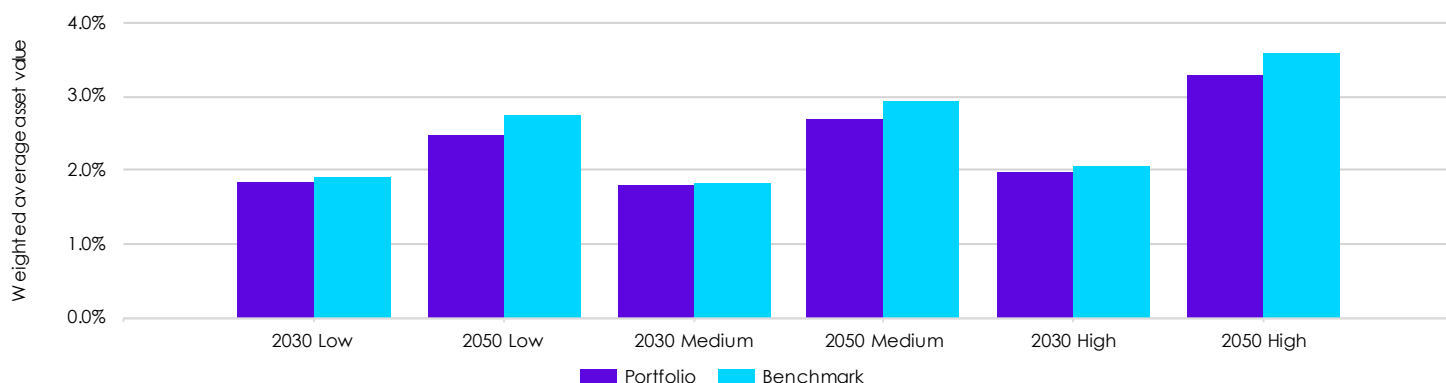
The portfolio is not currently aligned to the Paris agreement, with a warming estimate of >3°C. This is unsurprising given the nature of energy generation in emerging market economies. For example, countries like India and South Africa - two significant emerging market constituents - are still heavily reliant on oil and coal for power generation. Oil and coal account for more than two thirds of the energy mix for both these countries using the latest data from the IEA.

The benchmark is surprisingly showing 1.5-2°C aligned. This is due to unexpected values driven by pandemic-affected business results for some issuers, particularly affecting the underlying FY2021 data of issuers in the marine transportation GICS sub-industry. The portfolio currently has no exposure to marine transportation. The majority of the top detractors for emissions reduction are found in the energy and materials sectors.

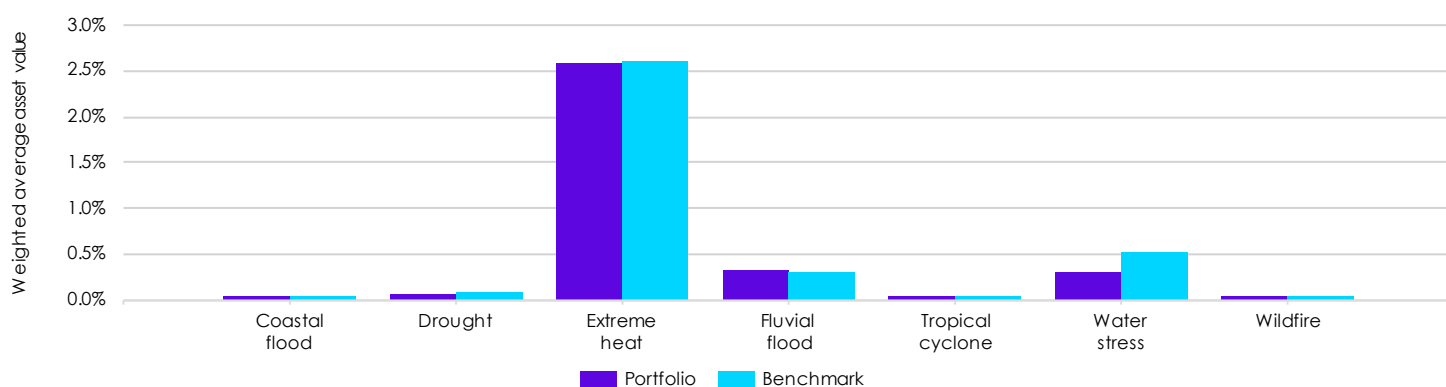
## Emerging Markets Equities

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Hindustan Aeronautics Limited	0.46%	3	12.88	72	42
OCI Holdings Company Ltd.	0.07%	18	9.03	76	68
CP ALL Public Company Limited	0.55%	529	7.43	72	50
Samsung Electronics Co., Ltd.	5.34%	4	7.29	73	42
Richter Gedeon Vegyészeti Gyár	0.18%	19	7.29	67	63
OTP Bank Nyrt.	0.60%	2,032	7.19	69	36
Bank of Ningbo Co., Ltd.	0.13%	426	6.92	74	22
KT Corporation	0.19%	21	6.72	73	26
Unimicron Technology Corp.	0.26%	6	6.52	83	79
China Merchants Bank Co., Ltd.	0.37%	1,882	6.43	72	26

The portfolio has a similar amount of physical risk to the benchmark under various climate scenarios for the 2030 horizon. The portfolio becomes more underexposed to physical risks under various scenarios for the 2050 horizon.

There is a notable difference in water stress risk, where the portfolio carries significantly less risk than the benchmark.

## Emerging Markets Equities

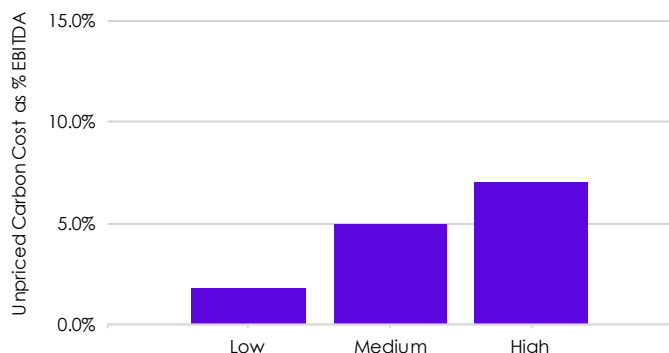
### Physical risk

The largest contributor to the 2050 high scenario is Hindustan Aeronautics. This is common for Indian companies given that extreme heat will become a frequent risk for vast majority of the population. There are also risks from severe flooding, which is expected to increase over the coming decades.

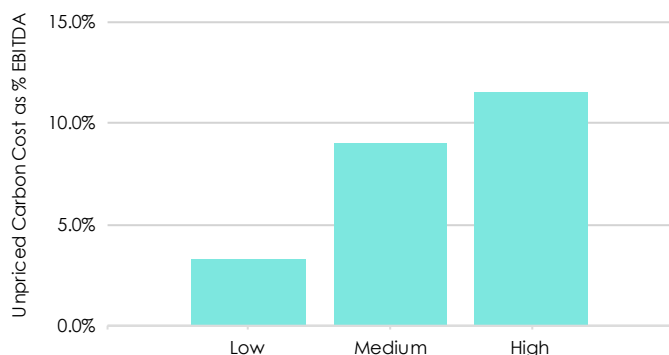
## Emerging Markets Equities

### Carbon earnings at risk

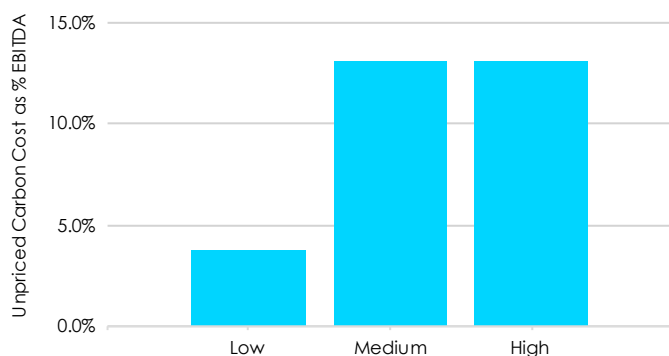
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
China National Building Material Company Limited	0.09%	371.78%
Anhui Conch Cement Company Limited	0.12%	349.44%
Ambuja Cements Limited	0.30%	314.42%
Tata Steel Limited	0.07%	146.67%
POSCO Holdings Inc.	0.14%	103.13%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
China National Building Material Company Limited	0.09%	620.61%
Anhui Conch Cement Company Limited	0.12%	583.65%
Ambuja Cements Limited	0.30%	526.13%
Tata Steel Limited	0.07%	255.16%
POSCO Holdings Inc.	0.14%	155.27%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
China National Building Material Company Limited	0.09%	706.38%
Anhui Conch Cement Company Limited	0.12%	663.40%
Ambuja Cements Limited	0.30%	597.81%
Tata Steel Limited	0.07%	293.33%
POSCO Holdings Inc.	0.14%	176.29%

The same companies contribute to the high-risk scenarios over the 2030, 2040 and 2050 horizons. Anhui Conch and Ambuja Cements - mentioned previously in the metrics section – also contribute to EBITDA at risk.

China national building materials - a cement producer - is the most significant contributor to EBITDA risk. The company has a TPI management quality rating of 2, meaning it is currently not aligned. There has been recent progress from the company, who have acknowledged climate change as a risk/opportunity and put a policy in place to action this. Brunel expect the holding manager to engage with the company to set targets for greenhouse gas emission reduction.

## Emerging Markets Equities

### Carbon earnings at risk

Tata Steel Limited is an Indian steel producer held in a materials sleeve. The company has a strong TPI Management Quality score of 4, although it is not currently aligned to net zero. Brunel expects the holding manager to engage with the company on incorporating climate change risks and opportunities into their strategy.

## Sterling Corporate Bonds

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£1,921m	£2,544m	78,732	46,261	53	20

### Portfolio Objective

To provide some return over gilts by exploiting the credit risk premium: the fact that credit spreads are generally more than adequate compensation for default risks.

### Portfolio Approach

An active approach with enhanced credit analysis and sensible portfolio construction should provide additional returns over the benchmark. Some exposure to unrated and non-benchmark bonds will allow further return enhancements. The portfolios are expected to be highly diverse with more than 250 holdings. This is because with bonds, risks are asymmetric and so diversification reduces risks without limiting return.

### Carbon Emissions

Total WACI is lower than the benchmark. This is particularly driven by lower Scope 3 emissions in the portfolio relative to the benchmark. The top contributors to WACI are mainly holdings in the Utilities sector, including National Grid which is a transmission and distribution company focusing on electricity and gas within the UK and north-east America. Positively, the company recently improved its emission reduction targets and renewed emphasis on biodiversity. The company will also be improving its lobbying disclosures and developing a climate transition plan. Both National Grid and North West Electricity Networks (the highest contributor to WACI) are arguably companies which are vital in moving towards electrification and helping the UK to achieve Net Zero emissions. In the manager's view, the highest contributor to WACI is Aggregated Micro Power Infrastructure (AMP) which operates a gas power-peaking business as well as owning and operating biomass plants. The gas power-peaking business consists of gas-powered plants across the UK that generate electricity when renewable power is low and results in AMP being a significant contributor to the portfolio's WACI. During engagement, the company demonstrated that the strong negative correlation of its plants with wind power production means that they can operate efficiently to meet energy demand at times when renewable power is lacking. While the manager believes that the high emission intensity is mitigated by the "renewable-enabling" role played by these plants, the questions around the viability of natural gas in the context of the Net Zero transition mean that the manager will continue to scrutinise the longer-term outlook for this business.

### Disclosures

Whilst value-weighted full scope 1 disclosures have slightly declined from FY2022 to FY2023, GHG-weighted carbon disclosure rates have marginally improved from FY2022 to FY2023. Only 21% of data was modelled on a GHG-weighted basis as at the end of 2023. The decline in value-weighted full disclosures is a result of



## Sterling Corporate Bonds

### Introduction

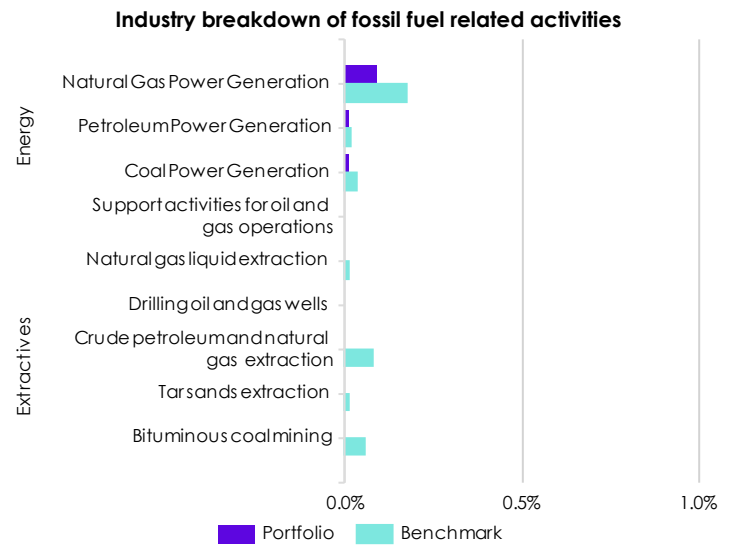
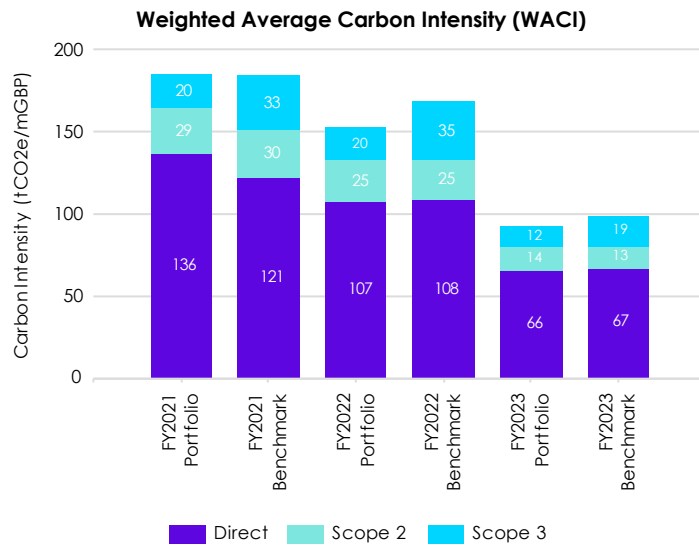
moving from the use of parent company data to more granular data, which has increased the proportion of modelled data and reduced the proportion of full disclosures.

### Fossil Fuels

In terms of fossil fuel related activity, there is less exposure in the portfolio than the benchmark for each category. The manager's bottom-up credit selection, which integrates environmental considerations including climate risk, results in a bias away from fossil fuel activities relative to the benchmark. For example, the portfolio is underweight the Utility sector which forms over 10% of the benchmark. On an absolute basis, the portfolio is most exposed to natural gas power generation, however, natural gas is arguably a fuel needed for the transition. The top contributors to weighted fossil fuel revenues are companies operating in the Utility sector. The top contributor is SSE plc which engages in the generation, transmission, distribution, and supply of electricity, with a vision to be a leading energy company in a low carbon world. Along with other Utilities in the portfolio, the manager has engaged with SSE plc to provide feedback on the company's just transition plan and approach to Net Zero. Top contributors also include Centrica which has set targets to reduce scope 1 and 2 on an absolute basis, as well as a target to reduce scope 3 emission intensity. With nearly 90% of Centrica's emissions associated with the customers' use of sold products, Centrica are looking into solutions to help customers decarbonise, for example creating home energy management solutions. The manager has engaged with Centrica on areas for improvement in its decarbonisation plan, including requesting more detail on the steps to align capital expenditures with the company's Net Zero ambition.

Positively, the portfolio is not expected to generate any future emissions from coal, oil or gas reserves. This compares favourably to the benchmark and is unsurprising given the responsible investment considerations of the manager.

## Sterling Corporate Bonds v iBoxx Sterling Non Gilt x



### Current year top contributors to WACI

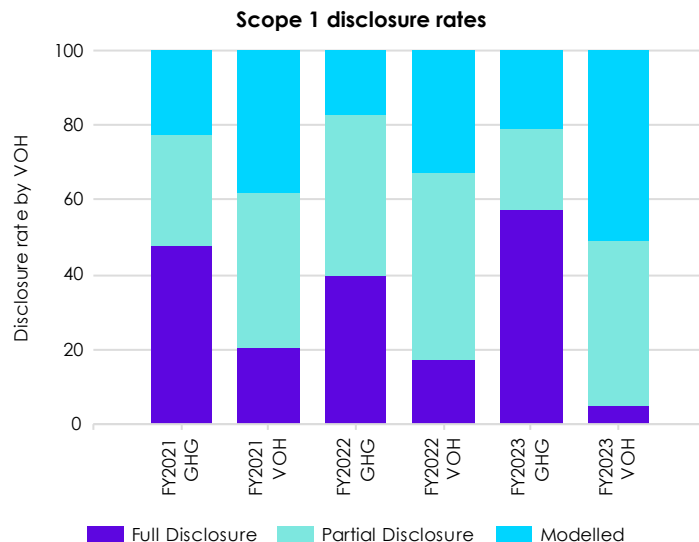
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
North West Electricity Networks	5,053	0.35%	-19.09%
National Grid Electricity	5,053	0.27%	-14.81%
WoDS Transmission plc	7,269	0.09%	-6.97%
Peel Holdings (Management)	752	0.61%	-4.40%
Electricité de France S.A.	271	1.63%	-3.21%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
SSE plc	0.36%	0.09%
National Grid plc	0.53%	0.01%
Ørsted A/S	0.20%	0.01%
Centrica plc	0.71%	0.00%
Anglo American plc	0.00%	0.00%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



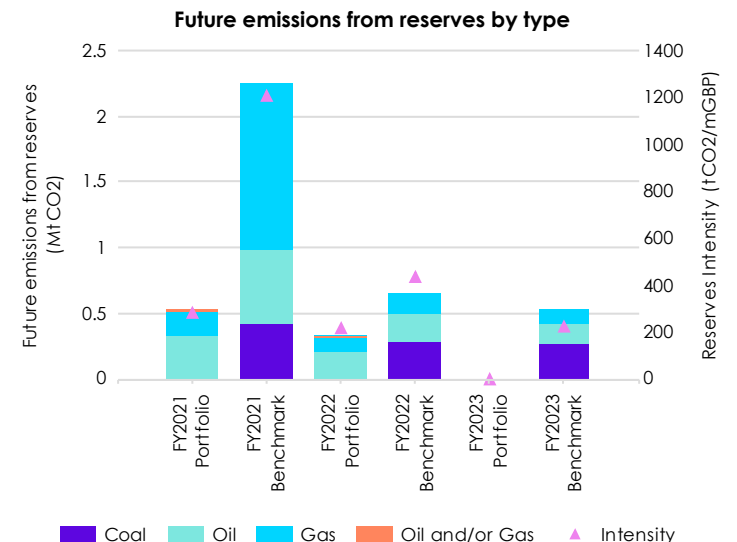
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	57%	5%
Modelled	21%	51%
Partial Disclosure	22%	44%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO)

Source	FY 2022	FY 2023
	Port.	Ben.
Coal	0.00	0.28
Oil	0.21	0.22
Gas	0.11	0.15
Oil and/or Gas	0.00	0.00

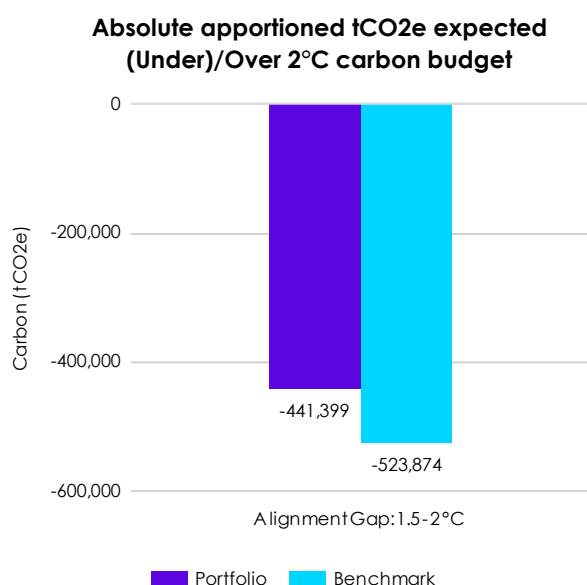
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.

## Sterling Corporate Bonds

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	<1.5°C	1.5-2°C
Alignment Gap: <1.5 °C	-51,771	9,583
Alignment Gap: 1.5 - 2 °C	-441,399	-523,874
Alignment Gap: 2 - 3 °C	-656,329	-758,211



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget	Total emissions (2012-2030)
Bottom	Weight (%)	apportioned emissions	
YTL Corporation Berhad	0.33%	74,209	132,227,108
CK Hutchison Holdings Limited	0.80%	34,652	43,632,681
National Grid plc	1.72%	14,860	107,608,306
Balfour Beatty plc	0.37%	12,076	1,720,556
Coventry Building Society	0.71%	10,288	95,232
Stagecoach Group Limited	0.11%	7,588	9,405,067
Tesco PLC	0.75%	4,873	42,096,341
APA Group	0.16%	4,848	9,844,800
Mitchells & Butlers plc	0.70%	4,231	2,224,613
Volkswagen AG	0.58%	2,386	122,436,746

#### Top portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment		(Under)/over budget	Total emissions (2012-2030)
Top	Weight (%)	apportioned emissions	
Vattenfall AB	0.33%	-220,550	1,042,705,613
Electricité de France S.A.	1.63%	-131,822	1,158,140,269
SSE plc	0.36%	-77,700	440,057,977
Mobico Group Plc	0.50%	-73,741	30,634,476
Enel SpA	0.38%	-39,183	1,822,502,273
Aviva plc	2.07%	-26,234	11,233,589
Centrica plc	0.71%	-17,565	54,546,338
E.ON SE	0.38%	-13,431	616,466,229
Ørsted A/S	0.20%	-11,022	116,554,025
Pennon Group Plc	0.08%	-1,820	20,177,384

Positively, apportioned tCO<sub>2</sub>e for both the portfolio and benchmark are expected to be under the 2°C carbon budget. In terms of Paris Alignment, the portfolio compares favourably to the benchmark, with the portfolio expecting <1.5°C warming (whilst the benchmark reflects 1.5-2°C level of warming). The worst portfolio performer to emissions reductions goals is YTL Corporation Berhad (YTL), an infrastructure conglomerate with extensive operations across a number of countries. YTL is the ultimate parent company of Wessex Water which is held in the portfolio. As Wessex Water does not have any Paris Alignment data, the report uses ultimate parent company data which is not a fair representation of the extent to which Wessex Water is under/over budget apportioned emissions. One of the worst portfolio performers to emissions reductions goals is National Grid, however, the manager sees this company as vital in moving towards electrification, as mentioned previously. In contrast, the best performer is Vattenfall. The company has adopted programs, such as developing e-vehicle charging networks and installing rooftop solar panels,

## Sterling Corporate Bonds

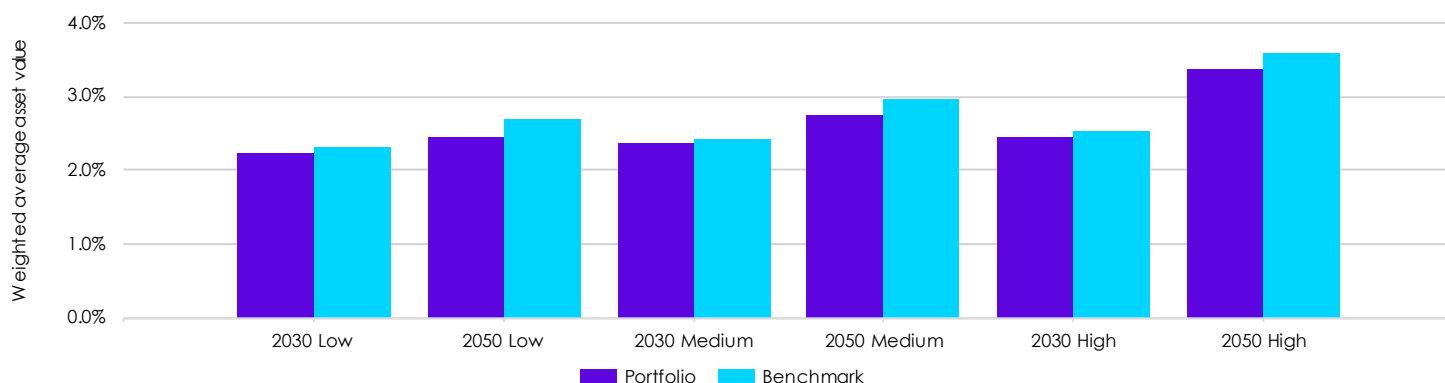
### Paris alignment

which may support renewable energy uptake in other sectors. Vattenfall has set an SBTi-approved Net Zero target for 2040. Accordingly, it plans to phase out hard coal-fired heat and power generation by 2030. EDF is also one of the top performers to emissions reductions goals. Despite having relatively high carbon intensity, arguably EDF is an enabler of the transition to Net Zero through its investments in renewable energy and commitment to divest fully out of coal.

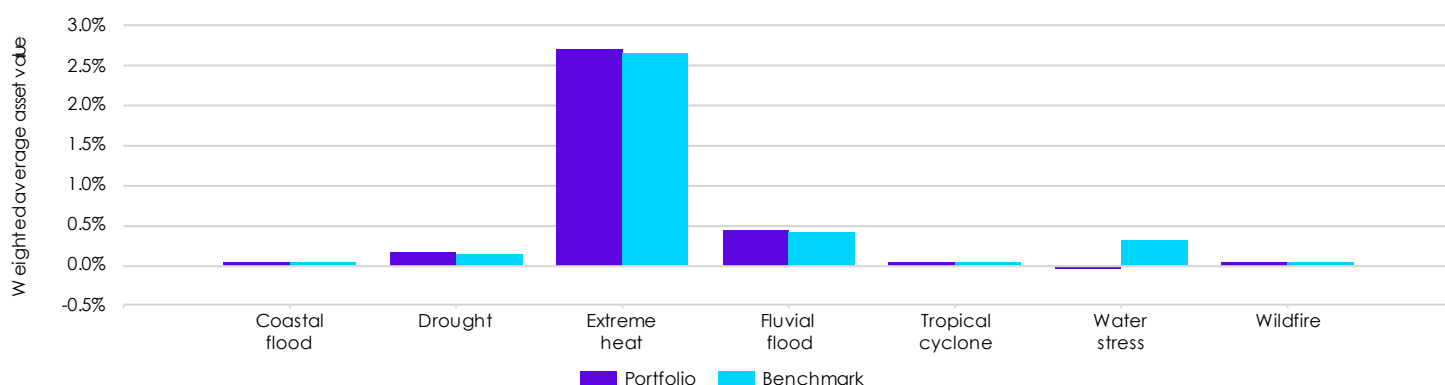
## Sterling Corporate Bonds

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Places for People Group Limited	0.66%	50	16.86	82	60
Assicurazioni Generali S.p.A.	0.53%	291	12.16	77	5
Crédit Agricole Assurances S.A.	0.28%	21	11.95	78	28
Verizon Communications Inc.	0.17%	209	9.70	72	33
Digital Realty Trust, Inc.	0.12%	433	9.00	72	46
Vodafone Group Public Limited	0.90%	457	8.45	69	13
Electricité de France S.A.	2.03%	657	8.34	74	67
Fidelity National Information Services,	0.49%	223	8.14	74	33
Banco Santander, S.A.	0.85%	11,903	8.05	74	25
Koninklijke KPN N.V.	0.18%	12	8.03	73	9

Financial impacts from physical risk are expected to be less than the benchmark by 2050 in each scenario. The most significant financial impact from physical risk is related to extreme heat, with little financial impact expected due to other risks by 2050 in the high scenario. In particular, there is expected to be very limited financial impact from coastal flooding, wildfires and tropical cyclones, which is likely related to the physical premise locations of the company holdings.

The top contributor to portfolio level physical risk by financial impact is expected to be Places for People Group Limited, a social housing association. It is worth noting the priorities which housing associations are having to balance (including rent caps, health and safety, and new construction) and the common

## Sterling Corporate Bonds

### Physical risk

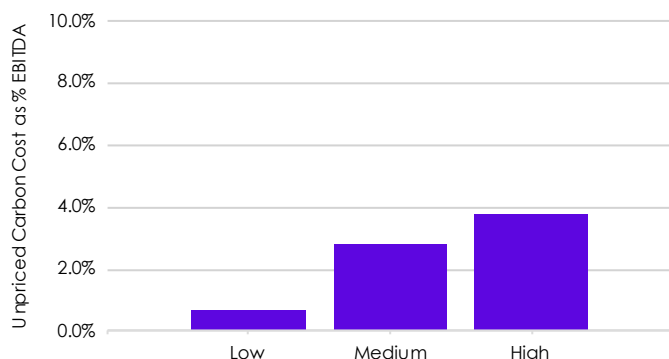
challenges they are facing in order to reach government mandated EPC targets (including strategic and financial support from the government, and resident engagement). The manager frequently engages with social housing associations, including Places for People Group Limited, to better understand the climate-related challenges faced by the sector as well as to foster collaboration, best practice sharing and coordinated advocacy.

Assicurazioni Generali, an insurer specialising in Life, Property and Casualty insurance, is also one of the top contributors to portfolio level physical risk.

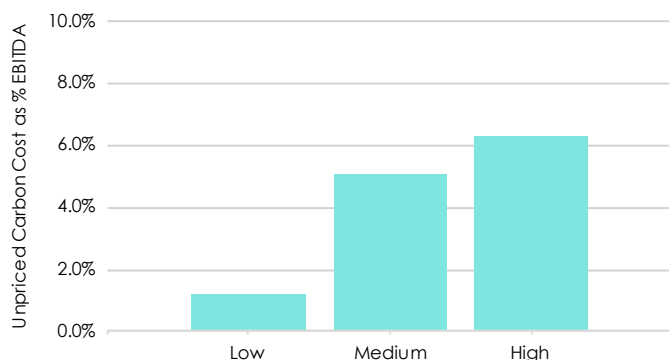
## Sterling Corporate Bonds

### Carbon earnings at risk

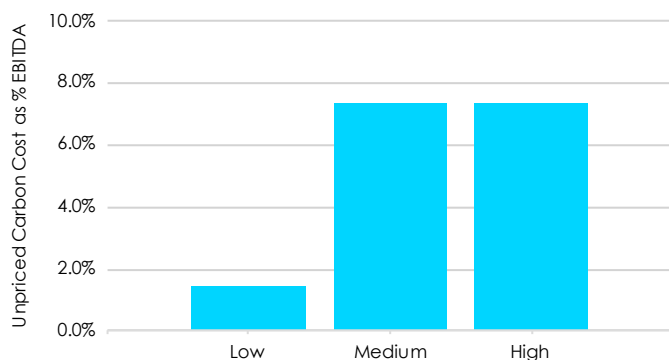
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Stagecoach Group Limited	0.18%	344.62%
YTL Corporation Berhad	0.54%	168.00%
InterContinental Hotels Group PLC	0.31%	44.59%
Mobico Group Plc	0.83%	30.84%
Balfour Beatty plc	0.62%	23.20%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Stagecoach Group Limited	0.18%	572.68%
YTL Corporation Berhad	0.54%	269.03%
InterContinental Hotels Group PLC	0.31%	70.14%
Mobico Group Plc	0.83%	50.45%
Enel SpA	0.64%	38.63%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Stagecoach Group Limited	0.18%	661.56%
YTL Corporation Berhad	0.54%	313.01%
InterContinental Hotels Group PLC	0.31%	79.87%
Mobico Group Plc	0.83%	58.35%
Enel SpA	0.64%	46.29%

EBITDA at risk scenario analysis demonstrates a significant contrast between low and medium/high scenarios, particularly by year 2050.

In a low scenario, which represents the full implementation of countries' Nationally Determined Contributions under the Paris Agreement, less than 2% of EBITDA is at risk through 2030, 2040 and 2050. The medium scenario assumes that policies will be implemented to reduce greenhouse gas emissions and limit climate change to 2°C in the long term, but with action delayed in the short term. In this scenario, EBITDA at risk is over 2% in 2030, but increases to over 4% in 2040 and over 7% in 2050.

The high scenario, which represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C by 2100 (the Paris

## Sterling Corporate Bonds

### Carbon earnings at risk

Agreement), also predicts over 7% EBITDA at risk by 2050, but with over 6% EBITDA already at risk in 2040 and just less than 4% at risk in 2030.

The top contributor to EBITDA at risk, in the high scenario, is Stagecoach Group which is expected to be significantly impacted by future carbon pricing policies. Stagecoach Group is one of the largest UK transport operators, who manage a network of over 8,000 buses, a low carbon alternative when compared against cars. The company is targeting a zero-emission bus fleet by 2035 and for the business to be fully Net Zero by 2050. The company has already started rolling out 100% electric buses, notably within Greater Manchester, Aberdeen and Inverness. While the company still has progress to be made through switching over to an electrified fleet, investments being carried out are arguably encouraging, including on hybrid technologies.

The InterContinental Hotels Group (IHG) is also one of the top contributors to EBITDA at risk. The company has set 1.5°C-aligned science-based near-term targets (validated by SBTi) which target a reduction across all emission scopes. However, whilst its action plan highlights the key levers to achieve its 2030 targets, given its franchised model, a key challenge for IHG remains working with hotel owners to drive emission reductions.



## PAB Passive Global Equities

### Introduction

Total fund value		Absolute carbon emissions		Carbon to value intensity	
Q4 2022	Q4 2023	Q4 2022	Q4 2023	Q4 2022	Q4 2023
£2,265m	£3,842m	110,075	130,579	49	34

### Portfolio Objective

To provide exposure to equity returns and the global economy with lower exposure to carbon emissions and fossil fuels, while still low cost and liquid, and aligning to the Paris Agreement.

### Portfolio Approach

This portfolio is invested in global developed equities, predominantly those that are constituents of the underlying index. Climate change is significant long-term risk to investments. This portfolio seeks to mitigate this risk by investing in accordance with a Paris Aligned Benchmark.

### Carbon Emissions

The PAB Passive Global Equities portfolio has a WACI 20% lower than the benchmark market capitalisation index. It should be noted that the EU regulations for Paris Aligned Benchmarks to which the portfolio conforms measure carbon intensity relative to a company's enterprise value with an adjustment for inflation applied. The WACI calculation in this report measures carbon intensity relative to a company's revenue. This results in differences between the WACI shown in this report and the WACI reported by the index provider. The portfolio is required to achieve a 7% year on year reduction in WACI calculated using inflation adjusted WACI. This target was met at the last index rebalance date in October 2023.

Contributing factors to the portfolio's lower WACI include an underweight allocation to the Energy and Industrials sectors and an overweight to the Telecommunications sector. Furthermore, within Industrials the portfolio performs well on a WACI basis due to security selection due to overweight positions in a number of companies with low carbon intensity. The effect of an overweight allocation to the carbon intense Utilities sector was mitigated by selection within the sector.

The portfolios below benchmark WACI score is also supported by an overweight allocation to the Consumer Discretionary sector and selection within this sector, where Amazon and Tesla are large overweight holdings and are included in the portfolio due to strong green revenue scores. The underweight allocation to the Financials sector makes a negative contribution to relative WACI performance. However, we would highlight that WACI metrics are unlikely to fully capture risk presented through bank's financed emissions which the product aims to minimise and leads to the underweight allocation to Financials.

### Disclosures

On a value of holdings basis, full disclosure rates are in line with FY2022, however on a GHG basis full disclosure rates have fallen. The change on a GHG basis is mainly due to an increase in the partial disclosure rate, rather than a significant increase in modelled data.

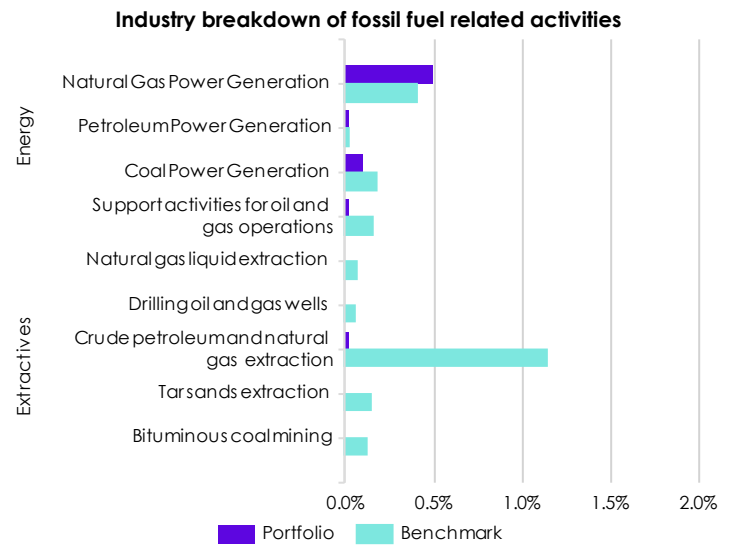
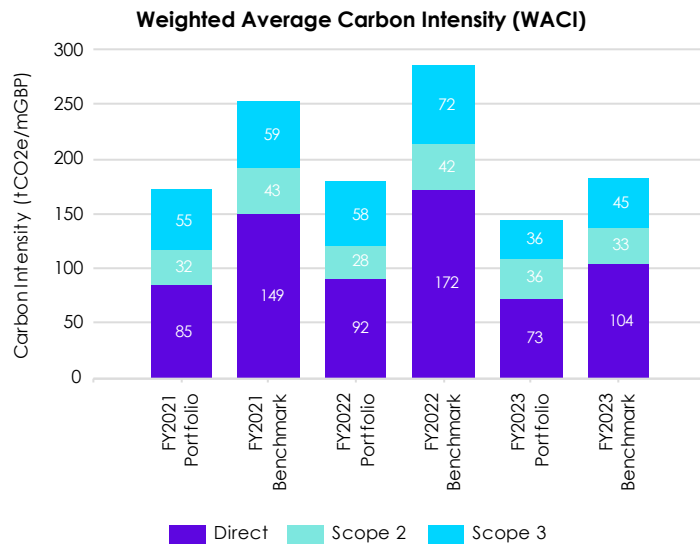
## PAB Passive Global Equities

### Introduction

#### Fossil Fuels

On an absolute basis, the portfolio generates significantly less energy from fossil fuels on all mining, extraction, and generation metrics than the benchmark. The exception to this is generation from Natural Gas, which is above the benchmark. The portfolio has significantly lower future emissions from all fossil fuel sources than the benchmark. The absolute portfolio future emissions from Natural gas reserves have increased from a low level in FY 2023 vs FY2022, however the benchmark has seen a much greater increase and so on a relative basis the portfolio remains under benchmark to a greater degree than in FY 2022.

## PAB Passive Global Equities v FTSE Dev World TR UKPD



### Current year top contributors to WACI

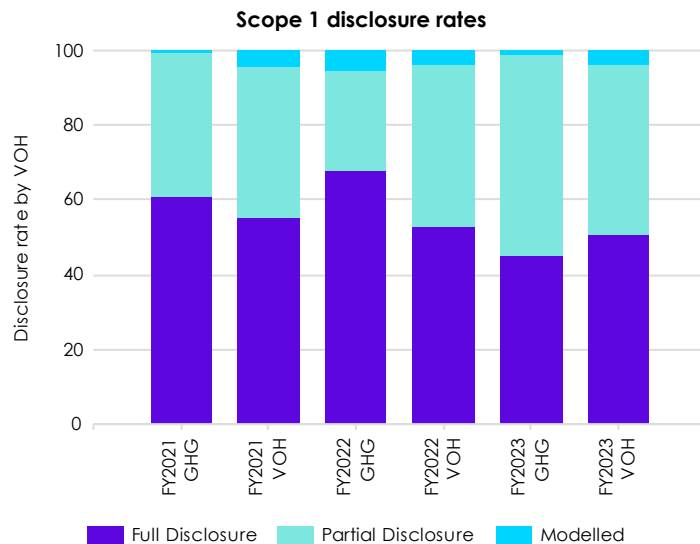
Name	Carbon-to-Revenue intensity (tCO2e/mGBP)	Weight (%)	Contr. (%)
NextEra Energy, Inc.	2,570	0.82%	-13.84%
Linde plc	1,483	0.94%	-8.77%
Waste Management, Inc.	1,976	0.44%	-5.53%
Duke Energy Corporation	3,678	0.11%	-2.81%
Nestlé S.A.	434	1.21%	-2.46%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

### Top contributors to weighted fossil fuel revenues

Name	Weight (%)	Weighted FF Revenue (%)
NextEra Energy, Inc.	0.82%	0.37%
Duke Energy Corporation	0.11%	0.06%
EDP - Energias de Portugal, S.A.	0.16%	0.04%
Consolidated Edison, Inc.	0.10%	0.02%
The AES Corporation	0.03%	0.01%

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



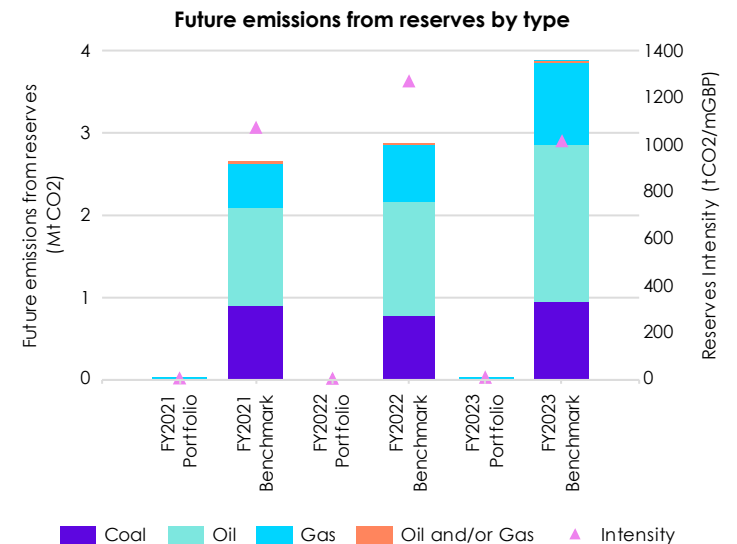
### Portfolio disclosure rates by method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	45%	51%
Modelled	1%	4%
Partial Disclosure	53%	45%

**Full Disclosure** - Data disclosed by a company in an un-edited form.

**Partial Disclosure** - S&P has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process.

**Modelled** - In the absence of usable disclosures, the data has been modelled.



### Future emissions from reserves by type (MtCO2)

Source	FY 2022		FY 2023	
	Port.	Ben.	Port.	Ben.
Coal	0.00	0.77	0.00	0.94
Oil	0.00	1.39	0.00	1.90
Gas	0.00	0.71	0.02	1.04
Oil and/or Gas	0.00	0.00	0.00	0.00

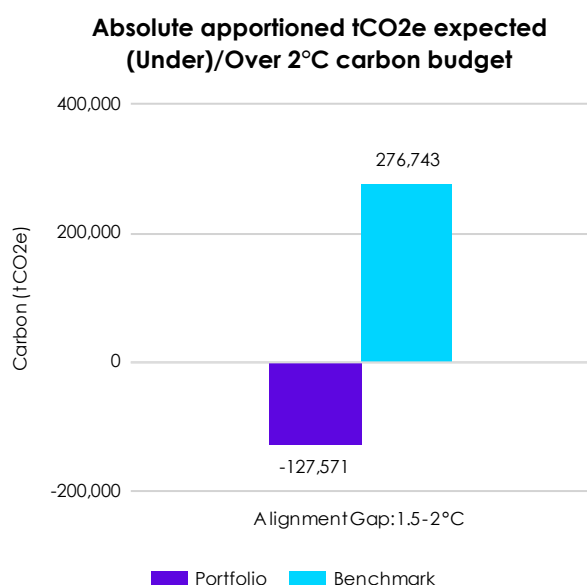
Future emissions by type indicates an emissions level for each fossil fuel type. We provide this analysis for each portfolio against its benchmark, as well as how it has changed over time. Above we display this analysis for the Portfolio.

## PAB Passive Global Equities

### Paris alignment

#### Paris alignment

	Portfolio	Benchmark
Alignment	1.5-2°C	2-3°C
Alignment Gap: <1.5 °C	131,158	772,927
Alignment Gap: 1.5 - 2 °C	-127,571	276,743
Alignment Gap: 2 - 3 °C	-470,572	-172,772



#### Worst portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment	(Under)/over budget	
Bottom	Weight (%)	apportioned emissions Total emissions (2012-2030)
Linde plc	0.94%	27,848 400,508,543
NextEra Energy, Inc.	0.82%	27,726 661,912,507
Evergy, Inc.	0.02%	8,956 167,718,890
CRH plc	0.09%	7,469 327,227,648
Fortum Oyj	0.01%	7,072 308,627,568
Oji Holdings Corporation	0.01%	6,105 46,770,400
Steel Dynamics, Inc.	0.03%	4,481 34,124,719
Air Products and Chemicals, Inc.	0.04%	4,199 357,839,261
Mitsubishi Corporation	0.13%	4,007 49,138,256
Marriott International, Inc.	0.09%	3,928 79,518,851

#### Top portfolio performers to emissions reduction goals

GHG emissions WRT 2 degree alignment	(Under)/over budget	
Top	Weight (%)	apportioned emissions Total emissions (2012-2030)
Amazon.com, Inc.	5.20%	-65,518 468,817,029
SK hynix Inc.	0.19%	-27,962 431,359,327
Iberdrola, S.A.	0.32%	-19,979 555,670,764
Ørsted A/S	0.21%	-18,807 116,554,025
PPG Industries, Inc.	0.15%	-12,411 98,420,861
Honeywell International Inc.	0.61%	-11,827 112,863,433
DuPont de Nemours, Inc.	0.16%	-11,796 353,244,775
The AES Corporation	0.03%	-11,130 675,219,213
EDP - Energias de Portugal, S.A.	0.16%	-11,121 272,023,922
Holcim AG	0.03%	-10,941 2,689,430,497

The portfolio is currently aligned to a 1.5-2.0°C scenario. It is important to consider that the portfolio will follow a decarbonisation pathway so it would not be surprising to see the level of alignment further improve over time. The least aligned parts of the portfolio include exposures held in the Basic Materials sector, an underweight allocation relative to the market capitalisation index, and the Utilities sector, which is an overweight allocation. The EU regulations for Paris Aligned Benchmarks stipulate that compliant products should not be underweight high impact sectors in aggregate and the overweight to Utilities helps the portfolio, which has a significant underweight allocation to the Energy sector, meet this objective.

Linde Plc makes the largest contribution to over budget apportioned emissions. The company is involved in gas processing and distribution and has a high carbon footprint. However, initiatives undertaken by the

## PAB Passive Global Equities

### Paris alignment

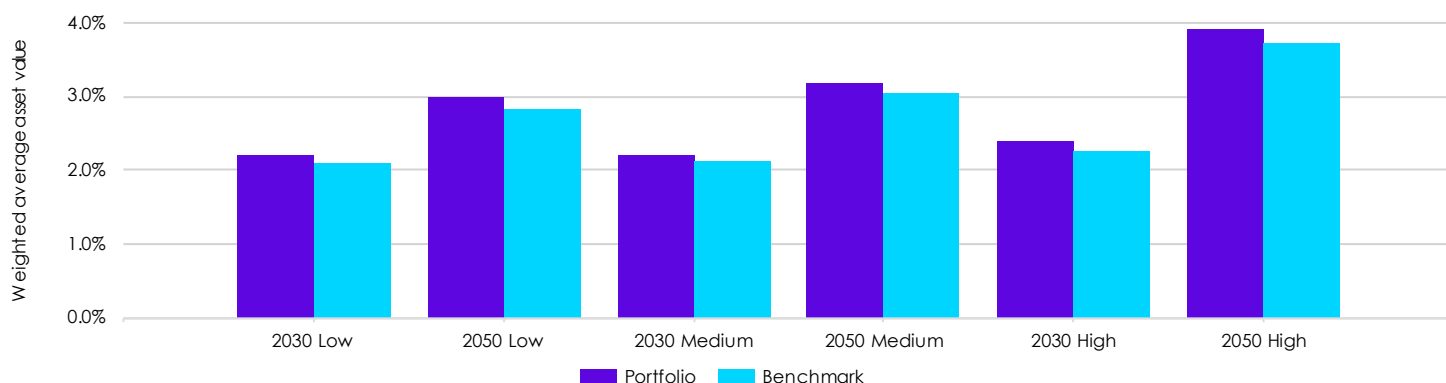
company to reduce carbon production in a carbon intensive industry, results in the portfolio's quantitative model assigning a high green revenues score which contributes to the overweight position.

NextEra Energy also makes a large contribution to the portfolios over budget apportioned emissions. Like Linde, the company is involved in a carbon intensive industry: Power Generation. However, it invests significantly in renewable energy, resulting in positive green revenue and TPI management quality scores. This leads to an overweight position relative to the market capitalisation benchmark.

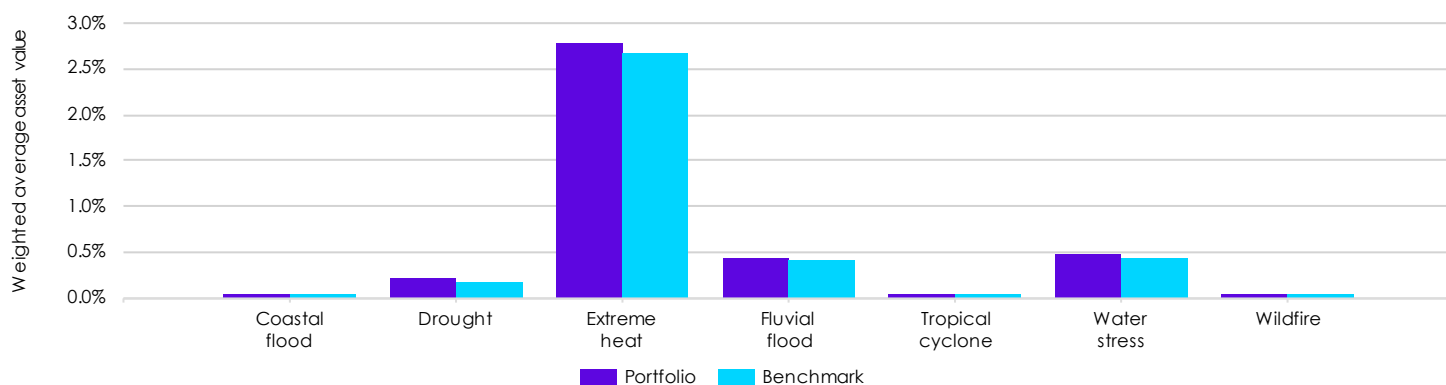
## PAB Passive Global Equities

### Physical risk

#### Financial impact composite score



#### Financial impact by risk type - 2050 high



#### Top 10 contributors to portfolio-level physical risk - 2050 high scenario

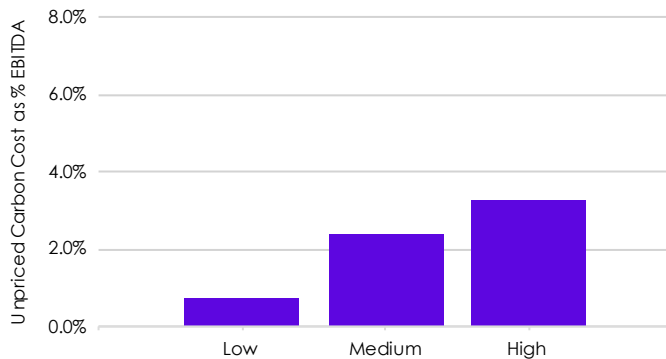
Name	Weight (%)	Asset count	Financial impact composite score	Composite score	Sensitivity adjusted composite score
Unite Group PLC	0.00%	13	24.30	81	76
Hexagon AB (publ)	0.04%	25	18.97	79	56
Cellnex Telecom, S.A.	0.03%	28	16.60	77	29
Telia Company AB (publ)	0.01%	35	16.50	70	29
Samsung Electro-Mechanics Co., Ltd.	0.01%	4	15.48	77	65
Suncorp Group Limited	0.01%	142	12.81	72	11
Assicurazioni Generali S.p.A.	0.01%	291	12.16	77	5
Telstra Group Limited	0.02%	52	11.74	70	18
Neoen S.A.	0.02%	76	10.51	78	69
Fujitsu Limited	0.09%	64	9.92	69	45

At an aggregate level, the product's exposure to physical risks is slightly higher than the benchmark in 2030 and 2050. In 2050 the portfolio is exposed to slightly higher physical risk from Drought, Extreme Heat and Water Stress.

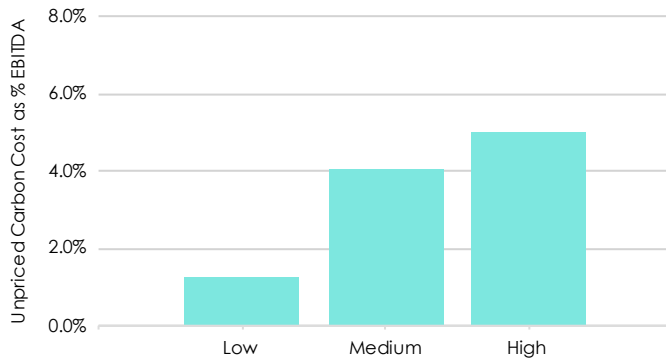
## PAB Passive Global Equities

### Carbon earnings at risk

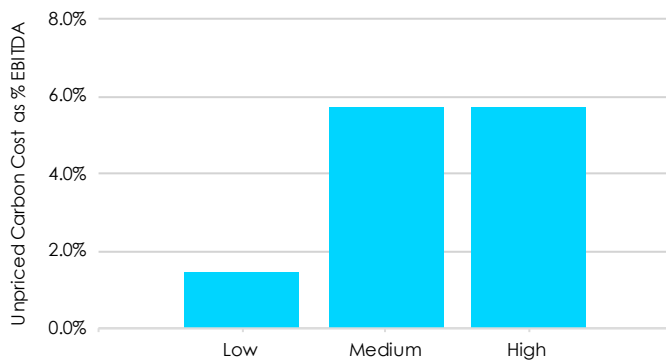
EBITDA at risk % - 2030



EBITDA at risk % - 2040



EBITDA at risk % - 2050



EBITDA at risk - 2030 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Live Nation Entertainment, Inc.	0.01%	572.76%
Datadog, Inc.	0.00%	459.51%
Evergy, Inc.	0.02%	176.52%
Posco Future M Co., Ltd.	0.02%	157.07%
Holcim AG	0.03%	151.22%

EBITDA at risk - 2040 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Live Nation Entertainment, Inc.	0.01%	847.42%
Datadog, Inc.	0.00%	675.23%
Evergy, Inc.	0.02%	249.96%
Posco Future M Co., Ltd.	0.02%	237.21%
Holcim AG	0.03%	236.47%

EBITDA at risk - 2050 top 5 (High)

Name	Weight (%)	Unpriced carbon cost / EBITDA
Live Nation Entertainment, Inc.	0.01%	958.29%
Datadog, Inc.	0.00%	761.87%
Evergy, Inc.	0.02%	279.59%
Holcim AG	0.03%	270.23%
Posco Future M Co., Ltd.	0.02%	269.44%

The product is designed to have lower climate-related financial risk than the benchmark on the assumption that the cost of carbon (reflecting negative externalities) is priced into the market. It is not surprising therefore that the product's revenues at risk in the event of a high price on carbon are 3% which compares favourably to the benchmark's 6%. The value of companies that would be impacted are also lower, at 5% versus the benchmark 11%.

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