



Taskforce on Climate-related Financial Disclosures Report

First UK Bus Pension Scheme
Year ending 5 April 2023



Trustee statement on climate risks and opportunities

Chair statement on behalf of the Trustee

The Trustee recognises that climate change represents a long-term financial risk to the Scheme and can also be a source of opportunities. Climate change is expected to affect our members, financial markets and society at unprecedented levels. As such, the Trustee recognises that managing the associated risks and opportunities form part of its fiduciary duty to members. We have taken steps to ensure climate considerations are fully integrated across our processes, procedures and decision-making, including an aspiration for an investment strategy which is net zero by 2050.

The Task Force on Climate-related Financial Disclosures (“TCFD”) is an international institution that has developed a framework to improve and increase reporting of climate-related financial information. This report sets out our response and key actions across the four TCFD pillars: Governance, Strategy, Risk Management, and Metrics and Targets. It has been produced to comply with the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and addresses the specific disclosure requirements in the regulations which are based on the recommendations of the TCFD.

Previously we have set policies and procedures to provide a framework to manage climate risk and capture opportunities over time across both the Defined Benefit (“DB”) and Defined Contribution (“DC”) Sections of the Scheme. Our climate-related priority for the 12 months ending 5 April 2023 was to understand the Scheme’s current position and what may be achievable in the future. As part of this, we have analysed all the relevant asset classes invested in by the Scheme. We have also analysed the current DB investment strategy and the default DC strategy. The remaining self-select funds are not in scope as the assets invested are less than £100m or 10% of total fund value.

Defined Benefit Section

The Trustee considers climate risks and opportunities when making decisions on the investment strategy. For example, the allocation to Timberland is a key solution of climate change mitigation. Further, the Trustee mandated its principal manager with guidelines on reductions in greenhouse gas emissions for the corporate bond mandate.

The anticipated climate impact on the funding position from an investment standpoint is projected to be relatively modest in the short to medium term.

Given the characteristics of the industry which FirstGroup Holdings Limited (the “Company”) operates in, climate change and its associated effects would bring about substantial transformations for their business. The impact on the Company Covenant is regularly monitored by the Trustee via the Covenant adviser.

The potential impact of climate change on Scheme demographics, particularly life expectancy, and the resulting financial effects are considered by the Actuary.

Defined Contribution Section

Since 5 April 2023, the DC activities have been established as a separate Trust. The Trustee has worked on the DB and DC sections of this report with input from two investment advisers, reflecting the specific characteristics of the Sections. This means that some content is presented differently for the DB and DC Sections.

The Trustee recognises both shorter-term transition risks alongside physical climate risks which are expected to become more prominent in the long-term. The Trustee has offered, and continues to offer, members funds that directly address these risks both in the default strategy and self-select options.



In summary the Trustee is committed to ensuring the best outcomes for Scheme members by addressing the risks and opportunities of climate change and further building the Scheme’s plan for climate action.

Richard Soper, Chair of the Trustee of the First UK Bus Pension Scheme

Overview



Executive Summary

This report sets out the Trustee's response and key actions across the four Task Force on Climate-related Financial Disclosures ("TCFD") pillars below.

Governance

Governance around climate-related risks and opportunities

- **ESG Policy** – The Trustee maintains an ESG Policy which sets out the Trustee's ESG beliefs & implementation framework.
- **Climate Delegation Framework** – Established by the Trustee. Defines roles and responsibilities in relation to climate-related risk.
- **Meetings** – The Trustee Board meets regularly and receives adviser support.
- **Training** – The Trustee has received training on relevant climate risks and opportunities from its advisers.

Risk Management

Identification, assessment and management of climate-related risks

- **Risk register** – The Trustee has reviewed its risk register to include climate-related risks.
- **Manager assessments** – The DB Investment Adviser conducts an annual ESG review of the Scheme's investment managers to identify areas for improvement. The DC Investment Adviser monitors ESG considerations on behalf of the Trustee and raises any risks or opportunities when they arise.
- **Dashboard** – The Trustee, with advice from its advisers, has developed a climate risk and opportunity dashboard for the DB Section (page 28).

Strategy

Actual and potential impacts of climate risks and opportunities

- **Time horizons** – The Trustee has defined key time horizons for each Section and considered how the Scheme may develop over these periods.
- **Risks & opportunities** – The Trustee has identified relevant climate-related risks and opportunities for each Section over the selected time horizons.
- **Scenario analysis** – The Trustee has conducted scenario analysis to assess the impact of an increase in the global average temperature on assets and liabilities and therefore the funding position of the Scheme.
- **Covenant impact** – The Trustee has considered how climate-related risks and opportunities could affect the Scheme's covenant.

Metrics & Targets

Disclosure of key metrics and targets

- **Metrics (DB and DC)** – The Trustee has selected four metrics to report on and collated data against these from the Scheme's investment managers.
- **Targets (DB and DC)** – The Trustee has set a data quality improvement target for both sections.

Importance of climate change

Why is climate change important for our members?

The ongoing risks associated with climate change are increasingly present across the global economy and financial markets. As a result, we know that the future will look very different for the Scheme and its members. Climate change therefore needs to be at the forefront of our investment thinking and governing decisions.

This presents both risks and opportunities for the Scheme as global decarbonisation is required to mitigate climate change. The decarbonisation action is expected to incur large transition costs, and physical damages are expected if global temperatures continue to rise. This means that whatever comes next, we will face climate-related risks which we need to appropriately manage across both Sections.

Currently the world continues to grapple with rising emissions, and we recognise global changes are required to keep global average temperature rises within safe limits. Surpassing these safe limits could mean unprecedented impacts on our global society and economy. This will have an impact on members, financial markets, and the Company.

Global decarbonisation efforts and the potential wider impact of climate change will also result in opportunities for the Scheme, as demand for low carbon alternatives rise, as well as the potential for investments in renewables and natural capital. We will assess the appropriateness of these opportunities in alignment with other financially material considerations when making investment decisions.

Climate science

Greenhouse gas ("GHG") emissions arise from the burning of fossil fuels for purposes such as transport or power. Emissions released into the atmosphere cause warming due to a blanketing effect, impacting the entire climate system.

Current policies in place

Governments have agreed to the Paris Agreement to limit global average temperature rises to well below 2°C, with ambitions towards 1.5°C (versus pre-industrial levels). Further action is required in order to achieve the Paris Agreement goals.

The transition to a low-carbon economy

To decarbonise the global economy, policies, technologies and market preferences are expected to shift in favour of low-carbon solutions.

Physical risks from climate change

Physical risks will arise due to the impacts of climate change, including both sudden onset natural disasters and slower shifts in weather patterns. Such risks are expected to scale up in the long term due to rising global average temperatures.

TCFD Overview

Governance

Governance around climate-related risks and opportunities

Internal

Trustee – We, the Trustee, hold ultimate responsibility for managing the Scheme. This includes setting the Scheme’s Climate Delegation Framework, which was last updated in 2022, to ensure Scheme-level climate-related risks and opportunities are well governed.

The Trustee, working with the Scheme’s advisers, has agreed to ensure it has oversight of the climate-related risks and opportunities as they pertain to the Scheme’s assets to enhance long-term, sustainable financial stability.

Investment Committee (“IC”) – Whilst overall responsibility lies with the Trustee, the general ongoing management of Scheme assets is delegated to the IC, along with the responsibility of assessing the impact of climate considerations on Scheme assets. The IC, working with the Investment Adviser, provide oversight and manage ESG and climate-related risks to help the Trustee execute its regulatory requirements.

External

Investment Adviser – The Scheme’s DB and DC Investment Advisers provide climate-related advice to the Trustee throughout the year, covering the inclusion of climate considerations in the governance arrangements, climate risks and opportunities, the analysis of climate metrics, and providing training on the ever-evolving climate science (as well as regulatory updates).

Actuary – The Scheme’s Actuary assesses climate-related risks and opportunities in relation to the DB Section and the implications for the Section’s funding and long-term objective.

Other Advisers – The Scheme’s Covenant Adviser and Legal Adviser provide advice to the Trustee on climate-related regulation, risks and opportunities.

Investment Managers (including DC Provider) – The Trustee has delegated responsibility to the Scheme’s investment managers, and DC Provider, for managing the Scheme’s assets in line with the agreed mandates. This includes identifying, assessing and managing climate-related risks and opportunities in relation to the Scheme’s investments, as well as engaging with portfolio companies in the best interests of the Scheme’s members and providing the agreed climate-related metrics for both Sections.

TCFD Overview

Low impact █
 Average impact █
 High impact █

Strategy

Actual and potential impacts of climate risks and opportunities

Over the current reporting year, the Trustee assessed and quantified the actual and potential impacts of climate risks and opportunities on the Scheme’s investment strategies by identifying key time horizons relevant to each Section which are detailed later in this report. The Trustee has evaluated the potential risks and opportunities over these timeframes, including an analysis of the Scheme’s position under various climate scenarios (noting that the scenarios vary for the DB and DC sections), two of which are shown below. The estimated magnitude of the potential impacts are illustrated using a colour coded rating across each timeframe and climate scenario. Further details on the actual and potential impacts of risks and opportunities are found in later pages in the report.

Defined Benefit

Risk (Medium Term, 8 years)	Assets	Liabilities	Company
Transition risk (net zero scenario)	Low impact	Average impact	High impact
Physical risk (current policies)	Average impact		High impact

Defined Contribution

Risk (Long Term, 20-30 years)	Default Strategy Assets
Transition risk (late action)	Average impact
Physical risk (no additional action)	High impact

Note that the Scheme’s reliance on the Company is expected to reduce significantly by March 2024 and reduce further over time.

TCFD Overview

Risk Management

Identification, assessment and management of climate-related risks

The Trustee has a framework to ensure risks are managed holistically. This includes analysis of climate risks at the overall Scheme level and ensuring the Scheme's investment managers are considering ESG risks and opportunities in line with the Trustee's expectations.

Scheme level

The Trustee periodically reviews the risk register and have received advice on potential issues and potential mitigating actions relating to:

- Company Covenant
- Investment strategy
- Asset and investment manager allocations
- Funding

In addition to the risk register, the Trustee receives regular advice from their advisers on climate considerations.

Underlying investment mandates

The Trustee regularly reviews the Scheme's investment managers' ESG capabilities.

On an annual basis, the DB Investment Adviser provide an ESG assessment for the Scheme's mandates, analysing the level of ESG integration for each mandate. The assessment of the DB Section's mandates has a strong focus on climate-related risks and results in mandate- and Section-level ESG and climate scores.

The DC Investment Adviser monitors ESG considerations on behalf of the Trustee and raises any risks or opportunities when they arise.

The Trustee has set specific improvement targets for these scores, and our Investment Advisers, on behalf of the Trustee, uses the results of these assessments to engage with our investment managers on these areas to improve.

TCFD Overview

Metrics & Targets

Disclosure of key metrics and targets

The Trustee has selected, gathered and assessed the four climate metrics in the table below. Due to the nature of the Defined Benefit Section's investment strategy, which has a material allocation to illiquid assets, coverage of climate metrics is currently limited. The target the Trustee has set is outlined below. This will be monitored against the same set of metrics for both Sections. The Trustee will continue to monitor annually, via our investment advisers, the Scheme's progress against the target.

Metrics Data as at 31 December 2022	Total GHG emissions (scope 1 & 2)		Carbon Footprint (scope 1 & 2)		Data Quality			Implied Temperature Rise	
	Metric, tCO ₂ e	Coverage	Metric, tCO ₂ e/ £1m of EVIC	Coverage	Reported	Estimated	Unavailable	Metric	Coverage
DB Section - Total Portfolio	67,451	57%	80	57%	1%	56%	43%	1.9°C	53%
DC Section (for growth stage of default strategy) - Total Portfolio	7,536	98%	42	98%	80%	18%	2%	Unavailable	0%

Climate target	Data Quality (2024 TCFD submission)	Data Quality (2025 TCFD submission)
DB and DC sections - Total Portfolio	66%	75%

The Trustee wishes to maintain an alignment of the target across the two sections until both have met this goal. Subsequently the Trustee will determine a revised target. Whilst the Trustee recognises that the data quality of the DC section is higher than the target set it also recognises that the DB Section has the greatest climate risk associated with the Scheme and has some way to go before the target is reached.

What's next?



Building on the opportunities

We will continue to consider ESG opportunities that can be integrated within our investment strategies. While recognising the limitations of the illiquid mandates and LDI invested in by the DB Section, there may be room for improved integration of climate considerations as the strategy develops. We will implement this via engaging with existing investment managers as well as considering new suitable opportunities. We will also monitor the evolving beliefs of the Trustee and DC members to ensure that the Fund's default strategy remains appropriate.



Focus on improving data

We recognise that high-quality data relating to climate metrics is important for feeding into our decision making and the current data coverage for the DB Section is low. In recognition of this, we have adopted a data quality improvement target for both the DB Section. The Trustee, via its Investment Adviser, is engaging with our investment managers to seek improvement in the quality and availability of carbon emissions intensity data.



Evolving our target

As the quality of our climate metrics data improves, we may seek to adopt a different target, such as carbon emissions intensity reduction. We seek to have a long-term, forward-looking view on target setting that can feed into our strategic thinking. As part of this, we will also monitor how best practice evolves across the industry to ensure we adopt a target that is both ambitious as well as practical.



Understanding the Company's risks and opportunities

We will seek to further understand the risk to the Company and its role in the transition to a low-carbon economy. We will work with the Company and advisers to better understand potential risks and opportunities and what these might mean for the Scheme.

TCFD Pillars



TCFD Recommendations – Governance

Governance

Describe the Trustee Board's oversight of climate-related risks and opportunities

The Trustee recognises that climate change represents a long-term financial risk to the Scheme and can also be a source of opportunities. Climate change is expected to affect our members, financial markets and society at unprecedented levels. As such, the Trustee recognises that managing the associated risks and opportunities form part of its fiduciary duty to members. We have taken steps to ensure climate considerations are fully integrated across our processes, procedures and decision-making,

Climate-related beliefs within the Trustee's ESG Policy

The Trustee seeks to pursue the UN's seventeen 'Sustainable Development Goals' in its investment selection processes which includes goals directly associated with climate risks (affordable and clean energy, and climate action) amongst other goals which are impacted by and will benefit from improved climate practices.

Climate-related policies within the Trustee's ESG Policy

Monitoring – The Trustee will comply with the spirit as well as the letter of the TCFD requirements and encourage those managers with whom we invest to ensure that they, and the ultimate recipients of the Scheme's investment make available appropriate TCFD data, irrespective of jurisdiction.

Zero carbon by 2050 – The Trustee has an aspiration for an investment strategy which is net zero by 2050.

Oversight responsibilities of the Trustee Board

Overall responsibility for ESG considerations (including climate-related) lies with the Trustee. Whilst overall responsibility lies with the Trustee, the general ongoing management of its climate-related responsibilities is delegated to the Investment Committee (IC). The IC meets regularly (at least every 2 months) and when optimal receives updates and support from its Scheme Actuary, Investment Advisers, Legal Counsel and Covenant Adviser on ESG and climate change topics.

The IC and Trustee will consider the quality of advice the advisers are able to provide from a climate perspective when reviewing their appointments. In the annual assessment of the Investment Adviser via the Competition and Markets Authority ("CMA") investment adviser objectives the IC includes objectives relating to the advice received on ESG (including climate change) and TCFD reporting.

Climate-related training

The Scheme's DB Investment Adviser provided TCFD training to the IC in 2021 and throughout 2022 and 2023 to prepare for, and work towards, the new upcoming regulations. Training sessions included a focus on climate risk, types of climate metrics, and metrics feasibility.

The Trustee and IC also comprises persons with multiple pension scheme trustee appointments and professionals within the investment advisory and UK pension scheme industries and use this experience to make informed decisions, question and, where appropriate, challenge the information provided to it by their advisers undertaking governance activities.

Governance

Describe the Trustee Board's role in assessing and managing climate-related risks and opportunities

Climate Delegation Framework

Over 2022, the Trustee agreed a Climate Delegation Framework which sets out the roles and responsibilities of various stakeholders for managing climate-related risks and opportunities. The Trustee has the ultimate responsibility for ensuring Scheme-level climate-related risks and opportunities are governed well. Our Climate Delegation Framework sets out the governance process we have agreed to ensure we have oversight of these risks and opportunities that are relevant to the Scheme. This framework is reviewed, alongside the ESG Policy, on at least an annual basis.

Roles and Responsibilities

Trustee	<ul style="list-style-type: none"> – Ensuring the Trustee has sufficient knowledge and understanding relating to climate-related risks and opportunities. – Incorporating climate-related considerations into strategic decisions across the DB and DC sections, based on the advice of the IC and external advisers. 	Investment Advisers	<ul style="list-style-type: none"> – Prepare a report assessing how well the Scheme's investment managers are incorporating ESG considerations (including climate change) and subsequently generate a progress report that updates on the actions outlined in the ESG impact assessment report (DB specific). – The DC Investment Adviser monitors ESG considerations on behalf of the Trustee and raises any risks or opportunities when they arise. – Aid in the selection, collection, and presentation of metrics and targets related to ESG performance. – Support in preparing the Trustee's annual report aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). – Provide support in conducting climate scenario analysis to evaluate the potential effects on the Scheme's assets and liabilities across different climate change scenarios over the short, medium and long term. – Provide training and updates to the Trustee on relevant climate-related matters.
Investment Committee (IC)	<ul style="list-style-type: none"> – Ensuring the IC has sufficient level of understanding with regards to climate-related risks and opportunities through regular training, to support the Trustee and to meet statutory and fiduciary obligations. – Reviewing climate-related risks and opportunities for the Scheme, and how risks and opportunities play out over multiple time horizons, across the short, medium and long-term, including defining these time horizons for each Section. – Receiving relevant climate-related updates from its Investment Advisers, covering the investment managers' climate capabilities and how they have performed against their climate targets, as well as any relevant market or regulatory updates. 		

Governance

Describe the Trustee Board's role in assessing and managing climate-related risks and opportunities

Roles and Responsibilities

Scheme Actuary	<ul style="list-style-type: none">– Assess climate-related risks and opportunities in relation to the Scheme's funding position over the short, medium, and long term and the implications for the Scheme's funding and long-term objective.	Investment Managers	<ul style="list-style-type: none">– Identify, assess, and manage climate-related risks and opportunities in relation to the Scheme's investments.– Actively exercise voting rights and engage with portfolio companies concerning climate-related risks and opportunities, prioritizing the best interests of the Scheme's members.– Provide the agreed-upon climate-related metrics to the Scheme's Investment Adviser regarding the Scheme's investments and focus on enhancing the quality and availability of these metrics.
Legal Advisers	<ul style="list-style-type: none">– Provide training to the Trustee on climate-related legal matters, including working with the Trustee and the investment adviser as requested to advise in relation to the Trustee's statutory and fiduciary obligations.– Where requested, assist in the documentation of the arrangements with the Scheme's third parties with respect to climate-related matters.– Assist with the preparation and provide a legal review of the Trustee's annual TCFD report.		
Covenant Adviser	<ul style="list-style-type: none">– Undertaking periodic reviews, at least triennially, of the extent to which climate-related risks and opportunities might affect the Company over the short, medium, and long term.		

TCFD Recommendations – Strategy

Strategy

Introduction to DB climate scenarios chosen – slides 26 and 27 describe the resilience of the Scheme’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Agree climate scenarios

Climate scenarios are hypothetical futures, which can apply different levels of climate action and produce a unique combination of physical and transition risk. The Trustee, in conjunction with its Investment Advisers, chose the below scenarios to provide a balanced set of hypothetical constructs with which to analyse the potential risks and opportunities across the Scheme’s portfolios. Forward-looking analysis always involves uncertainty, however these scenarios help to examine different possible outcomes in terms of emissions, global average temperatures, and associated transition and physical risks, for example.

DB Section - The Trustee, via the DB Investment Adviser, has assessed the potential impacts on the Section’s assets and liabilities under three different climate scenarios defined by the Network for Greening the Financial System (“NGFS”), and interpreted and modelled by Moody’s Analytics.

Net Zero 2050

- Temperatures kept to a 1.5°C rise this century (Paris-aligned).
- CO₂ emissions reach net zero in 2050 globally but only some regions achieve global GHG net zero.
- Relatively high transition costs incurred in near term, but physical damages are minimised.

Divergent Net Zero

- Temperatures kept to a 1.5°C rise this century (Paris-aligned).
- Divergence in policies across sectors results in higher transition costs e.g., the transport sector instils more stringent policies than the energy sector.
- Physical damages are minimised.

Current Policies

- World largely fails to meet the Paris Agreement, resulting in 3.8°C of warming this century.
- Whilst there are lower transition costs, higher physical risks arise due to rising global temperatures, shifts in weather patterns and an increased incidence of natural disaster.

Strategy

Introduction to DC climate scenarios chosen – slides 31 to 33 describe the resilience of the Scheme’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Agree climate scenarios

Climate scenarios are hypothetical futures, which can apply different levels of climate action and produce a unique combination of physical and transition risk. The Trustee, in conjunction with its Investment Advisers, chose the below scenarios to provide a balanced set of hypothetical constructs with which to analyse the potential risks and opportunities across the Scheme’s portfolios. Forward-looking analysis always involves uncertainty, however these scenarios help to examine different possible outcomes in terms of emissions, global average temperatures, and associated transition and physical risks, for example.

DC Section – The Trustee, via the DC Investment Adviser, has assessed the potential impacts on the Section’s assets under four different climate scenarios, building upon a subset of the climate scenarios outlined by the NGFS.

Early action

- Transition to net-zero begins in year one, alongside assuming carbon pricing and policy intensifies over time.
- Temperatures are kept to a 1.6°C rise this century.
- Minimal physical damages and medium transition costs in near term.

Late action

- Policy implementation is more sudden and disorderly due to delay, resulting in disruption over the medium-term.
- Temperatures are kept to a 1.6°C rise this century.
- Minimal physical damages and high transition costs.

No additional action

- No new climate policies are introduced beyond those agreed.
- Temperature rise to 2.3°C is assumed to happen immediately. Assumed temperature rise is 4.1°C this century.
- High physical damages but low transition costs.

Far too little too late

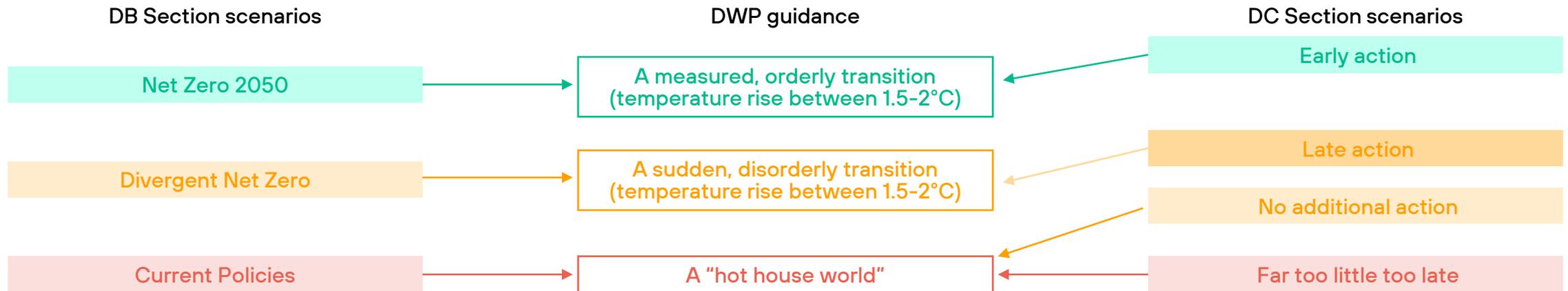
- This scenario accumulates the impacts of a ‘late action’ and ‘no additional action’ scenario.
- Implementation of policies is sudden and disorderly due to delay, and despite action, results in larger increase in global temperatures.
- High physical damages and high transition costs.

Strategy

Introduction to DB and DC climate scenarios chosen

Agree climate scenarios

Given the differences in the membership demographics and investment characteristics between the DB and DC Sections, the Trustee has reviewed the Sections separately for scenario analysis. As the Scheme has two different Investment Advisers, and two sets of scenarios, the Trustee has mapped the previous slide's scenarios across to each other using the Department for Work and Pension's ("DWP's") guidance to allow for comparison. However, we are aware that whilst they broadly reflect the same scenario, the underlying assumptions are different and may result in different outcomes.



Limitations

The Trustee recognises that there are limitations involved within investment strategy and climate scenario modelling given the inherent uncertainty around the future impact of climate change (including climate tipping points and "unknown unknowns") and the need to use assumptions which are subjective. The Trustee therefore uses the scenario analysis for comparative purposes rather than analysing the absolute magnitude of the results, to help understand some of the possible impacts of climate-related risks. Further detail can be found in the appendix.

Strategy

Introduction to DB timeframe horizons chosen - slides 23 to 25 describe the climate-related risks and opportunities the Trustee has identified over the short, medium and long term

DB Section – agreed timeframes

Climate considerations differ depending on the timeframe in question; we have identified timeframes that are relevant to the Scheme and considered material climate-related risks and opportunities under each of these. We have identified the following timeframes via a blended view of the climate outlook, membership demographics, the funding position, the long-term objective (“LTO”), and the ability to pay benefits. In the shorter term, we expect transition risks to be greatest. However, in the longer-term, we expect physical risks to increasingly manifest and become more important.

Timeframe	Investment Horizon	Climate Horizon
Short term <i>3 years</i>	Actuarial review and review of illiquid mandates	Company target setting, improvement in data quality, government responses to COP27
Medium term <i>8 years</i>	LTO target & consideration of insurance options	Companies hitting interim 2030 targets, alignment with Sustainable Development Goals (SDGs*)
Long term <i>15 years</i>	Duration of Scheme’s liabilities	Physical damages starting to be incurred
Very long term <i>28 years</i>	Majority of remaining liabilities paid	Physical damages incurred, Net Zero by 2050 target

*SDGs: 17 goals adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 people enjoy peace and prosperity.

Strategy

Introduction to DC timeframe horizons chosen - slide 33 describes the climate-related risks and opportunities the Trustee has identified over the short, medium and long term

DC Section – agreed timeframes

Different scenarios are expected to have different impacts on the Scheme’s assets (at both an investment fund level and an overall strategy level).

The scenarios cover a range of outcomes, from global warming being limited to increasing significantly. However, risks may be significantly more material than implied within these scenarios. The Scheme’s investment strategy has been assessed under each scenario and modelled across a 30-year time horizon, which has been split into three segments of ten years (short-term, medium-term and long-term). Ranges, rather than precise years, have been used due to the uncertainty of exact timings regarding climate events.

Whilst short, medium and long-term are commonly used expressions when considering investments, it is important to note these are used here in the context of climate risk. Here, they are represented by three equal-length terms of ten years over the 30-year time horizon (that is, the approximate time that many accept as being the point where the world must achieve net-zero emissions to avoid the worst risks of climate change). As such, they may be quite different from the usual short, medium and long-term time horizons that are familiar to the Trustee.

Timeframe	Climate Horizon
Short term <i>0-10 years</i>	Over this period, we would expect significant improvements in modelling and data quality with regards to climate scenario analysis. Furthermore, under an “early action” scenario, we would expect significant progress by global governments and corporations, given the importance of significant changes being made by 2030 to limit global warming.
Medium term <i>10-20 years</i>	Over this period, we may expect the impacts of a “late action” scenario to be at their highest. This is expressed as a ten-year range, as there is great uncertainty regarding the precise timing of any “late action”.
Long term <i>20-30 years</i>	Over this period, under an “early action” and “late action” scenario, we would expect global governments and corporations’ carbon emissions to be tending towards zero, in order to meet any net-zero targets by 2050. Furthermore, under a “no additional action” and a “far too little too late” scenario, we would expect impacts to be at their greatest at the end of the scenario period (that is, by 2050).

DB Section – Strategy

DB Section

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

Climate scenario analysis: portfolio – impact on funding position relative to baseline scenario

Under all climate scenarios, the Scheme's funding position is expected to deteriorate compared to the baseline – where there are no expected physical or transitional costs from climate change.

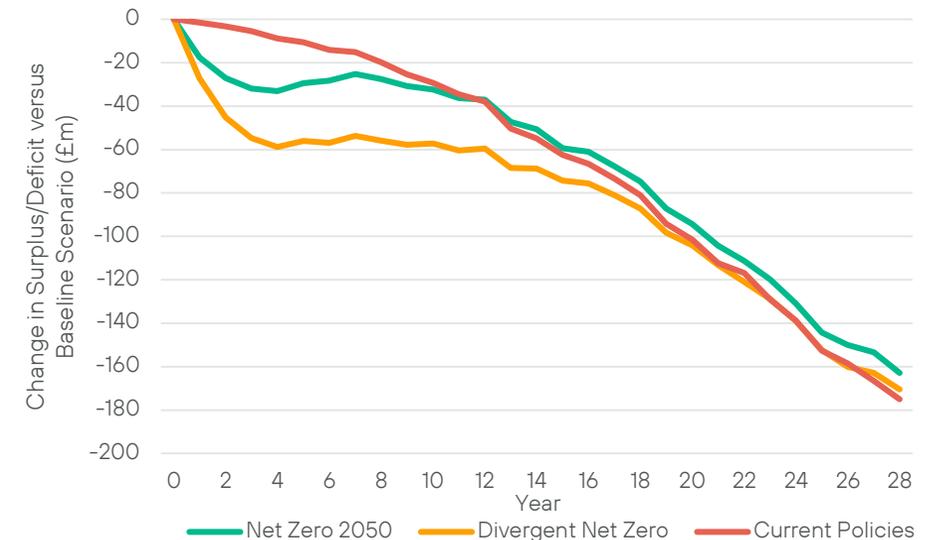
Over the shorter and medium term, the costs associated with the transition to a lower carbon economy are clear within the Net Zero 2050 and Divergent Net Zero scenarios. This reinforces the focus on investing in companies that are prepared for the transition, where transition risks are minimised.

Over the longer term, from c.2040 onwards, the costs relating to physical damages are significant within the Current Policies scenario, with temperatures reaching a c. 2.4°C rise above pre-industrial levels by the end of 2050.

Whilst impacts under the Current Policies scenario are minimal over the shorter term/potential life of the Scheme, consideration should be given to the wider implications of this scenario.

The Trustee recognises this modelling is based on top-down macroeconomic assumptions and analysis, and so will not always account for specifics of underlying investment funds or holdings. The analysis might therefore over (or under) state the risks to the Scheme, given the nature of the specific holdings. More detail is provided in the appendix.

The Baseline scenario assumes no transition or physical impacts of climate change i.e. a climate neutral scenario. Source: Investment Adviser, Moody's. This is based on stochastic modelling, with the median outcome shown. Liabilities are modelled on a gilts + 0.5% basis. Whilst we have modelled the potential physical and abatement costs over the next 28 years, in theory, markets may price these in sooner. The model's projections are sensitive to the underlying methodology and assumptions. No guarantee can be offered that actual outcomes will fall within the range of simulated results. Due to the long projection period, the model's outcomes are particularly reliant upon the underlying assumptions. Therefore, more attention should be paid to the relative comparisons between different projections than to the absolute magnitude of the results.



Asset impacts – p.a. return drag relative to Baseline scenario

Scenario	Short-term 3 years	Medium-term 8 years	Long Term 15 years	Very Long-term 28 years
Net Zero 2050	-0.7%	0.0%	-0.4%	-0.7%
Divergent Net Zero	-1.2%	-0.2%	-0.4%	-0.7%
Current Policies	-0.2%	-0.3%	-0.7%	-0.9%



DB Section

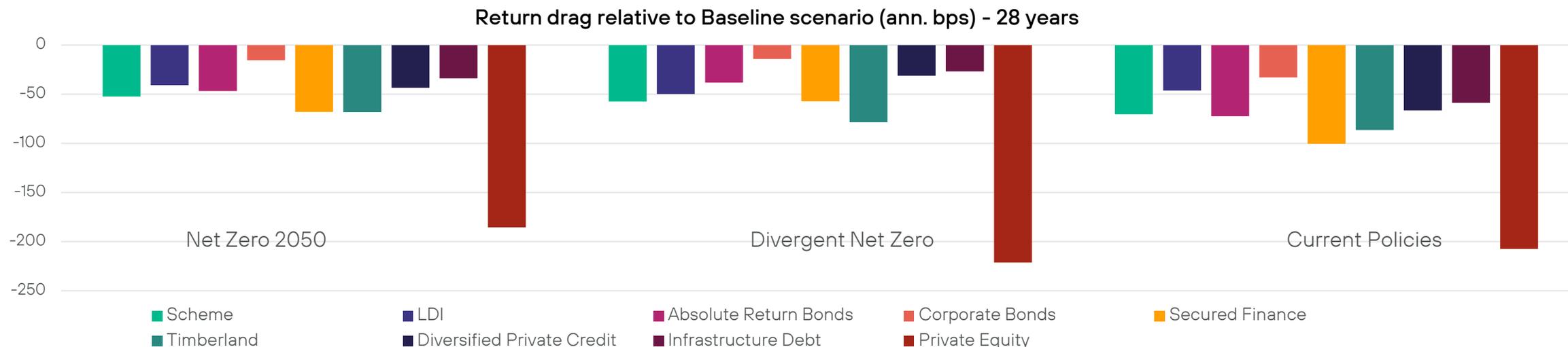
Describe the resilience of the Scheme's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

Climate scenario analysis: asset classes

The Trustee considers the isolated impact on different assets to understand which allocations might contribute to the Section's climate risk and how this might evolve over time. The private equity mandate has potentially the greatest exposure to transitional and physical risk, given economic sensitivity of the asset class. The allocation is relatively large today but is expected to fully mature over the next decade (with timing uncertain, depending on pace of running-off the assets).

We can see the delayed impact of a disorderly transition, as the two net zero scenarios will have delivered the same outcome of net zero by 2050, the Divergent Net Zero will have incurred higher transaction costs. Although impact at overall Scheme level is marginally different between these two scenarios, while more impacted under the Current Policies scenario.

We also see significant impacts of the physical costs of rising global temperatures across all asset classes (with temperature rise reaching 2.4°C under Current Policies).



Source: Isio, Moody's. This is based on stochastic modelling, with the median outcome shown.

Note that annualised return drags are shown but costs and impacts in reality won't be uniform. Whilst we have modelled the potential physical and abatement costs over the next 28 years, in theory, markets may price these in sooner. The model's projections are sensitive to the underlying methodology and assumptions. No guarantee can be offered that actual outcomes will fall within the range of simulated results.

DB Section

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

Timeframe	Risks to Asset Strategies	Risks to Liabilities	Risks to Company
Short term <i>3 years</i>	Transitional risks such as the costs associated with global decarbonisation anticipated, carbon pricing and regulation.	Changes to yields (as for assets), inflation and longevity expectations due to expected transition costs or rising physical risks.	Investors (Green financing) - Higher costs of debt and return on equity demands could negatively impact EV, leading to more stringent capital market requirements.
Medium term <i>8 years</i>			Technology (Electrification) - Material levels of investment could be required by the Group to decarbonise the Bus fleet and infrastructure.
Long term <i>15 years</i>	Physical risks such as damage to assets caused by extreme weather events anticipated.		Policy (Carbon pricing) - Increasing carbon prices have the potential to drive higher than expected energy costs for the Group.
Very long term <i>28 years</i>			Physical risks predominantly relate to weather events, such as flooding and are not expected to have a significant impact in the short to medium term.

DB Section

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

Implemented Opportunities

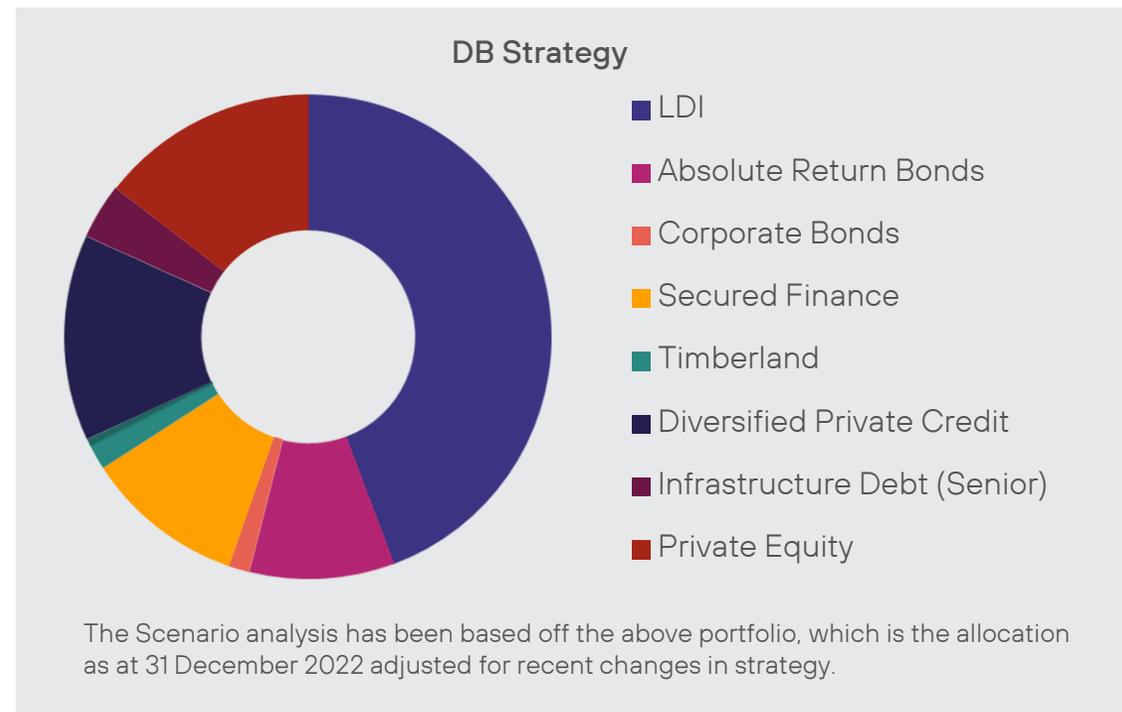
- Timberland: The Scheme has allocated to the Timberland fund, which currently makes up c.2% of the portfolio. Whilst this is expected to be fully paid out by 2024, forestry is a key solution of climate change mitigation given the carbon sequestration.
- Corporate bonds: ESG guidelines have been implemented in the past and can be considered again in future.

Other Opportunities

- Multi-asset credit/Liquid credit: As the illiquid mandates roll off, sustainable liquid credit solutions could be considered. We are seeing considerable innovation of products in this space in terms of forward-looking climate alignment and wider ESG risk management.
- The Trustee could explore the possibility of having a minimum allocation to green gilts within the LDI mandate.

Impact on liabilities

- The Scheme Actuary have considered the impact of climate change on individuals' life expectancy, which they believe will vary by scenario and time horizon. The three scenarios considered are described as No Transition, Orderly Transition, and Smooth Transition scenarios and are compared to the base case.
- Aon estimate that the 'Orderly' and 'Smooth Transition' scenarios have a positive impact on life expectancy (i.e. an improvement in mortality assumptions) compared to the base case, resulting in an increase in liabilities (estimated to be +2% and +3% respectively). While the 'No Transition' scenario has a negative impact on life expectancy (i.e. a decline in the assumed long-term improvement in mortality), resulting in a decline in liabilities (around -4%). Overall expected impact on the Scheme's funding across the three scenarios (relative to base case) analysed is shown later in the report.
- The Scheme (partially) manages the impact of the liabilities by hedging 95% of the liabilities' exposure to interest rate and inflation movements.



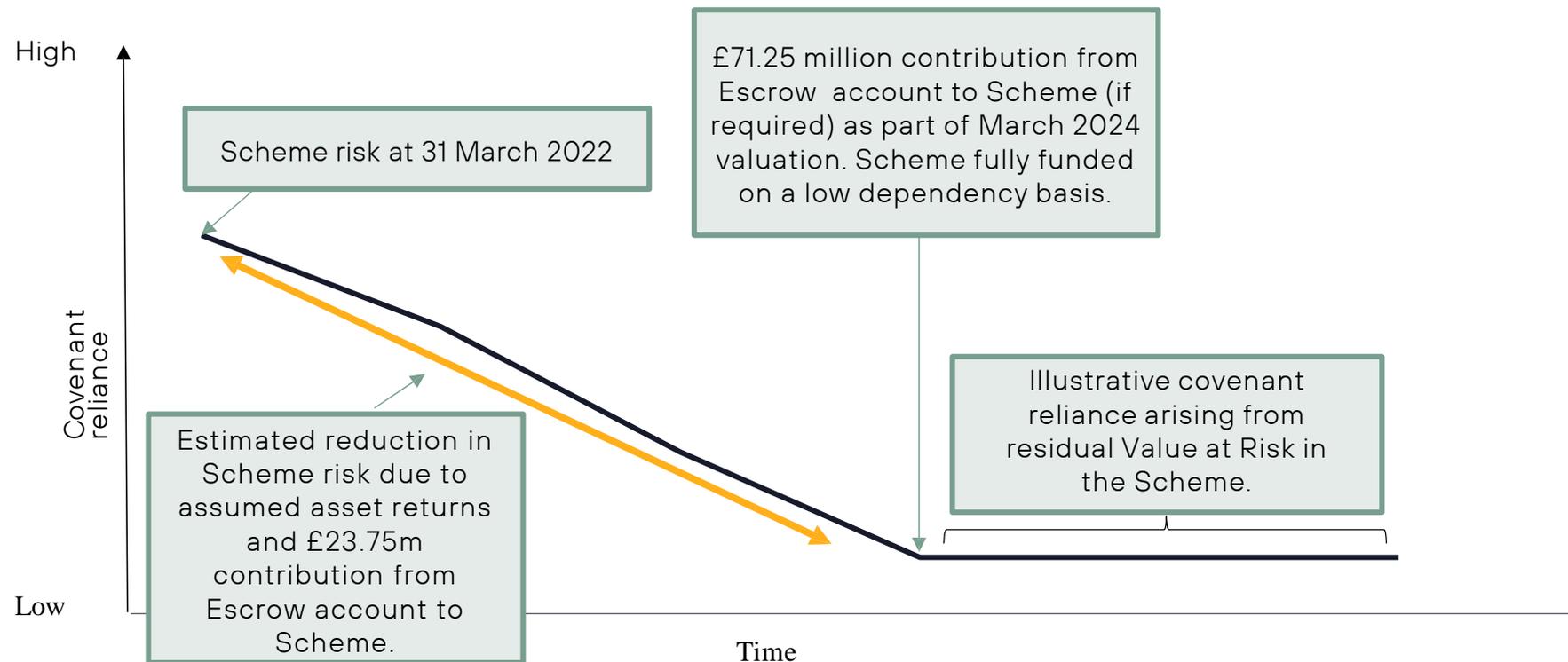
DB Section

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

Impact on the Company

The Trustee has considered the potential impact of climate related risks on the Company (outlined on page 23). When identifying these risks, the Trustee has considered the Scheme's period of reliance on the Company. The Scheme's reliance on the Company is expected to reduce significantly by March 2024 and reduce further over time, but the material climate related risks to the Company are expected to be longer term. It is therefore reasonable to expect the longer term climate related risks affecting the Company to not have an impact on the Scheme's current journey plan.

Illustrative covenant reliance over time



DB Section

Low impact ■
 Average impact ■
 High impact ■

Describe the impact of climate-related risks and opportunities on the Scheme's assets, liabilities, and Company

Materiality of climate-related risks and opportunities

The Trustee, in conjunction with its Investment Adviser, has used a Red, Amber, Green rating scale to illustrate the likely magnitude of the potential impacts of climate-related risks and opportunities across the different time horizons agreed.

Assets – The Scheme's assets are well diversified and are expected to react differently to various climate scenarios. The impact is expected to change over the longer term as the Trustee revisits the climate considerations of the equity portfolio.

Liabilities – The liabilities are well hedged and protected from movements in yields and inflation. Potential changes in mortality assumptions are a material risk.

Company – The Scheme's reliance on the Company is expected to reduce significantly by March 2024 and reduce further over time.

Risk	Time frame	Assets								Liabilities	Company
		LDI	Absolute Return Bonds	Corporate Bonds	Secured Finance	Timberland	Diversified Private Credit	Infrastructure Debt	Private Equity		
Transitional (net zero scenario*)	Short term	Low	Low	Average	Low	Low	Average	Low	Average	Average	Average
	Medium term	Low	Low	Low	Low	Low	Average	Low	High		High
	Long term	Low	Average	Low	Average	Low	Average	Average	High		High
	Very long term	Average	Average	Average	Average	Low	Average	Average	High		High
Physical (current policies scenario)	Short term	Low	Low	Low	Low	Low	Low	Low	Low	Average	Average
	Medium term	Low	Average	Low	Average	Average	Average	Average	High		High
	Long term	Low	Average	Average	Average	Average	Average	Average	High		High
	Very long term	Average	Average	Average	High	Average	Average	Average	High		High

Expected allocation change reflects the expected change in asset mix as the Scheme's funding position improves and membership matures.

* The directional impacts under the 2050 Net Zero and Divergent Net Zero scenarios are likely to be similar, albeit the magnitude and timing is expected to differ.

DC Section – Strategy

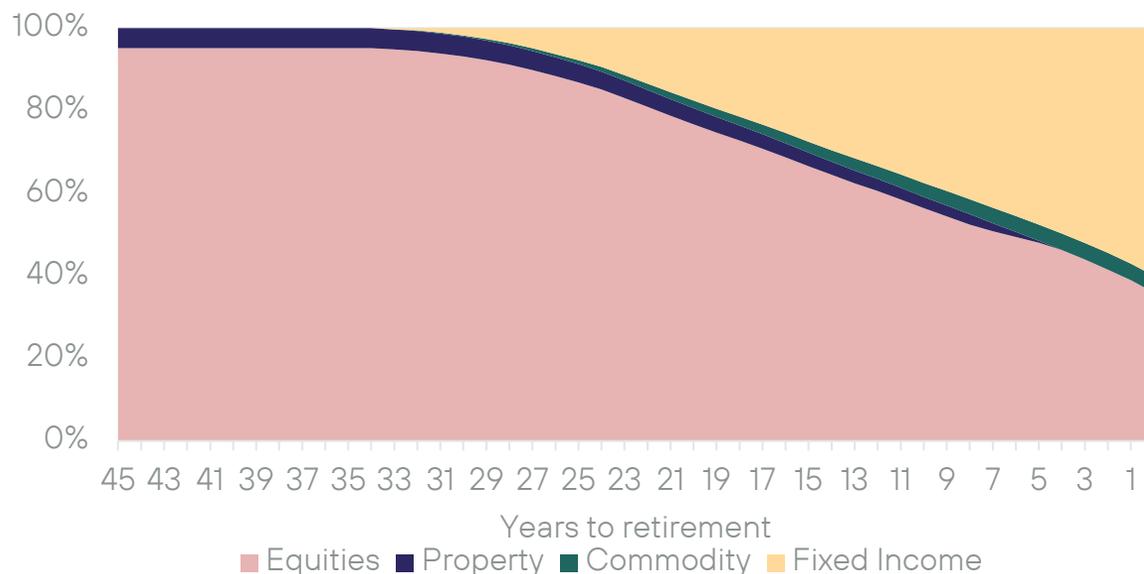
DC Section

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

Scheme's investment strategy

This section sets out the climate scenario analysis and the Climate Risk Impact 'CRI' Score for the Scheme's Aegon LifePath portfolio completed by the DC Investment Adviser.

The scores and impacts for the strategies have been derived from the weighted average of their underlying holdings. Please note, scenario analysis has been undertaken during the 'growth' stage of the strategy (i.e., 34+ years to retirement). This is when the portfolio has its largest allocation to growth assets (i.e. property and equities) and, therefore, is when the portfolio is expected to be most exposed to climate risk over all time periods.



Strategy analysis - considerations

The portfolio has varying levels of climate risk and opportunity across its holdings. The Scheme's investment strategy is reviewed periodically, with consideration of various risks and opportunities (which may also include climate risks and opportunities). Over time, changes to this analysis may arise from: (i) changes to the Scheme's asset allocation or investment managers; (ii) changes to the Scheme's membership; (iii) changes to assumptions, data quality and data availability; and (iv) the passage of time.

Currently analysis has been undertaken on the current investment strategy. At any one time, the Scheme's investment strategy (including the underlying assumptions and characteristics of the Scheme's assets) may differ from what has been analysed.

Furthermore, this analysis has been completed at a single point in time, using current assumptions. All else being equal, we would expect a pension scheme's climate risk to decrease as it matures and de-risks from risk assets into fixed income assets. However, future developments in scenario modelling may change assumptions, resulting in a higher or lower perceived level of climate risks and/or opportunities, relative to this analysis. On a relative basis, we would still expect a reduction in climate risk as a scheme de-risks, given the expected higher allocation to fixed income assets (which are generally perceived as being lower risk).

DC Section

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

Climate Risk Impact (CRI) Scores – Aegon LifePath

		CRI score scale Expected potential per annum "climate risk impact"									
		0	1	2	3	4	5	6	7	8	9
		<0.2	<0.3	<0.4	<0.5	<0.6	<0.7	<0.8	<1.2	<1.6	>1.6
		Negligible to low			↔	Medium		↔	High to severe		
Developed Equities	87% (34-45 years)								7		
Emerging Market Equities	8% (34-45 years)										9
Property	5% (34-45 years)										9
Commodities	4% (0-2 years)	A CRI score has not been assigned to this asset class ¹									
Gilts	18% (0-1 years)			2							
Index Linked Gilts	9% (0-3 years)	0									
Developed (ex UK) Government Bonds	18% (0-1 years)				3						
Emerging Market Debt	3% (0-1 years)						5				
UK Corporate Bonds	6% (0-1 years)				3						
Developed (ex UK) Corporate Bonds	6% (0-1 years)					4					
Total CRI score	--					4	5	6	7		
Years to retirement	--					0-2	2-11	11-21	21+		

Key thoughts

The Aegon LifePath funds are expected to have a CRI score between 4 and 7. The CRI score is highest ('7') during the period of 21+ years to retirement, given the relatively high allocation to equity and property. As a member moves closer to retirement, and their allocation to fixed income increases, the CRI scores fall. For the period 0-2 years to retirement, the CRI score is at its lowest ('4').

CRI scores are calculated by considering the "climate risk impact" between a 'far too little too late' and 'early action' scenario, over a 30 year time horizon. ¹Due to the nature of the asset class, a CRI score has not been assigned to commodities.

DC Section

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

Climate scenario impact – Aegon

The below analysis has been undertaken during the 'growth' stage of the Aegon LifePath portfolio (i.e., 34+ years to retirement). This is when the portfolio has its largest allocation to growth assets (i.e., property and equities) and is, therefore, when the portfolio is expected to be exposed to most climate risk.

Scenario	Short-term (<10 years)	Medium-term (10-20 years)	Long-term (20-30 years)
Late action	0	9	2
No additional action	7	6	7
Far too little too late	7	9	7

Climate scenario impact scale | Expected potential per annum "climate risk impact"



Key thoughts

The investment strategy experiences a level of impact over all climate scenarios considered. However, the level of impact varies across scenarios and time periods. Over the short-term, the strategy is most impacted under a "no additional action" and a "far too little too late" scenario, driven by the assumption that physical risk is present from day 1.

Over the medium-term, the largest impacts are experienced under a "late action" and "far too little too late" scenario, driven by the introduction of sudden and disorderly policies. However, under these impacts are partially recovered over time under a late action scenario.

Over the long-term, the largest impacts are experienced under a "no additional action" and a "far too little too late" scenario, driven by the long-term impacts of physical risk.

DC Section

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

Risks

Within the Aegon LifePath portfolio, the Scheme has varying levels of climate risk.

CRI Scores

At an underlying asset class level, the CRI Scores range from "0" (for Index Linked gilts) to "9" (for Property and Emerging Market equities) out of 9.

Within the Aegon LifePath portfolio, we would expect the most risk to be during the growth stage (i.e., 34+ years to retirement). This is due to the relatively high allocation to:

1. Equities – which are expected to be impacted by both physical and transition risk, due to their economic sensitivity and potential regulations imposed on companies. Specifically, due to its higher exposure to physical risks and higher sensitivity to economic cycles, emerging market equities are expected to be more impacted, relative to their developed counterparts.
2. Property – as a physical asset that contributes significantly to global emissions, property (and associated exposures, such as REITs) is expected to be impacted significantly by: (i) policy aimed to reduce global emissions; and (ii) the physical effects (e.g., floods) or climate change.

Conversely, members who are closer to retirement age, and have a higher allocation to fixed income assets, are expected to be less impacted by climate risks. Impacts beyond retirement age will be dependent on the member's choice of asset allocation.

Climate scenario impact

The growth stage of the Aegon LifePath portfolio is impacted by climate change risk across all three climate scenarios and across all three defined time periods. This is due to the relatively high exposure to equities and property (as previously mentioned).

Other asset allocations have not been modelled. However, as a member moves towards their retirement age, we would expect risk to decrease across scenarios and across time periods, due to the increased allocation to fixed income. This is due to fixed income generally having a lower perceived climate risk, relative to property and equities. Impacts beyond retirement age will be dependent on the member's choice of asset allocation.

Opportunities

Opportunities will arise to support sustainable growth, development and investment across industries as part of a move towards net-zero economies.

For example, companies that proactively adapt to the above risks or develop solutions that work to address these risks are likely to outperform in the long-term relative to companies who are less able to adapt to these risks.

TCFD Recommendations – Risk Management

Risk Management

Describe the Trustee's processes for identifying, assessing and managing climate-related risks

Climate-related risk management process

We depict below the Trustee's climate-related risk management process. This is designed to allow identification of the most material risks for the Scheme and the development of controls and processes to manage these.



Risk identification and prioritisation

Risk register: The Trustee reviews the climate-related considerations annually.

Roles & responsibilities: The Trustee has agreed with the Scheme's advisers their various roles and responsibilities, documented in the Climate Delegation Framework. This includes their advice covering the identification, assessment and managements of climate-related risks across investment, actuarial, legal and covenant matters.

Training: The Trustee receives training to understand potential impacts of climate-related risks. The investment advisers help the Trustee identify which asset classes have the greatest potential risks and therefore which risks to prioritise.



Investment strategy impact

Climate scenario analysis: The Trustee seeks to quantify the potential impact of climate change on the Scheme's investment and funding strategy (DB) and the projected asset values (DC).

ESG integration: Where possible, the Trustee ensures ESG considerations are integrated within each mandate. For example, the DB Section's segregated B&M Credit mandate has climate and UN SDG alignment objectives within the investment guidelines. Within the DC section the Trustee has added a Fund with an ESG focus to the self-select fund range.



Climate risk monitoring

Assessing investment managers: The Trustee assesses the ESG capabilities of the investment managers.

Assessing climate metrics: In line with TCFD recommendations, the Trustee monitors the Scheme's investments against pre-agreed climate-related metrics on an annual basis. The quality and availability of these metrics is expected to improve over time. For example, the Scheme monitors KPIs including total GHG emissions, carbon footprint, and Implied Temperature Rise (ITR) which are a subset of numerous metrics which describe climate risk (see metrics section for more detail).



Stewardship

Assessing investment managers: The Trustee assesses the stewardship activities and capabilities of the investment managers annually, documenting this in the Implementation Statements for each section, to ensure these align with our ESG beliefs and policy.

Through active stewardship and engagement with investment managers, the Trustee looks to better manage risk as well as identify opportunities, for example within the liquid credit and LDI mandates (as noted in the previous section).

Risk Management

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

Risk register

In 2022, the Trustee agreed the following additions to the Scheme's risk register to ensure climate considerations are embedded into the Scheme's ongoing governance and risk management processes.

	Potential risk:	Potential control measures:
Company covenant	<ul style="list-style-type: none"> – Worsening Covenant position associated with the impacts of climate change (transitional and physical) – Damage to reputation and/or legal challenge due to poor or inconsistent climate practices 	<ul style="list-style-type: none"> – Covenant formally considered by external professional covenant consultant ongoing – Regular review with the Company
Investment strategy	<ul style="list-style-type: none"> – Asset mispricing due to the impacts of climate change and the transition to low carbon economy and/or physical impacts of climate change, e.g. lower real returns and/or market shocks due to pricing-in climate change 	<ul style="list-style-type: none"> – Professional advice from Investment Adviser – Continued monitoring of investments against the Trustee's ESG policy and climate target(s), and regular (at least triennial) climate scenario modelling – Ongoing Trustee training
Asset and investment manager allocations	<ul style="list-style-type: none"> – Investment managers do not adequately integrate financially material ESG factors in their risk management framework – Investment managers do not adopt effective stewardship or collaborate to encourage best practice in addressing systemic climate risks – Investment managers do not consider potential investment opportunities, which may be expected to benefit from climate change and provide upside opportunity for the portfolio, or individual asset classes 	<ul style="list-style-type: none"> – Investment Adviser monitors managers and reports to the Trustee; this may include but is not limited to, monitoring managers and asset classes on the risks and opportunities that arise from climate change and how these are managed on an ongoing basis
Funding level	<ul style="list-style-type: none"> – Funding target is increased at future actuarial valuations due to higher expected costs / greater uncertainty / weaker Company due to climate-related reasons – Cost of longevity insurance increases due to climate change 	<ul style="list-style-type: none"> – Actuary, Company, Investment Adviser and covenant consultant all involved in ongoing funding level assessment and IRM – Training and advice on potential funding impact using climate scenario analysis

Risk Management

Describe the Trustee's processes for identifying, assessing and managing climate-related risks

Investment Managers

While the Trustee bears ultimate accountability, the day-to-day management of climate-related responsibilities is entrusted to the IC (Investment Committee). The IC assumes responsibility for evaluating the impact of climate on assets, covenant, funding, and the financial security of members. Collaborating with the Investment Adviser, the IC oversees and mitigates risks related to environmental, social, and governance factors, aiding the Trustee in implementing its strategy and fostering long-term, financially sustainable practices. The IC will dedicate adequate time to deliberate and discuss the Scheme's approach to responsible investment and climate change with the Trustee Board and its advisers.

Each mandate is assessed across five key areas, detailed on the right. At a high level, the majority of the Scheme's managers received at least satisfactory ratings. The main areas of improvement were in the categories 'Voting & engagement' and 'Reporting'.

The Trustee uses this assessment to identify areas of improvement and targets engagement efforts towards these areas. The Trustee expects to see progress in the investment managers' capabilities and the Investment Adviser's considerations each year.

Assessment category	Example evaluation criteria
Investment approach	Are the fund's climate objectives quantifiable with interim targets set?
Risk management	Does the manager have a dedicated individual within the ESG team with responsibility for oversight of the climate change policy?
Voting & engagement	Can the manager provide a case study example demonstrating effective engagement on climate-related issues?
Reporting	Does the manager undertake forward-looking climate scenario modelling and is this published in quarterly reports?
Collaboration	Is the manager a member of the UN Net Zero Asset Owner Alliance? If not, is there a valid reason why?

Stewardship Activity

The Trustee recognises the importance of stewardship in driving change and aiding the transition to a lower carbon economy as well as in better managing risk and identifying opportunities.

The Trustee delegates stewardship responsibilities (Voting & Engagement) to its investment managers, and the managers should engage and vote on all issues, including climate, in the best interests of the Scheme's members.

This is monitored through the Implementation Statements produced by the Scheme's investment advisers.

TCFD Recommendations – Metrics and Targets

Metrics and Targets

Disclose the metrics used by the Trustee to assess climate-related risks and opportunities in line with its strategy and risk management process

Climate metrics selection

Greenhouse gas (“GHG”) emissions are a key driver of climate change. These result from a number of economic activities, primarily as a result of burning fossil fuels. The gases contribute to the increased retention of the sun’s energy, resulting in a “greenhouse effect” where the Earth is warmed. Slowing and reducing the release of GHGs into the atmosphere is therefore important. The Trustee selected and monitored four climate metrics, for the whole Scheme (both DB Sections and the DC Section), during the year:

1. **Absolute emissions metric:** Total greenhouse gas emissions (scope 1 & 2)
2. **Emissions intensity-based metric:** Carbon footprint (scope 1 & 2)
3. **Portfolio alignment metric:** Implied temperature rise (“ITR”)
4. **Additional climate change metric:** Data quality

The process of selecting these metrics for monitoring focussed on two key aspects 1) **level of impact** and 2) **availability of data**.

Level of impact

The metrics were chosen based on their potential to add value to the Trustee’s decision making. The Trustee is currently focussing on scope 1 and 2 emissions only i.e. direct emissions from company-owned or -controlled sources and indirect emissions from purchased energy. The Trustee will start reporting on scope 3 emissions (indirect emissions in the value chain) in our 2023/2024 TCFD report.

Whilst it’s important to consider emissions to date, it’s also important to assess how these could evolve into the future. We have chosen ITR, expressed in degrees Celsius (°C), in order to estimate the global implied temperature rise if the whole economy was invested according to our strategy. This ensures we have a longer-term focus for our climate-related decision making.

Availability of data

The Investment Advisers gathered this data from the Investment Managers on behalf of the Trustee. The quality of this information is important to allow robust decision-making and target-setting. We have chosen to monitor data quality as our fourth metric given this.

The Investment Advisers, on behalf of the Trustee, engage with the Investment Managers to seek improvements in data quality.

Monitoring

The Trustee will assess these metrics (or KPIs), at least annually, in order to monitor climate-related risks and as a tool to engage with the Investment Managers.

More detail on how the metrics are defined can be found in the appendix.

Metrics and Targets

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

Metrics review

The Trustee gathered climate metrics for the Scheme as at 31 December 2022 (or the data at the best-available proximate date) and the results are set out below. This helps to set a baseline against which future action can be measured, so that trends over time and problem areas within the portfolio can be understood. The Trustee will monitor the chosen metrics on an annual basis and report on scope 3 emissions in next year's TCFD report.

DB Section

Typically, pension schemes have emissions coverage ranging from approximately 50% to 65%. The emissions coverage of this particular scheme falls within this range at 56%. It is evident that coverage is better for more easily tradable investments, and we aim to achieve improved coverage across all investment mandates. Enhancing coverage is a crucial focus in our interactions with investment managers.

Although the timberland mandate does contribute to carbon sequestration (removal of carbon from the atmosphere), the TCFD (Task Force on Climate-related Financial Disclosures) statutory guidance suggests that these negative emissions are not included in the overall scheme figures.

Regarding UK Government Bonds, there are notable variations in emissions reporting among different investment managers. We are collaborating with an industry organization to establish standardized approaches, which may result in adjustments to the QIAIF's figures in the future. This applies to most reported figures, and best practices for climate metrics are continually evolving.

DC Section

The DC Section has considerably higher coverage levels than the DB Section. Total emissions and carbon footprint data were available for the majority of the assets in the default lifestyle strategy.

Metrics and Targets

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

Fun	Total GHG emissions (scope 1 & 2)		Carbon Footprint (scope 1 & 2)		Data Quality			Implied Temperature Rise	
	Metric, tCO2e	Coverage	Metric, tCO2e/ £1m of EVIC	Coverage	Reported	Estimated	Unavailable	Metric	Coverage
Total Portfolio (DB)	67,451	57%	80	57%	1%	56%	43%	1.9°C	53%
Total Portfolio (DC)	7,536	98%	42	98%	80%	18%	2%	Unavailable	0%

Data quality and coverage

Data is referred to as 'reported' when the data used in the calculation is reported directly and publicly by the investee. Data is considered estimated data when the investment manager uses a range of data providers and proxies to estimate the level of emissions and may do this in different ways.

Acquiring reported data for private holdings is more challenging than for public holdings as often these are not published.

The DC portfolio is largely comprised of public holdings whereas the DB portfolio has a c45% allocation to private holdings (the breakdown of the metrics of the portfolios can be found in the appendix). This is the key driver for the discrepancy in data quality between the DB and DC portfolios. The DB Investment Adviser will continue to engage with the managers to influence improvement in data coverage over time.

Further, at the time of data gathering the manager of 55% of the DB portfolio was unable to differentiate their data between "Reported" and "Estimated". The manager is looking to rectify this therefore the Trustee hopes for this to improve in the 2024 submission of this report.

Metric calculation

More details on the approach for the metrics calculations can be found in the appendix. Where metrics are not reported, the estimation approach used by investment managers or data providers in calculating these metrics may differ, and so the quality of the data might vary.

Metrics and Targets

Describe the targets used by the Trustee to manage climate-related risks and opportunities and performance against targets

Target setting

DB and DC Section

The Trustee has set, with support from its investment adviser, an initial target to increase emissions data coverage to 75% of total portfolio over the next two years (i.e., by 31 Dec 2024), with a target to reach 66% at the end of the first year, and specifically look to improve reported and/or verified data across the portfolio.

We believe the target can be achieved through:

1. The natural roll-off of private assets with the subsequent investment into more public investment opportunities.
2. Consideration of the implications for TCFD metrics, when selecting future investments.
3. Targeted engagement with the Scheme's investment managers with the support of our investment adviser.

The Trustee will monitor the Scheme's progress against the target annually via our investment adviser.

The Trustee wishes to maintain an alignment of the target across the two sections until both have met this goal. Subsequently the Trustee will determine a revised target. Whilst the Trustee recognises that the data quality of the DC section is higher than the target set it also recognises that the DB Section has the greatest climate risk associated with the Scheme and has some way to go before the target is reached.

	Baseline 31/12/2022	Target
DB Section – Data coverage	56%	75%
DC Section – Data coverage	98%	75%

Appendix

Strategy

Scenario analysis appendix – DB Section

Climate scenario analysis

The Scheme's Investment Adviser partnered with Moody's to deliver a climate change model. Please see below an overview:

1. Selection of **climate scenarios** from the Network for Greening the Financial System. The interpretation and implementation of these scenarios are detailed below, across these building blocks.
2. Inclusion of climate scenarios within Moody's **climate model**, composed of two building blocks: a socioeconomic REMIND-MAGPIE general equilibrium model, modelling macroeconomic growth and energy systems. This assumes that markets are efficient and sets out traditional economic assumptions around the evolution of economic markets. This is combined with the MAGICC 6 climate model, modelling climate and weather. The model runs 600 climate scenario projections and takes the median outcome for each climate scenario: baseline, orderly, disorderly and hot house. There is interplay between these models.
3. The investment model determines how different asset classes will react under the different climate change scenarios analysed, and across time. It is also composed of two building blocks: Moody's Economic Scenario Generator, modelling economic pathways. This is combined with a proprietary investment model, which models the impact on investments.
4. The output is an understanding of the potential impacts on **investment strategy and asset class outcomes**, as well as the **funding position**. In particular, the impacts of rising transitional and physical costs associated with climate change are assessed.

Strategy

Scenario analysis appendix – DB Section

Modelling Principles

- SOFIA is a stochastic model that simulates a large number of possible future economic outcomes, in which financial conditions develop in a number of different ways, defined by assumptions for average outcomes, range of variability, and inter-dependency between different markets.
- The high-level market scenarios are generated by a third-party Economic Scenario Generator (ESG) provided by Moody's Analytics. The ESG is an industry-standard tool that is widely used by financial institutions (e.g., insurers, asset managers, and investment banks). Both the climate scenarios and the underlying economic impacts are provided by Moody's Analytics.
- Based on the scenarios generated by the ESG, SOFIA simulates asset-class returns calibrated to Isio Investment Advisory's asset-class assumptions.
- SOFIA takes the initial starting position of the assets, and projects these values forward under the simulated scenarios, taking into account any relevant inflows and outflows.
- Different investment strategies are modelled in order to illustrate the effects of different allocations. In each case, SOFIA assumes that the strategy remains constant over the full projection period. Assets are annually rebalanced back to the original allocations.

Strategy

Scenario analysis appendix – DB Section

Compliance Statement

- This report has been prepared for the purpose of assisting the addressee in quantifying climate risk and feeding into a TCFD report. If you intend to use it for any other purpose or make any other decisions after considering this report, please inform Isio and we will consider what further information or work is needed to assist you in making those decisions.

Material Assumptions

- Isio Investment Advisory's central asset-class assumptions are assessed and revised at each calendar quarter-end. The assumptions used within this modelling exercise are set out in the Appendix.
- Certain assumptions are sourced directly from the Moody's Analytics ESG and available market data or set via adjustments to these sources. Where required or deemed to be more appropriate, assumptions are entirely determined by Isio Investment Advisory. The assumption setting process is subjective and based on qualitative assessments rather than a wholly quantitative process. Where judgement is required, input is received from Isio's internal asset-class research teams.

Limitations and Risk Warnings

- The only risk factors considered in our modelling are those that affect the values of pension schemes' assets. The modelling results should be viewed alongside other qualitative considerations including portfolio complexity, governance burden, and liquidity risk.
- The model's projections are sensitive to the starting position and the econometric assumptions. Changes to the assumptions can have a material impact upon the output. There can be no guarantee that any particular asset class or investment manager will behave in accordance with the assumptions. Newer asset classes can be harder to calibrate due to the lack of a long-term history.
- The modelling analysis is based on portfolios containing a range of asset classes and different approaches to fund management. Clients should not make decisions to invest in these asset classes or approaches to fund management based solely on the modelling analysis.
- Portfolios that make use of derivatives are exposed to additional forms of risk and can experience losses greater than the amount of invested capital.
- No guarantee can be offered that actual outcomes will fall within the range of simulated results. Actual outcomes may be better than the simulated 95th percentile or worse than the simulated 5th percentile.

Strategy

Scenario analysis appendix – DC Section

- The Trustee has made use of Barnett Waddingham’s in-house climate scenario framework, which utilises the [Bank of England’s Biennial Exploratory Scenario](#) to undertake climate scenario analysis for the Scheme’s assets. These scenarios are as at 31 December 2021 and build upon a subset of the [Network for Greening the Financial System \(NGFS\)](#) climate scenarios, which have been produced in partnership with leading climate scientists and make use of climate economic models.
- The Bank of England Biennial Exploratory Scenario is not exhaustive concerning asset classes, regions, sectors, funds, macro-economic indicators and scenarios. Therefore, Barnett Waddingham’s in-house climate scenario framework combines a mixture of qualitative and quantitative methods to assess climate impacts across all required areas.
- The Bank of England Biennial Exploratory Scenario also utilises a “top-down” approach (that is, at a macroeconomic level), rather than a “bottom-up” approach (at a company level). A bottom-up approach may provide for more granular results, however, given the quality and availability of data, the expectation that climate impacts will be systemic and the nature of UK pension scheme investments (that is, they are primarily invested in pooled funds with various underlying asset classes and numerous securities), a top-down approach was viewed as being more appropriate. Nevertheless, Barnett Waddingham’s framework does incorporate a bottom-up approach at a fund level, through detailed analysis of the Scheme’s specific underlying funds.
- Climate scenario modelling is in its infancy and is expected to undergo significant development over time. Furthermore, climate scenario data quality is generally considered spurious and non-comprehensive. As a result, we intend to develop and build upon this analysis over time as data quality and availability improves.
- In creating this framework, Barnett Waddingham has recognised these limitations and aims to address them by creating a solution that combines quantitative and qualitative analysis. We will review and adapt our framework on an ongoing basis, but expect to undertake a full-scale review during 2023/2024, by which time we would expect a material increase in the quality and coverage of climate scenario analysis forecasts and climate data.
- In the meantime, they continue to engage with modelling and data providers, as well as fund managers, regarding best practice and improvements to methodologies, data quality and coverage.

Strategy

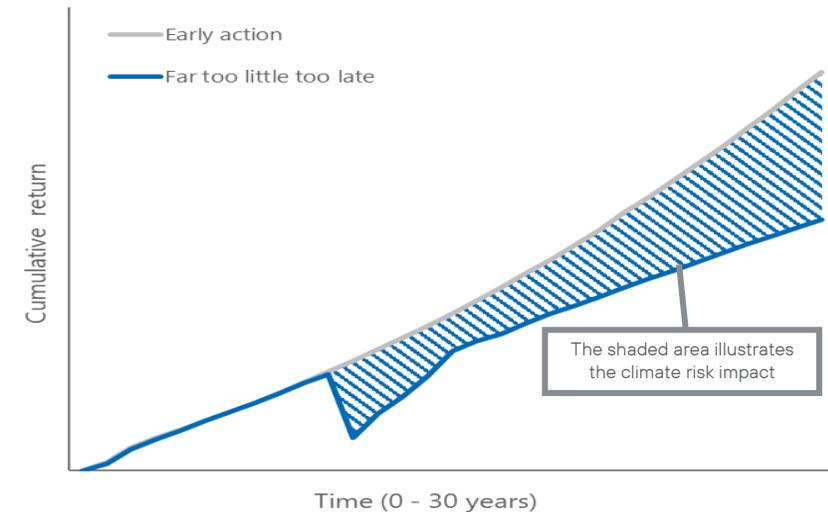
Scenario analysis appendix – DC Section

- The Climate Risk Impact (CRI) Score for an asset class is calculated through a blend of qualitative and quantitative analysis (by considering its performance under an “early action” scenario and a “far too little too late” scenario, over a 30-year time horizon – see Figure 1 and by considering the asset class’s unique characteristics). In doing so, both physical and transitional climate risk factors are considered.
- Transitional climate risk | This is the risk associated with the transition to a low carbon economy. The main risk is assumed to be the potential impact of the enforcement of carbon taxes and policies (it is assumed that this risk is higher for regions and sectors with a higher level of, and hard to abate, emissions). However, other risks may include wider policy and regulation risk, technological risk, market risk, legal risk and reputational risk.
- Physical climate risk | This is the direct risk associated with an increased global temperature. This may include acute physical risks (such as heatwaves, landslides, floods, wildfires and hurricanes) and chronic physical risks (such as rising sea levels, changes in precipitation and more volatile weather events). These risks may put an invested asset (or an asset of an underlying company) directly at risk of damage; may cause disruption throughout supply chains and the global economy and/or may lead to higher costs on invested assets or underlying companies (such as insurance and litigation costs).

- To determine a fund’s specific CRI Score, an adjustment is made to its underlying asset classes’ CRI Score. Specifically, a fund’s CRI Score can be adjusted by +/-2 points on the scale above, depending on the perceived transitional climate risk inherent in the fund versus its underlying asset class. The fund CRI adjustment is based on the carbon footprint (carbon emissions per £1m invested) that a fund currently has versus the underlying asset class as a whole (subject to data availability). Higher carbon emissions leads to a positive score adjustment (more risk) and lower emissions leads to a negative score adjustment (less risk). Therefore, transitional climate risks are considered at both a fund and asset class level, whereas physical climate risks are considered only at an asset class level.

CRI Score scale | Expected potential per annum “climate risk impact” over a c.30 year time horizon and under a “Far too little too late” scenario (%)

0	1	2	3	4	5	6	7	8	9
<0.2	<0.3	<0.4	<0.5	<0.6	<0.7	<0.8	<1.2	<1.6	>1.6
Negligible to low			↔	Medium		↔	High to severe		



Metrics and Targets

Climate metrics for the DB Section's investment strategies as at 31 December 2022 (or the data at the best-available proximate date) are set out below.

Fund	Current Asset Allocation %	Total GHG emissions (scope 1 & 2)		Carbon Footprint (scope 1 & 2)		Data Quality			Implied Temperature Rise	
		Metric, tCO ₂ e	Coverage	Metric, tCO ₂ e/ £1m of EVIC	Coverage	Reported	Estimated	Unavailable	Metric	Coverage
Secured Finance	10.7%	10,211	48%	82	48%	-	48%	52%	1.9°C	40%
Timberland	1.7%	3,012 (-51,494) ¹	100%	125 (-2,144) ¹	100%	-	100%	-	-	-
Diversified Private Debt	7.4%	183	6%	3	6%	6%	-	94%	-	-
Infrastructure Debt	3.8%	-	-	-	-	-	-	-	-	-
LDI and Corporate Bonds	45.0%	41,428	93%	83	93%	-	93%	7%	1.9°C	93%
Absolute Return Bonds	9.4%	12,616	75%	121	75%	-	75%	25%	2.5°C	75%
Insurance Linked Securities	2.8%	-	-	-	-	-	-	-	-	-
Secured Finance	6.1%	-	-	-	-	-	-	-	-	-
Private Equity	13.3%	-	-	-	-	-	-	-	-	-
Total Portfolio	100%	67,451	56%	80	56%	1%	56%	43%	1.9°C	53%

The fund manager of the LDI, Corporate Bonds and Absolute Return Bonds was unable to provide a split between "Reported" and "Estimated" data quality at the time of data gathering. The 93% and 75% respectively is the sum of both "Reported" and "Estimated" data and is declared under "Estimated". The manager has subsequently adjusted their process to be able to separate this for future TCFD reports.

Source: Investment managers, DB Investment Adviser calculations.

Notes: tCO₂e: Tonnes of carbon dioxide equivalent, where CO₂e expresses the impact of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming. EVIC: Enterprise value including cash. Coverage: Denotes the % of each fund where data is available. Figures rounded to nearest whole number or percentage. Current asset allocation as at 30 September 2022.

*Investment manager for the Elements section cannot split out the data coverage quality currently so we have assumed the total GHG emissions coverage is all estimated. Please see next page for further caveats.

Metrics and Targets

Metrics appendix – DB Section

Fund	Caveats
Secured Finance	<ul style="list-style-type: none"> Absolute GHG emissions data scaled up by Isio to represent 100% of assets.
Timberland	<ul style="list-style-type: none"> Data is calculated annually and so the metrics provided are for the 2021 calendar year. The manager has developed a proprietary tool for calculating the total carbon stock and the annual carbon sequestration for its timberland portfolio. This is based on estimates of the carbon sequestered annually by the forests growing in the portfolio (this is a carbon removal which is expressed as a negative emission) and then add estimates for the volume of carbon removed in the form of logs (which are harvested) and estimates for the emissions of operations associated with growing, harvesting and transporting logs (mainly that from vehicles and heavy machinery). This carbon accounting methodology has been reviewed and assessed by South Pole; a third-party company globally recognised in the carbon accounting sector.
Diversified Private Debt	<ul style="list-style-type: none"> Absolute GHG emissions data scaled up by Isio to represent 100% of assets.
Infrastructure Debt	<ul style="list-style-type: none"> The manager is engaging with a consultant to perform estimate calculations of climate metrics for the portfolios and formal reporting is anticipated to be made available in June 2023.
Absolute Return Bonds	<ul style="list-style-type: none"> The percentage of estimated vs actual reported carbon emissions is expected to be available from the end of Q1 2023. Missing data/non-covered holdings are excluded or ineligible for the calculations and the weights of the portfolio are recalculated to only consist of positions that are covered and eligible (i.e. scaled up).
Bespoke LDI	<ul style="list-style-type: none"> The manager defines 'Sovereigns' as Agency, Government, Municipals, Strips, and Treasury Bills. GHG emissions for Sovereigns are calculated by using the CO2e/GDP. Carbon Emissions Footprint uses: CO2e/Total Capital Stock. The manager could not provide data for derivatives including repo and the methodology is subject to change. Therefore, they were unable to provide LDI emissions split out for leveraged and unleveraged exposure.
Insurance Linked Securities	<ul style="list-style-type: none"> The manager is currently unable to provide TCFD metrics and are reviewing their approach.
Secured Finance	<ul style="list-style-type: none"> The manager has stated they expect to be able to provide the metrics in H2 2023.
Private Equity (Fund of Funds)	<ul style="list-style-type: none"> The manager is currently unable to provide the metrics, stating difficulties within private markets. Information is requested on an annual basis, and none of the private equity managers were able to provide data in 2022. The manager is working with managers to improve the availability and quality of information provided and are confident that for 2022 reporting (in 2023) many of the managers will be able to provide data.

Metrics and Targets

Metrics appendix – DC Section

Fund	Total GHG emissions (scope 1 & 2)		Carbon Footprint (scope 1 & 2)		Data Quality			Implied Temperature Rise	SBTi
	Metric, tCO ₂ e	Coverage	Metric, tCO ₂ e/ £1m of EVIC	Coverage	Reported	Estimated	Unavailable	Metric	Metric
UK Equity Tracker Fund	77	94%	85	94%	89%	5%	6%	-	44%
World (ex-UK) Equity Tracker Fund	712	98%	36	98%	85%	14%	2%	-	39%
World ESG Equity Tracker Fund	1,771	99%	30	99%	88%	10%	1%	-	42%
World ESG Screened Equity Tracker Fund	1,953	98%	33	98%	85%	13%	2%	-	40%
World Small Cap ESG Screened Equity Tracker Fund	980	97%	58	97%	40%	58%	3%	-	9%
Emerging Markets Index Fund (IE)	1,980	100%	132	100%	75%	25%	0%	-	8%
Environment & Low Carbon Tilt Real Estate (UK)	63	98%	7	98%	66%	32%	2%	-	38%
Total (for growth stage of portfolio)	7,536	98%	42	98%	80%	18%	2%	-	35%

Source: Investment manager, DC Investment Adviser calculations.

Notes: Totals may not sum due to rounding. The data is for information only and is not intended to provide and must not be constructed as regulated investment advice.

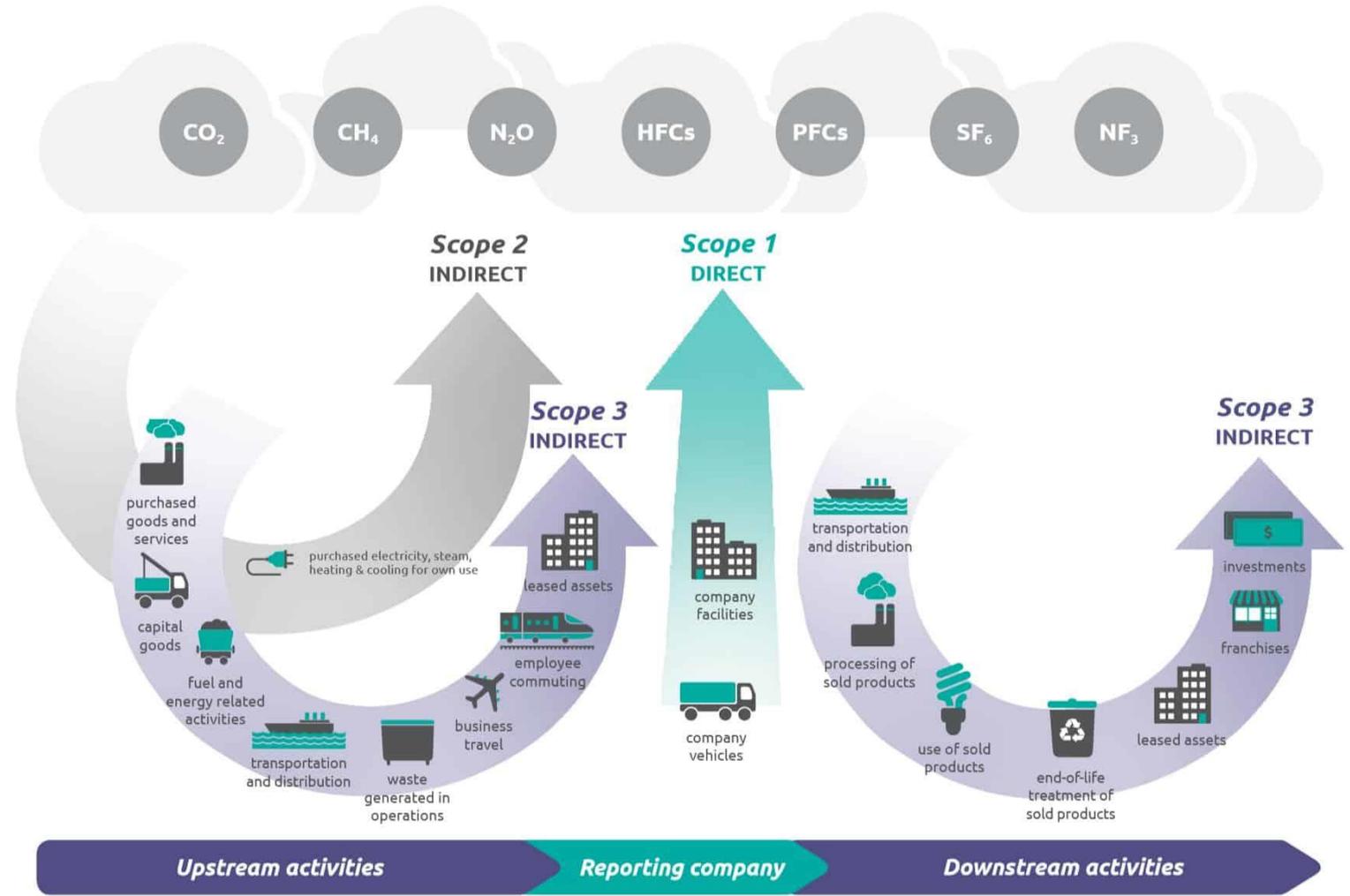
Glossary

Metric	Description	
Absolute Emissions Metric: Total GHG emissions (scope 1 & 2)	Total amount of greenhouse gas emissions (as mandated by the Kyoto Protocol) emitted by the underlying portfolio companies, attributed to the investor based on the total investment in each company	$\sum_n^i \left(\frac{\text{Current value of investment}_i}{\text{Investee company enterprise value}_i} \right) \times \text{investee company's scope 1 and 2 emissions}_i$
Emissions Intensity Metric: Carbon footprint (scope 1 & 2)	An intensity measure of emissions that assesses the level of greenhouse gas emissions (as mandated by the Kyoto Protocol) arising from £1 million investment (based on Enterprise Value Including Cash) in a company	$\frac{\sum_n^i \left(\frac{\text{Current value of investment}_i}{\text{Investee company enterprise value}_i} \times \text{investee company's scope 1 and 2 emissions}_i \right)}{\text{Current value of all investments (£ millions)}}$
Implied temperature alignment	A forward-looking view of carbon exposure that can be translated into a projected increase in global average temperature (°C) above pre-industrial levels that would occur if all companies had the same carbon intensity	
Data quality	Verified	% of the emissions data that is verified (audited or independently verified)
	Reported	% of the emissions data that is sourced from actual company reported data
	Estimated	% of the emissions data that is estimated, either by the manager or a third-party data provider

Glossary

GHG emissions from a particular company can be split across three levels, as shown in the diagram.

- **Scope 1** are direct emissions from company owned or controlled sources – this includes heating/cooling of offices/factories and fleet vehicles.
- **Scope 2** are indirect emissions from purchased energy – emissions are created during the production of the energy which is eventually used by the company.
- **Scope 3** are all indirect emissions that occur in the value chain – this includes emissions from the production of purchased goods and services and the use of sold products. There are currently industry-wide issues with reporting scope 3 emissions.



Source: GHG Protocol

The Trustee of the First UK Bus Pension Scheme

