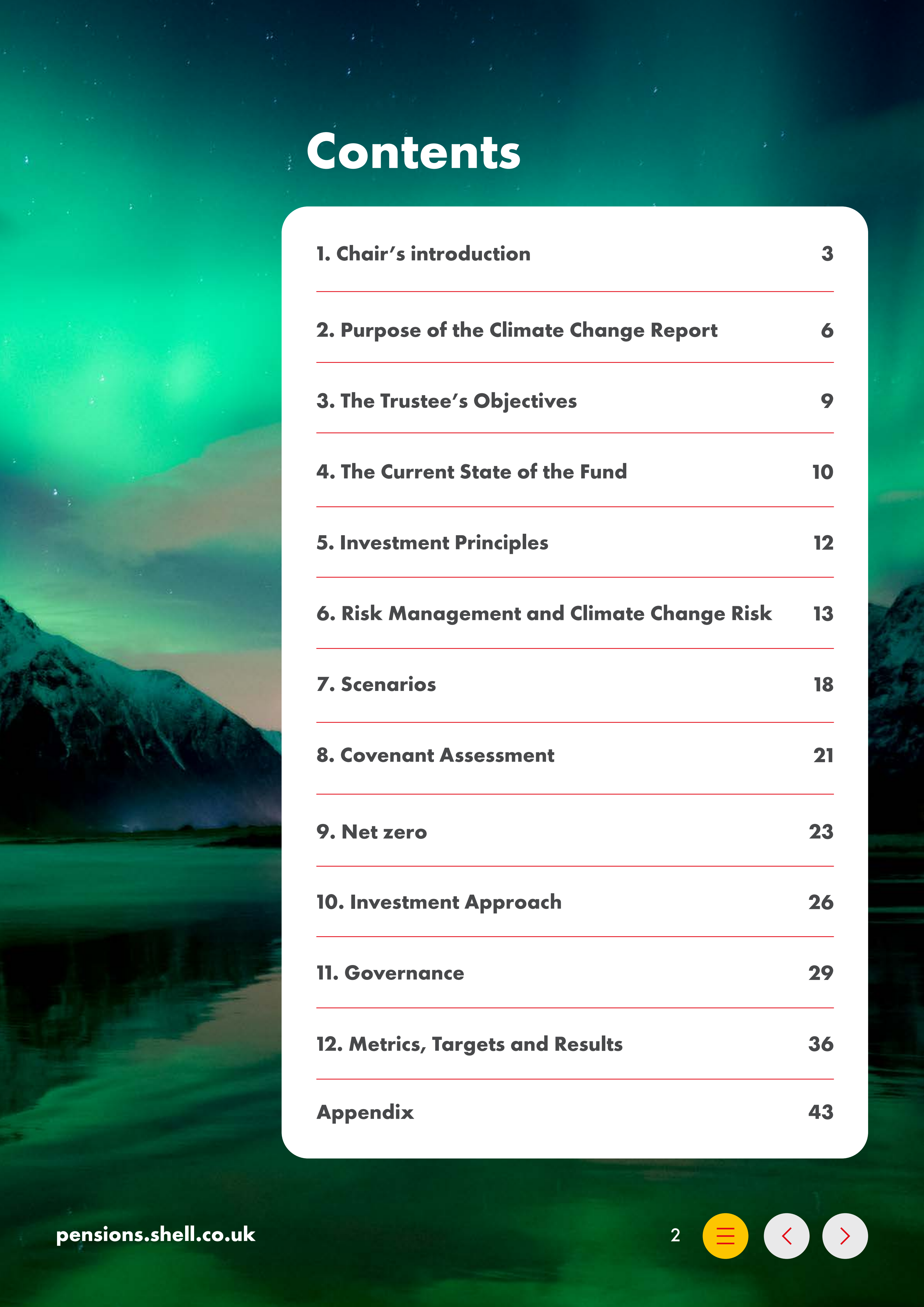
The Shell Contributory Pension Fund

Climate Change Report



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1. Chair's introduction

I have pleasure in presenting the third Climate Change Report of the Shell Contributory Pension Fund ('the SCPF' or 'the Fund').

The primary objective of the Trustee, Shell Pensions Trust Limited, is what it has always been – to ensure that all benefits due from the Fund are paid on time and in full throughout the life of the Fund. An important part of this is investing the assets of the Fund prudently so that they and the investment return on them are enough to cover the Fund's obligations.

The SCPF is fully funded as measured on the statutory funding basis. It also benefits from strong support from its Sponsor, Shell, through what is known as the Sponsor covenant – that is the Sponsor's legal obligation and financial ability to provide additional contributions to the Fund, should these be necessary. Because of the current adequacy of funding, our focus as a Board is more on the risks associated with climate change rather than on the investment opportunities that may arise from the necessary changes in the world economy and the energy industry, though these are considered as part of our investment management processes.

What has changed since last year's report?

- A new triennial valuation has been undertaken as at 31 December 2023 and shows that the Fund remains in surplus. See Section 4.
- A new Journey Plan has been set with the objective of reaching a position of self-sufficiency where:
  - investment risk is very low; and
  - reliance on the Sponsor is very limited. This position is currently expected to be reached in around 10 years. See Section 4.
- The Trustee has considered the limitations of climate scenario modelling in more detail and now places greater focus on the narratives around the scenarios. See Section 7.
- An independent assessment as at 31 December 2023 has rated the covenant of the Sponsor as Strong. See Section 8.
- The physical equity holding has been sold. This has the impact of reducing the Fund's carbon footprint as well as removing its ability to use voting as a lever when engaging with investee companies. See Sections 9 and 12.

Climate change represents a risk for the Fund, though one which is difficult to quantify with any precision. It is evident that the world is not on track to meet the goals of the 2015 Paris Agreement to limit global warming.

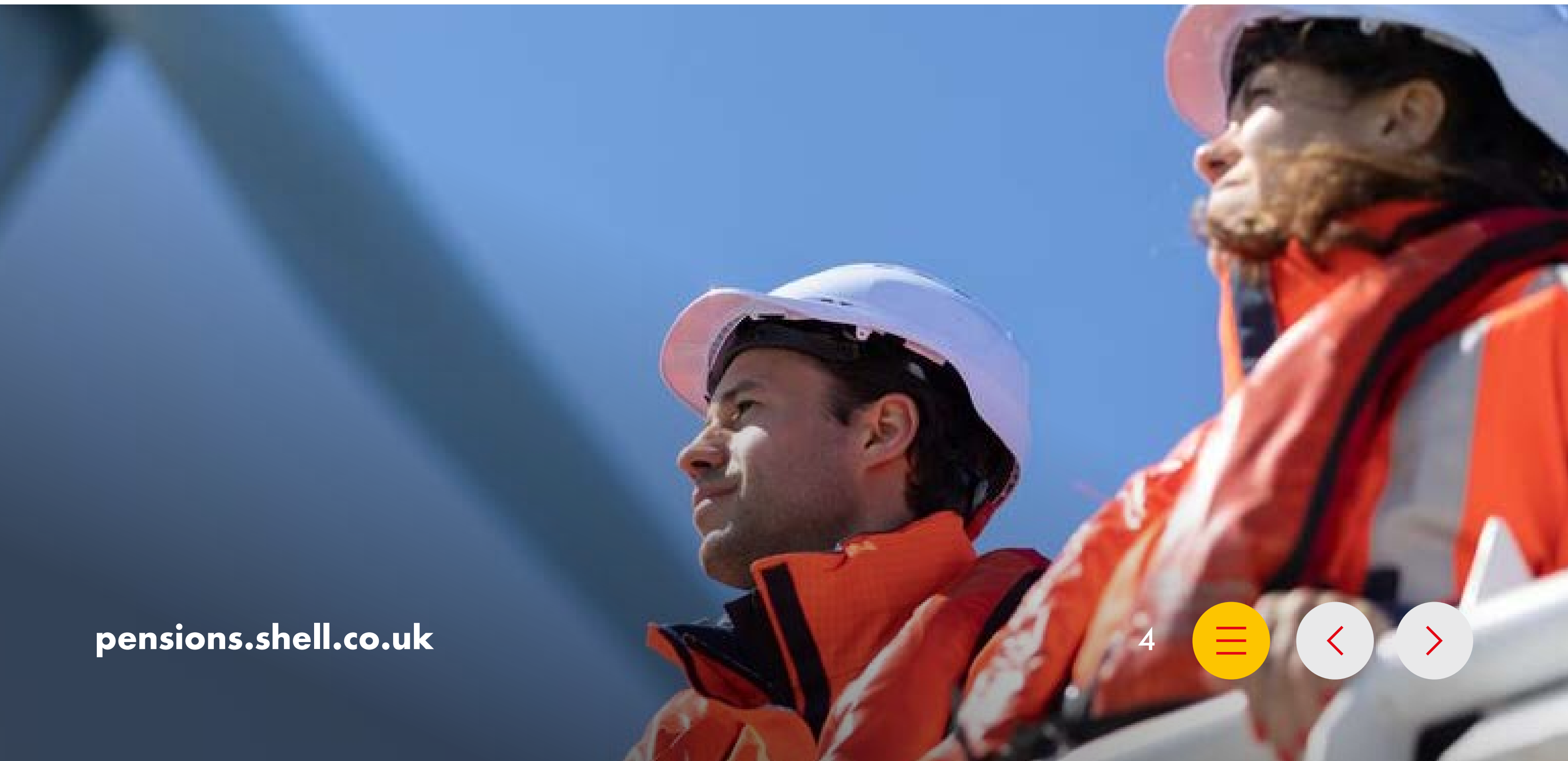
A consequence of this is that extreme market movements resulting directly or indirectly from climate change become more likely, but their form and impact become harder to predict. The Trustee believes that the funding ratio will be generally resilient to climate-related shocks but remains conscious that extreme events could have unpredictable results.

At the same time, climate change is not the only risk facing the Fund. The Trustee operates a system of integrated risk management, with the aim of ensuring that all material risks get the appropriate attention and management. Climate change risk has been incorporated in that system for some time. Overall responsibility is with the Trustee Board as a whole, given the materiality and interconnectedness of climate change risk. The Trustee has also established an ESG Forum to provide greater oversight of the Fund's approach to stewardship and providing input on Environmental, Social and Governance policies (including climate change) to the Trustee. The whole subject area is undergoing rapid development as more information becomes available, as new regulations are put in place and as the challenges of the world meeting its climate change goals become more apparent.

The overarching risk is that of insufficient funds to meet all benefit payments. We refer to this as funding risk and it is affected by changes in liability values, asset values and the ability of the Sponsor to support the Fund. Given this context we believe that changes to macro-economic factors from climate change, such as interest rates, inflation and life expectancy are likely to have a greater overall impact than the value of individual assets. As a result, we focus on managing funding risk.

As a Board, we look at funding risk from climate change over the short, medium and long term. The characteristics of the Fund change over time as it gradually matures and continues on its derisking path. The circumstances in which it will be operating become less clear the further out we look.

With funding ratio resilience increasing as investment risk reduces, the strength of the Sponsor covenant becomes less important over time. However, Sponsor covenant remains a key area of focus for the Trustee Board in the context of providing support in the event of extreme future shocks that unexpectedly lead to a funding shortfall, including those arising from climate change. The Trustee continues to monitor the success of Shell in navigating the transition to a low-carbon economy through its Powering Progress strategy.



The Trustee Board has set a target of net zero by 2050 or earlier in respect of greenhouse gas emissions associated with the Fund's assets. We think this is the right thing to do, but we also consider it to be in the long-term interests of our members and it represents a degree of risk mitigation for the Fund. However, we also recognise that as we have grown our holding of UK gilts, which are out of scope of the net zero target, the impact of this target diminishes substantially.

The overall approach of the Trustee is to contribute to the achievement of the goals of the Paris Agreement of limiting global temperature rises to 1.5°C above pre-industrial levels through using its influence as an investor, together with that of like-minded other investors, to encourage enterprises to align their strategy and operations with the Paris Agreement goals. This is done primarily through engagement and voting (noting that the Trustee currently has no voting rights following the sale of its physical equity holding – see Section 9) but the Trustee also considers divestment in certain cases. This contrasts with simply divesting from high-carbon companies which may reduce the carbon footprint of the Fund but does not change the actual carbon footprint of the investee companies.

Finally, it is appropriate to note once again that the influence of a materially de-risked and highly diversified pension fund is very limited compared to the ability of governments to change behaviours in relation to climate change. This becomes increasingly the case for the SCPF in the period beyond 2030. Progress depends on governments across the world taking the necessary steps to create the right incentives for economic actors – consumers as well as producers – to operate in a Paris Agreement-aligned manner.

We hope you find the information in the report of interest and value.

Tim Morrison

Chair of the Trustee Board, Shell Pensions Trust Ltd

Year	Target reduction in Carbon footprint* relative to a 2020 baseline
2025	30%
2030	50%
2050	100%

*Defined as CO_2-equivalent emissions per £1m invested. See Section 12 for further details.

2. Purpose of the Climate Change Report

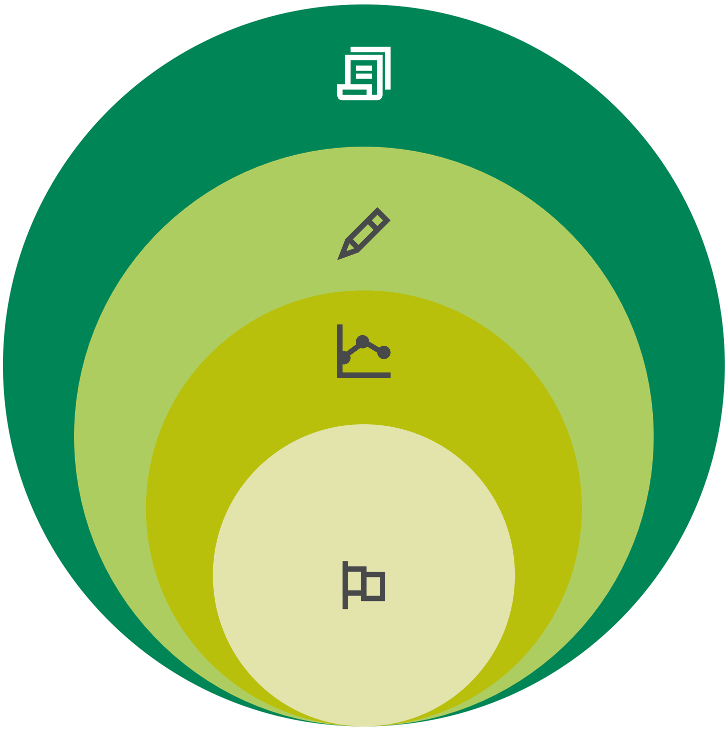
This report is written for members of the Shell Contributory Pension Fund ('the SCPF' or 'the Fund') and is required by the Pension Schemes Act 2021. Its purpose is to inform members about the risks to the SCPF from climate change and about how the Trustee of the Fund, Shell Pensions Trust Limited, is responding to those risks.

The report is shaped by the recommendations of the Taskforce on Climate-related Financial Disclosure ('TCFD') which has developed best practice guidance for climate risk reporting. The Financial Stability Board created the TCFD to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks and opportunities – those related to climate change. UK regulations require the trustees of large pension schemes, including the SCPF, to meet climate change governance requirements and to publish an annual TCFD-aligned report on their pension scheme's climate-related risks.

The Trustee considers that climate change has the potential to have a materially detrimental impact on funding risk, despite the improved funding position and significant investment de-risking that has taken place within the Fund over the past few years.

Climate change, whether managed or unabated, carries direct risks including through physical damage, changes in member health and disruption in the world economy. The various responses to climate change risk by governments, business and consumers also carry consequential risks, for example through the restructuring of economies, regulatory changes, litigation risk (with respect to both assets and covenant strength) and the impact on tax arrangements, public finances and monetary regimes.

This document is the third annual Climate Change Report for the SCPF and is for the year ended 31 December 2023. The Fund operates as a single section for funding and investment purposes, so this document covers the Fund as a whole, but excludes all Additional Voluntary Contribution (AVC) benefits and investments. The core requirements of the TCFD-aligned reporting framework for pension funds are set out on the next page.



Governance

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

Strategy

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

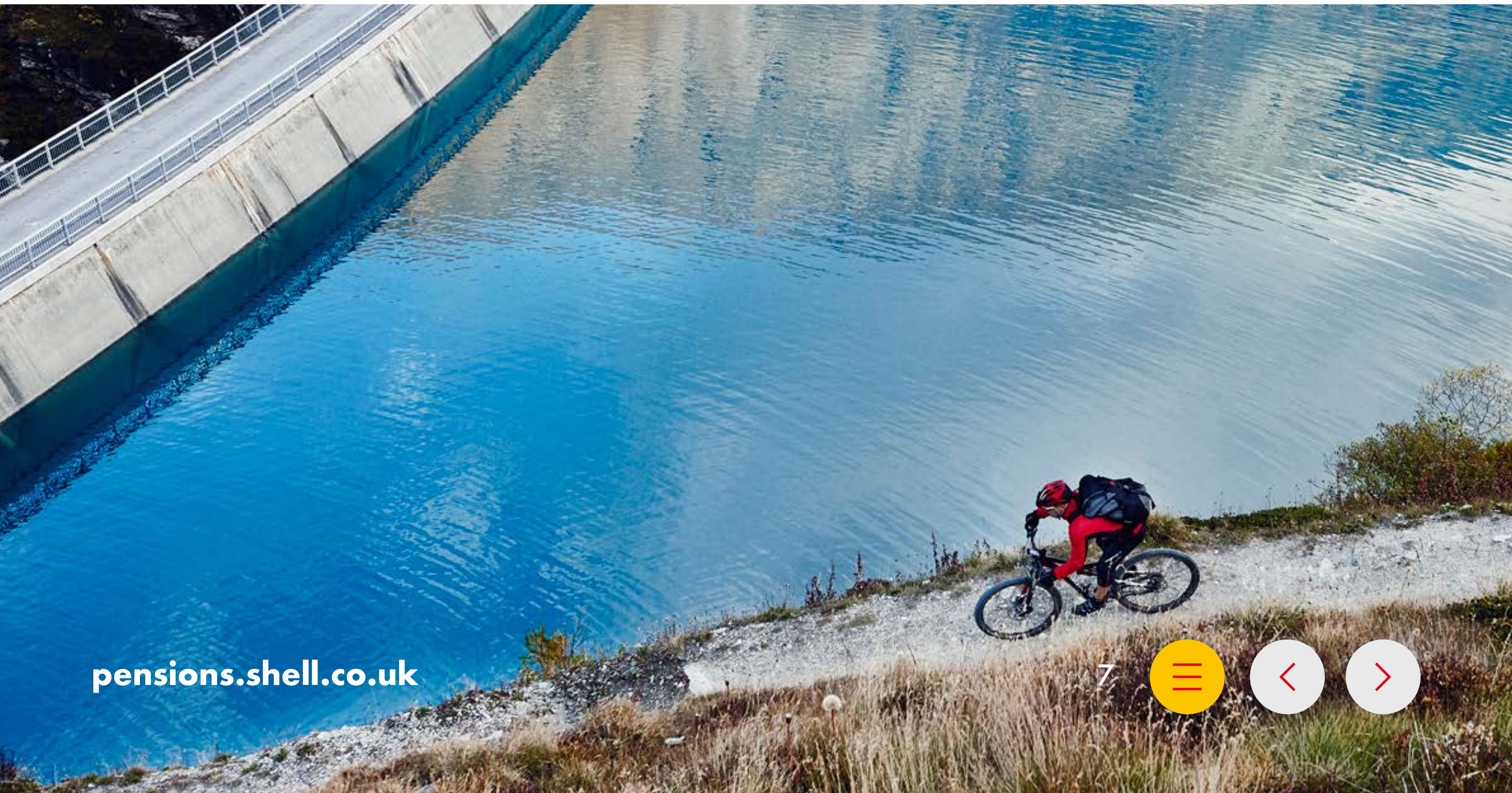
Risk Management

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

Metrics and Targets

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

Sections 3 and 4 of this report provide further context on the position of the Fund including the Trustee's objectives, the funding level and the investment strategy.



A summary of how the TCFD-aligned framework is addressed by this report is set out in the following table:

TCFD framework: Report section		Governance	Strategy and Scenario Analysis	Risk management	Metrics and Targets
5	Investment Principles	✓	✓	✓	
6	Risk Management and Climate Change Risk		✓	✓	
7	Scenarios		✓		
8	Covenant Assessment		✓	✓	
9	Net Zero				✓
10	Investment Approach	✓		✓	
11	Governance	✓			
12	Metrics, Targets and Results				✓

In preparing this report, the Trustee has considered the TCFD's Principles for Effective Disclosure.

Other documents relevant to the matters discussed in this Report are available on the SCPF website and include: the 2023 SCPF Annual Report and Financial Statements, the Statement of Investment Principles, the Responsible Ownership Policy, the Implementation Statement and the Annual Review on engagement activity.

https://pensions.shell.co.uk/scpf/resources/scpf-library.html

3. The Trustee's Objectives

The Trustee's primary purpose is to ensure that all benefits promised by the SCPF under its Trust Deed are paid in full and on time throughout the life of the Fund.

This is the fundamental context for its assessment of the risks and opportunities from climate change. It means aiming to ensure resilience in the funding of the SCPF whatever path is followed by the world in tackling climate change. As a large asset owner, the Trustee also seeks to be a responsible investor and is a signatory to the UN Principles of Responsible Investment (UN PRI).

The Trustee must meet the requirements of The Occupational Pension Schemes (Investment) Regulations 2005. This means that, amongst other things, the assets must be invested in the best interests of members and beneficiaries and in a manner to ensure the security, quality, liquidity and profitability of the portfolio as a whole. Investment decision making must take account of the nature and duration of the liabilities of the Fund, ensure proper diversification and avoid concentration of risk.

4. The Current State of the Fund

Funding position

A triennial valuation was undertaken as at 31 December 2023. At this date, the Fund was in surplus on a Technical Provisions basis with a funding level of 108%.

Technical Provisions (£bn)	**31/12/2023**
Assets	12.3
Liabilities	11.4
Surplus	**0.9**
Funding level	**108%**

Journey Plan

The Trustee's initial journey plan was to reach a position of low reliance on the Sponsor by 2035. In fact, improvements in the funding level over 2022 meant that this position has already been achieved, with the investment strategy de-risked materially as a result. Over 2023, the Trustee and Sponsor reviewed the long-term strategy and set a revised target for the Fund to reach a position of self-sufficiency. Once this position is reached, the funding buffer and investment strategy would be such that the Trustee would not expect to require additional support from the Sponsor in all but the most extreme circumstances.

Under current projections, it is expected that this position will be reached in 10 years or so, though the timeframe could be shorter or longer depending on actual experience.

Investment strategy

		31/12/23		
		Actual Allocation	**Strategic Asset Allocation**	**Long-term Target Allocation**
Liability hedging assets	48%	59%	69%	87%
Investment grade credit	10%	11%	10%	7%
Return-seeking assets	42%*	31%*	21%	6%
Total	**100%**	**100%**	**100%**	**100%**

Figures may not sum due to rounding

*Economic exposure to return-seeking assets was 25% at both 31/12/22 and 31/12/23 as a result of derivative overlays.

The Fund has increased its economic exposure to UK Government bonds through a temporary use of repurchase agreements (repos[1]). This approach enables the Fund's assets to more closely match its liabilities, reducing future risk. The current target hedge ratio is 95% of liabilities[2]. The amount of repos held will be reduced as illiquid return-seeking assets are sold over time.

The Fund's Strategic Asset Allocation was formally updated in March 2023. This was to reflect the de-risking that took place over 2022 as the Fund reached a number of de-risking triggers.

However, the actual allocation is not currently in line with the Strategic Asset Allocation. This is because the Fund holds a material allocation to illiquid assets which were intended to be held for a longer period. As the funding level has improved more quickly than expected, the Fund has been able to de-risk. However, the illiquid assets can only be sold quickly in the secondary market, typically at a discount to the expected longer-term value. As a result, the Fund instead uses derivative overlays – a type of financial instrument – to reduce its economic exposure to return-seeking assets. The investment strategy will move towards the strategic asset allocation and the derivative overlays will be unwound over the next few years as the illiquid portfolio is sold down.

The Trustee made the decision at the end of 2023 to sell the Fund's holding of physical Listed Equity holding in full, along with a proportion of its return-seeking fixed income holdings. This has not changed the Fund's economic exposure to these liquid return-seeking assets since an equivalent amount of the derivative overlays was also removed. This was not a change to the strategic target, but instead an implementation decision to improve investment efficiency. The proceeds from the sales were used to reduce the Fund's repo holdings, improving the Fund's liquidity position. As the illiquid assets are sold, some exposure to Listed Equity will be restored. However, this is not expected to be to previous levels.

The long-term target allocation represents the investment strategy the Trustee intends to adopt once its self-sufficiency target has been reached. This is currently expected to be achieved around the middle of the next decade.

[1] In this context, a repo is a transaction in which a UK Government bond is sold with an agreement to repurchase it at a later date. The proceeds from the sale are then used to buy additional or replacement UK Government bonds.

[2] 95% of accrued liabilities on the Trustee's Low Reliance basis, the discount rate for which is Gilts + 0.5% pa.

5. Investment Principles

The Trustee's investment objective is to invest the Fund's assets such that they, together with the return on them and contributions from members and employers, are sufficient to pay all benefits due to members.

In discharging its responsibility to invest the assets of the Fund in the long-term interests of its members, the Trustee believes that it protects and enhances the value of the Fund in the long term by taking environmental, social and governance (ESG) considerations, including climate-related risks and opportunities, into account in its investment decisions and investment oversight.

The Trustee also believes that supporting the most ambitious goal of the Paris Agreement – to limit atmospheric heating to 1.5°C compared to pre-industrial levels – is consistent with that overriding objective as well as being an important part of responsible ownership and a benefit to the Fund's members.

Given the currently insufficient progress made by the world towards meeting the Paris Agreement goals, improving funding ratio resilience in all circumstances and supporting achievement of the Paris Agreement goals by investee companies is the context for the Trustee's work on climate change risk. These two lenses that the Trustee uses to consider climate change questions – funding ratio resilience and responsible ownership of investments – bring somewhat different perspectives and areas of focus.

The main method of improving funding ratio resilience in whatever climate change mitigation path the world actually follows over the coming decades is the de-risking of the investment portfolio of the Fund. The holdings of return-seeking assets such as equities, property and non-investment grade corporate bonds have declined significantly in the recent past and are expected to decline further over the next few years. As such, there has been and will continue to be a decline in the sensitivity of the Fund to the success or otherwise of the underlying companies in meeting the challenges of climate change. Nonetheless, the Fund will benefit from both promoting climate change preparedness in its investees and considering the matter whilst reshaping its portfolio.

As a responsible owner of assets, the Trustee uses stewardship to help bring about a particular mitigation outcome (i.e. one consistent with the Paris Agreement goals) while also ensuring the achievement of the Trustee's primary purpose of paying members' benefits and remaining compliant with regulatory requirements[3] in respect of defined benefit pension scheme investment. Further information on the Trustee's approach to stewardship is included throughout the report.

The general approach is incorporated in the Statement of Investment Principles and the Responsible Ownership Policy.

[3] The Occupational Pension Schemes (Investment) Regulations 2005

6. Risk Management and Climate Change Risk

The Trustee has a comprehensive risk management approach, identifying a wide range of risks to the achievement of its objective to pay all pensions on time and in full.

Addressing climate change risk is an integral part of this approach, not least because the risks themselves are in practice frequently interwoven with other risks, as explained below. The Trustee maintains a risk register which records risks, the main risk control and mitigation methods being applied, any matters requiring improvement and actions to deliver that improvement. Risks are assessed by reference to their potential impact and likelihood to ensure attention and resources are focused in the right place. The remainder of Sections 6 to 10 discuss the risks identified to date and how the Trustee has assessed and is managing them. More details about the Trustee's risk management processes, including how the Trustee identifies new risks, follow in Section 11.

Given the purpose of the SCPF, the overarching risk is that of insufficient funds to meet benefit payments as they fall due. The Trustee refers to this risk as 'funding risk'. It is affected by changes in both liability values (principally interest rates, inflation rates and the longevity of members) and asset values. In relation to funding risk, the Trustee operates an integrated risk management approach, incorporating covenant risk, liability risk and investment risk.

While climate change-originated physical risks[4], and possibly transition risks[5], may have an impact on the Fund's operational activities in future, the Trustee considers that it is funding risk which requires focus at this stage.

The Trustee's de-risking plans are driven by the desire to reduce the impact on the funding level of all risk, whether climate change originated or from any other source.

The Trustee considers that climate change has the potential to have a materially detrimental impact on funding risk, albeit that the scale and likelihood of this risk has reduced in the recent past as a result of de-risking. Other more generic matters such as compliance with regulatory requirements and good member communications have a climate risk component but are covered by their own risk management processes.

Longevity risk is the risk that members live longer than expected and this risk could be impacted by climate change. Longevity is one area where risk has not yet been mitigated, other than through building prudence into the demographic assumptions. The Trustee is considering options to mitigate its longevity risk exposure in the short-to-medium term.

[4] "Physical risks" pertain to the physical impacts that occur as the global average temperature rises. For example, the rise in sea levels could have impacts such as flooding and mass migration. Extreme weather events, such as flooding and fires, could become more frequent and severe, and these incidents could threaten physical assets and disrupt supply chains.

[5] "Transition risks" arise as the world seeks to realign the economic system towards low-carbon, climate-resilient solutions. Changes in industry regulation, consumer preferences and technology will take place and impact on current and future investments.

The Trustee considers all three areas of its integrated risk management approach (i.e. covenant risk, liability risk and investment risk) when adopting policies for climate-related risks.

The likelihood and gravity of effects increase as the timeframe extends into the future but, as far as return-seeking asset classes are concerned, the Fund is vulnerable to markets repricing financial assets well in advance of the actual events or changes causing damage. It is also worth noting that the Fund's portfolio now has and will continue to have a very high exposure to UK Government debt. The impact of climate-related risks and opportunities on the Fund's investment approach is also described at an asset class level in Section 10.

Climate change, whether managed or unabated, carries direct risks including through physical damage, changes in member health and disruption in the world economy. The various responses to climate change risk by governments, business and consumers also carry consequential risks, for example through the restructuring of economies, regulatory changes, litigation risk (with respect to both assets and covenant strength) and the impact on tax arrangements, public finances and monetary regimes.

It is worth keeping in mind that financial risk from climate-related risk is not a single risk but a set of different, though often interrelated, financial risks which share a root cause in the progressive heating of the global climate. The financial risks also typically have multiple drivers, not just climate change.

The measurement of liabilities is also a critical element in determining the right investment strategy. For example, climate change may affect the longevity of members through changed climatic conditions, more or less spending available for health and social care or changed vectors of disease. The impact on the economy of necessary adjustments to deal with climate change may lead to changes in inflation and/or interest rates, causing changes to both the valuation of liabilities and the expected returns on assets. Indeed, as far as funding risk is concerned, the Trustee views changes to macro factors such as longevity, interest rates and inflation rates as having a greater overall impact than changes to individual asset values.

As well as risks arising from climate change, it is evident that there are major uncertainties arising from science and technological changes (including the impact of developments in medical science on longevity), from the long-lasting impacts from global health emergencies and from geo-political tensions. All these must also be taken into account.

In terms of scheme specific risks from climate change, because of the nature of the Sponsor's business, the most serious impact that the Trustee is concerned with is the combination of a steep fall in the value of its assets happening after, or at the same time as, a major weakening in the strength of the Sponsor covenant. The Sponsor itself is strongly affected across all of its business activities by climate change and the transition of the energy system to net zero emissions.
An extract of Shell's strategy is set out on the next page.

Context: Shell plc's strategy for achieving net zero

"We aim to become a net-zero emissions energy business by 2050 and will work with customers to help them decarbonise."

The Paris Agreement aims to strengthen the global response to the threat of climate change by "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels". Shell supports the Paris Agreement goal to limit the rise in global average temperature this century to 1.5°C above pre-industrial levels. To achieve this, urgent action is needed to reduce emissions across all sectors.

We are working to become a net-zero emissions energy business. This means net-zero carbon emissions from our operations. It also means net-zero carbon emissions from the energy products we sell (including those produced by others), which currently account for over 90% of the total emissions we report. We support a balanced energy transition where the world maintains a secure and affordable supply of energy, while building the clean energy system of the future. We want to play our part in the energy transition, purposefully and profitably.

We aim to partner with our customers, suppliers and governments to help decarbonise the energy system. Our integrated assets and supply chains are designed to provide a secure supply of energy for our customers, while also delivering low- and zero-carbon alternatives.

Source: Shell plc Annual Report and Accounts for the year ended December 31, 2023

Time horizons

The Trustee has chosen to assess climate-related risks over multiple time horizons. This is mainly because the risk profile of the Fund changes over time, particularly as risk is reduced in the investment strategy and as the Fund membership matures. It is also the case that uncertainty in economic and other responses to climate change grows over time.

The time horizons are unchanged since last year.

Time Horizon	Time Period	Rationale
Short-term	To 2028	During this period there is good visibility on the Sponsor covenant strength. A proportion of the illiquid assets are expected to be sold over this period.
Medium-term	To 2033	The Fund is likely to have reached a very low risk investment strategy and strong funding level by this point, with little reliance on the covenant.
Long-term	To 2040	The Fund will be very mature by 2040. Emissions will need to be close to net zero by this point if global temperature increases are to be limited to 1.5°C above pre-industrial levels.

In the context of these time frames, the Trustee has considered the key risks and opportunities from climate change, as well as the actions it intends to undertake to address them. This is set out in the following table.

Time period	Key risks	Key opportunities
Short-term (to 2028)	Exposure to climate-related investment risks may be highest while an allocation to growth / illiquid assets is retained.	Sustainable investment options and stewardship may present opportunities to mitigate climate risks.
Medium-term (to 2033)	Market volatility could cause investment losses and increase time to reach full funding on the long-term objective. Longevity risk also becomes more significant compared to other risks if it remains unmitigated.	Opportunities to de-risk early may help reduce possible climate impacts on the Fund. Climate-aware investment in the Fund's credit holdings could increase the resilience of assets to climate risks.
Long-term (to 2040)	Undeterminable macro level risks caused or exacerbated by climate change.	Macro level changes may present additional options or opportunities to the Trustee.

Short- to medium-term actions

- Include consideration of opportunities to reduce climate risk as part of investment strategy reviews.
- Despite the planned run-off of illiquid assets, for these assets, focus should be kept on increased understanding and robust management of climate risks as long as exposure remains in place.
- Monitor and engage with issuers and managers to ensure they are focussing on transition risk in good time and monitoring physical climate risk.
- Further consideration of the Fund's net zero target and Stewardship approach (for example, taking into account real-world progress by then).

Long-term actions

Continue to de-risk in line with the Journey Plan to ensure that the investment strategy is robust against a wide range of risks including climate change.

The approach taken to assess the potential impact of any particular risk depends on the nature of that risk. Given the wide range of risks faced by the Fund and their differing characteristics, it is clear that no single tool can be used to identify and assess the potential impact of all risks. The Trustee assesses and prioritises its response to risk using the combined judgement of its advisers, managers and Trustee Directors as to the potential likelihood and impact of one risk relative to another.

7. Scenarios

The Trustee uses scenario analysis to support its judgements about the resilience of its funding strategy and investment strategy over time and its reliance on covenant over the periods considered. Scenario analysis is an approach to analyse how different future events may unfold, although they are based on many assumptions and simplifications.

Modelling Risk

The intricacies of climate systems present considerable difficulties in modelling the impacts on pension schemes' assets and liabilities. This is particularly true in the Failed Transition scenario (see below) when over 2°C of warming is observed by 2050, increasing to over 4°C by 2100. Due to the unprecedented nature of such warming, it is challenging to encompass all potential consequences within the modelling process.

Simplifications in the modelling mean that the actual impact of climate change on pension schemes could be significantly worse than is currently being modelled. For example, the scenario modelling makes no allowance for the following as these are beyond current modelling capabilities:

- Tail risks (the high impact but less likely outcomes)
- Tipping points (where climate change could self-perpetuate)
- Variations from median outcomes
- Impacts of food and other resource shortages
- Impacts of migration and increased likelihood of armed conflict
- Other systemic risks such as new pandemics, financial market volatility and energy security

The way in which these risks interact and play out could lead to a wide range of macro-level impacts. For instance, at the extreme, countries could experience prolonged periods of high inflation, financial markets could be significantly disrupted and legal and regulatory changes could impact the sector in a material way. The impact these changes could have on pension schemes cannot be predicted. Further, the question of who bears the risk – trustees, members or sponsor – will vary depending on the transmission mechanism. However, the Fund is likely to better placed to deal with any shocks if it continues to de-risk its investment strategy in line with its Journey Plan.

Because of the limited ability of current scenario models in handling deeply disruptive change, we also consider climate change in qualitative terms, the conclusions of which are built into our de-risking strategy.

Scenario Analysis Results

These scenario analysis results should be considered in light of the above comments on modelling risk.

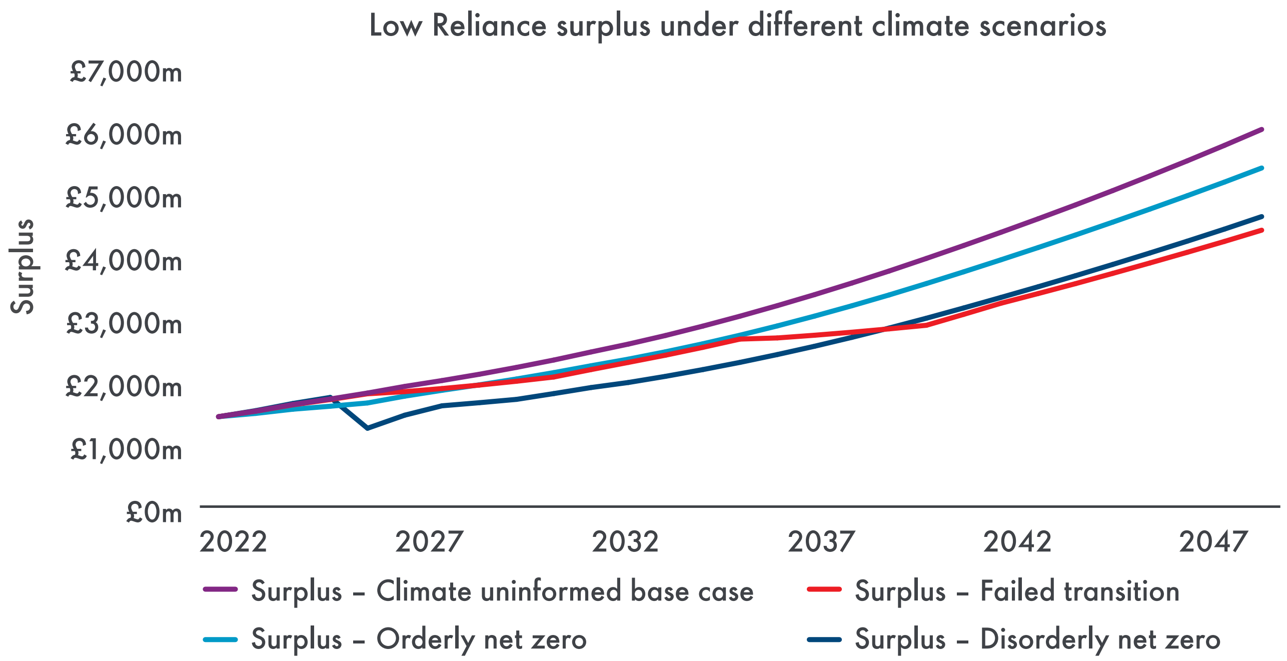
Because of the limited ability of current scenario models in handling deeply disruptive change, we also consider climate change in qualitative terms; the conclusions of which are built into our de-risking strategy.

In March 2023 the Trustee considered a set of Climate Change Scenarios, based on the Fund’s position as at 31 December 2022, with the support of our ESG adviser Lane Clark & Peacock LLP (LCP). The scenarios covered three cases (set out in the box below) which were chosen as they represent a broad range of potential outcomes, which can be seen as representing degrees of success in meeting the goal of the Paris Agreement.

Transition	Description	Why chosen
Failed Transition	Net zero is not met by 2050, or at all; the Paris Agreement goals are therefore not achieved. Only existing climate policies are implemented.	To explore what could happen to the SCPF’s finances if carbon emissions continue at current levels and this results in significant physical risks from changes in the global climate that disrupt economic activity.
Orderly net zero by 2050	Global net zero carbon emissions is achieved by 2050; rapid and effective climate action (including using carbon capture and storage), with smooth market reaction.	To see how the SCPF’s finances could play out if the global net zero carbon emissions is achieved by 2050, meaning that the economy makes a material shift towards low carbon by 2030.
Disorderly net zero by 2050	Same policy, climate and emissions outcomes as the orderly net zero transition, but financial markets are initially slow to react and then overreact.	To look at the risks and opportunities for the SCPF if the global net zero carbon emissions is achieved by 2050, but financial markets are volatile as they adjust to a low carbon economy.

Further details on the scenarios and assumptions are included in the appendix.

The Trustee acknowledges that many alternative plausible scenarios exist but found these were a helpful set of scenarios to explore how climate change might affect the SCPF in future. The Trustee also compared the outputs under each scenario to a "climate uninformed base case", that makes no allowance for either changing physical or transition risks in future. The key results of the scenario analysis are summarised in the chart below.



The chart illustrates the expected funding surplus on the Trustee's Low Reliance basis as it progresses over future years. The positions illustrated show the median (middle) outcome in a wide range of possible outcomes. Under these median outcomes, the Fund is not expected to fall into deficit on the Low Reliance basis and the reliance on the covenant of the Sponsor is limited.

However, as discussed above, the Trustee is conscious of the limitations of climate scenario modelling and continues to remain vigilant with regards to the impact of climate change on funding risk. It is in the most extreme scenarios that reliance is most likely to be placed on the covenant of the Sponsor, particularly in the shorter term while de-risking remains in progress.

The scenario analysis modelling will next be updated based on the Fund's position at 31 December 2025 (at the latest).

8. Covenant Assessment

The strength of the covenant could be affected by developments relating to climate change and the energy transition and therefore the processes for assessing the strength of the covenant are an important part of the Trustee's management of the Fund's climate change risk.

The main purpose of covenant assessment is to determine whether the Fund is carrying an acceptable level of funding risk now and into the future, in the context of the Sponsor's financial strength. If the Trustee were to decide this was not the case, various mitigants would be available – for example, further de-risking, increasing the level of contributions required from the Sponsor in the short term, or putting in place additional contingent support.

Covenant assessment is forward looking with two distinct features. First, the expected potential need declines as the Fund reduces risk over time and more members retire. Second, the Trustee's ability to assess the covenant strength at any particular time in future becomes more difficult the further out the assessment is made.

The Trustee has appointed Interpath to provide independent assessment of the covenant provided by the Sponsor. The latest assessment was undertaken as at 31 December 2023 and considered the impact on covenant of the Trustee's three climate scenarios (set out in the previous section).

In addition, the review considered the Sponsor's own 'base case' scenario, which broadly mirrors the Trustee's 'Disorderly net zero by 2050' scenario, as well as Shell's two Energy Security Scenarios[6] called Archipelagos and Sky 2050. Views on the lower bounds of demand for oil and gas and of oil and gas prices are of particular interest as these shape the lower case outcomes for the Sponsor's cash flow during this period.

Whilst there is uncertainty around the timing and extent of the energy transition (and the impact on the Sponsor), the covenant adviser's view was that the Sponsor's cash flows will be:

- resilient in a range of climate scenarios; and
- will remain material compared to SCPF liabilities over the expected period of covenant reliance (i.e. around 10 years).

The Trustee has entered into an Information Protocol with the Sponsor pursuant to which it receives information relevant to the ongoing assessment of the Sponsor covenant.

[6] Shell has been developing possible visions of the future since the early 1970s, helping generations of Shell leaders, academics, governments and businesses to explore ways forward and make better decisions. Shell Scenarios ask "what if?" questions, encouraging leaders to consider events that may only be remote possibilities and stretch their thinking. See What are Shell Scenarios? | Shell Global

The Trustee also meets with the Sponsor annually to discuss its progress and outlook and has access to all external reporting made by Shell plc. It monitors matters such as the Sponsor's published metrics, cashflow forecasts provided confidentially to the Trustee and the profile of Sponsor debt relative to the Fund's reliance over time on the Sponsor covenant. It also considers external and market-based metrics such as credit ratings and credit spreads on the Sponsor's long-term bonds relative to general corporate long-term bond spreads.

As well as considering Shell-specific metrics, the Trustee takes into account changes in government policy, technological and commercial changes in the energy industry and legal developments both in regulation and litigation.

9. Net zero

What is the Trustee's climate approach?

The Trustee's policy is to operate the SCPF in a manner that supports the most ambitious goal of the Paris Agreement – to limit atmospheric heating to 1.5°C compared to pre-industrial levels. To support this policy the Trustee has set a target of net zero by 2050 or earlier for the greenhouse gas (GHG) emissions for the entities in which it is invested.

With support from the Trustee's investment manager, SAMCo, the Trustee has adopted a climate strategy to support its net zero target, including a suite of interim targets. The strategy has been developed with reference to industry guidance such as the Paris Aligned Investment Initiative (PAII) Net Zero Investment Framework (NZIF) and covers a broad range of areas.

A key principle of the approach is that it **supports the real-world transition to net zero**, as well as managing climate-related risks to the SCPF's assets. That is, the Trustee will focus on using stewardship of investments to improve the net zero alignment of the entities in which it invests, rather than simply divesting from entities that operate in carbon-intensive areas of the economic value chain.

Work supporting the achievement of the net zero target will be carried out in a manner which remains consistent with the Trustee's fiduciary duties and legal obligations relating to the investment of assets.

What targets have been established for the SCPF?

Taking into account the current availability of data and tools to assess and promote net zero alignment across relevant asset classes, the Trustee has set various targets related to the activities of SAMCo in its capacity as investment manager for the SCPF's assets.

- The formal target for the purpose of this Climate Change Report is a carbon footprint reduction (tCO2e per £1m invested, for Scope 1 and 2 emissions, from an estimated 2020 baseline) of 30% by 2025, 50% by 2030, and 100% by 2050.
- The Trustee has also set targets in relation to the alignment of investee companies towards Paris-based goals, as well as Trustee engagement targets for investee companies deemed to not be aligning.

Further details on these targets are set out in Section 12. The targets will be monitored on a quarterly basis at ESG Forum meetings and developed in light of progress and as data and methodologies improve.

How will the targets be achieved?

From a portfolio perspective, SAMCo considers climate factors, including net zero alignment, in the investment process, considering financial risk and return and in the selection and monitoring of external asset managers.

This is expected to result in portfolios that have better net zero alignment than the broader market and for alignment to improve over time. The targets above are reflected in portfolio construction, to the extent that this is consistent with the Trustee's fiduciary duties. Moreover, the targets are taken into account for new investments as the Trustee transitions into lower risk assets over time.

The backdrop is also the SCPF's growing allocation to liability-matching assets, mainly fixed interest and index-linked gilts, which by their nature currently sit outside most net zero targeting frameworks, including the SCPF's. At a headline level, a large part of the reduction in carbon emissions associated with the Fund's total assets comes simply as a result of this de-risking process. However, the Trustee does not intend to rely simply on the de-risking trajectory to achieve its targets, but will use stewardship and targeted portfolio action with the aim to drive real-world change in investee companies. The effect in terms of a reduction in global emissions will be seen more clearly in a reducing carbon footprint of the assets held by the Fund and it is here that the work described below in Section 10 will have an impact.

To help achieve the Trustee's overall carbon footprint target, the Trustee works with its investment manager to drive improvements in all areas. However, the formal target for the purposes of this Climate Change Report remains at the overall Fund level.

Operational net zero

The GHG emissions of the SCPF's own operations are much less significant than that of the enterprises in which it is invested. Nonetheless, the Trustee's policy is to reduce the Fund's operational emissions[7] in line with the goals of the Paris Agreement to achieve net zero emissions by 2050. This includes engaging with our suppliers to seek commitments aligned with achieving the objectives of the Paris Agreement and net zero by 2050.

In practice, because almost all of the Fund's activities are carried out by service providers (both within the Shell Group and outside the Shell Group), a net zero position will be achieved when the service providers to the Fund are themselves net zero operators. Many of the Fund's service providers already have net zero plans or aspirations although the details and timelines of these vary considerably.

Sale of listed equities

At the end of 2023, the Fund sold its holding in physical equities. This was an implementation decision, rather than a strategic one; as discussed earlier, the Fund's economic exposure to equities was not affected since an equivalent offsetting derivatives overlay was also removed. This step was taken for a combination of reasons including a desire to reduce the repo holding and views about the future development of the Fund's equity holding.

A corollary of this decision is that the Fund's carbon footprint has fallen. This is an output of the above decision and was not a driver for it. It should be noted that the Trustee expects to reinvest in listed equities in future (as illiquid assets are sold), albeit to a lower level than previously. Hence, this fall in carbon footprint may be partially reversed in future.

A further consequence of the listed equity sale is that the Trustee no longer has any voting rights. This means that it has lost one of its levers of engagement for driving real-world change in investee companies. However, the Trustee's stewardship services provider (EOS) uses the full weight of both listed equities and corporate bonds under management when engaging with companies, and EOS's experience is that investee companies take both equity and debt into account when responding to engagement. In general, the objectives of equity and bond holders are aligned from an ESG perspective and EOS are therefore able to use the lever of voting (using the equity holdings of clients' assets under management) to the benefit of both equity and corporate bond holders. The Fund is therefore able to continue to impart some indirect influence on investee companies despite not holding listed equities.

In addition, since many companies use bonds as their primary financing mechanism, engaged issuers may in fact be more responsive to (prospective) bond holders than equity holders, especially when in the process of refinancing.

[7] Currently Scope 1 and 2 and identified elements of Scope 3

10. Investment Approach

The assets of the Fund are managed on behalf of the Trustee by Shell Asset Management Co BV ('SAMCo') under the supervision of the Trustee and in line with the investment strategy set by the Trustee.

Because of the different characteristics of the classes of assets in which the Fund invests, it is best to consider the investment approach by asset class rather than as a whole.

The impact of climate-related risks and opportunities on the Trustee's investment strategy depends on the time horizon in question. In the long term, once the Fund is primarily invested in liability-matching bond investments, climate-related risks and opportunities are expected to have a lower impact on the Trustee's investment strategy. The Trustee will be more exposed to climate related impacts in the short to medium term as it continues to hold an allocation to return-seeking assets. The remainder of this section sets out the action the Trustee is taking in relation to these short-term and medium-term impacts.

Listed Equities

As described earlier, the Trustee does not currently hold any listed equities. The Trustee expects to rebuild an exposure to listed equities over the next few years as illiquid assets are sold down, albeit to a lower level than previously. The Trustee has yet to determine its approach to rebuilding the equity portfolio, but ESG will form part of the considerations.

Bonds (other than Gilts)

As at the end of 2023, the Fund had a strategic allocation of 10% of the overall investment portfolio to investment grade bonds and a further 7% of the portfolio to high yield bonds (3%) and emerging market debt (4%). The emerging market debt portfolio includes exposure to quasi-sovereign corporate issuers (around 20% of the 4%) which in this report, together with high yield bonds, make up 'non-investment grade credit'.

The actual holdings of investment and non-investment grade credit were 11% and 4% respectively. Derivative overlays have been put in place to reduce the exposure to non-investment grade credit to 0%. As proceeds from the sale of illiquid investments are realised, the overlays will be unwound over the next two to three years. The SCPF's portfolio of bonds is broadly diversified with low exposure to any one issuer.

In late 2023, due to de-risking, part of the Non-IG Credit portfolio was sold. The reduction in the size of the portfolio necessitated the investment manager to transition to a new set of regional reference benchmarks. Whilst these benchmarks remain ESG-tilted, they have different sector allocation compared to the global index, including increased exposure to higher carbon footprint sectors such as energy, utilities and materials. This has led to the portfolio carbon footprint of the Non-IG Credit portfolio as reported per December 2023 to be higher than that of the previous year.

Through its engagement services partner, the Trustee engages with those companies in which the Fund holds debt with a view to encouraging management to adopt and deliver plans in support of the Paris Agreement.

Property

As at 31 December 2023, the Trustee has a 4% holding in Long Lease Property compared to a strategic benchmark of 3%. This asset class is considered a liability hedging asset for strategic purposes. However, in contrast with UK Government bonds, the Trustee has discretion and influence over the assets held. These assets are therefore in scope for the Trustee's climate policy.

The Trustee also has a return-seeking property portfolio comprised of directly held UK properties and a globally diversified portfolio in property funds. At the end of 2023, the Funds' actual allocation was 9% compared to a strategic allocation of 0%. This overweight position is due to the illiquid nature of the assets meaning they cannot be sold quickly without incurring losses in value. As a result, derivative overlays have been put in place to reduce the exposure to liquid return seeking assets (non-investment grade bonds) until property investments have been reduced. The direct and indirect core property portfolio will be sold when appropriate pricing can be achieved, while the non-core property will be run down, taking advantage of opportunistic sales if pricing allows.

SAMCo has been subscribing to the Global Real Estate Sustainability Benchmark (GRESB) since 2011 and encourages all the underlying property managers to subscribe to get the most complete ESG and climate-related data for the Fund. SAMCo continue to apply their external manager ESG assessment framework developed in 2022, leading to more targeted engagements being conducted in 2023, with the results being monitored and reported back to the Fund as part of the quarterly ESG Forum sessions.

Private Equity/Other Alternatives

At the end of 2023 the strategic weights of the Private Equity and Other Alternatives portfolios were both 0%, with the actual allocations being 9% and 2%. These overweight positions are due to strong investment returns and the illiquid nature of the assets meaning they cannot be sold quickly without incurring losses in value. These holdings will be run off over time, with advantage being taken of opportunistic pricing to accelerate sales when possible. Run-off is expected to be completed over the next five years or so.

Both asset classes hold broadly diversified portfolios. For both portfolios, ESG considerations, including climate-related risks, are a recurring topic in monitoring meetings with existing managers.

Over 2023, the SAMCo private equity team was transferred to an external manager, LGT, who now manage the Fund's private equity portfolio. LGT attend IFC meetings annually and report on Private Equity portfolio ESG metrics and engagement. SAMCo monitor and engage with LGT regularly throughout the year.

SAMCo continue to apply their external manager ESG assessment framework developed in 2022, leading to more targeted engagements over 2023. SAMCo continues to strongly encourage managers to improve on ESG and carbon reporting, with efforts underway to improve the collection of reported (as opposed to estimated) data for the Private Equity portfolio.

Hedge Funds

Approximately 5% of the Fund's assets are currently held in a diversified portfolio of hedge fund assets, in line with the strategic benchmark of 5%. The hedge fund portfolio is designed to return a modest long-run margin in excess of that obtainable from cash; in other words, it is a relatively low-risk component. The nature of the hedge funds invested in (the types of investments, the instruments used, the duration of holding) means it is not possible to carry out the type of engagement undertaken for corporate holdings.

However, SAMCo is steering its hedge fund managers to fully integrate ESG considerations, including climate change risk, and uses ESG performance and attentiveness to climate change risk as one factor in the selection and monitoring of managers. SAMCo's external manager ESG assessment framework is applied here as well.

Climate data availability for hedge funds is still limited. This is an area which will be kept under review and the Trustee expects SAMCo to encourage managers to improve ESG data reporting, including on climate-related metrics.

Index Linked Gilts & Nominal Gilts

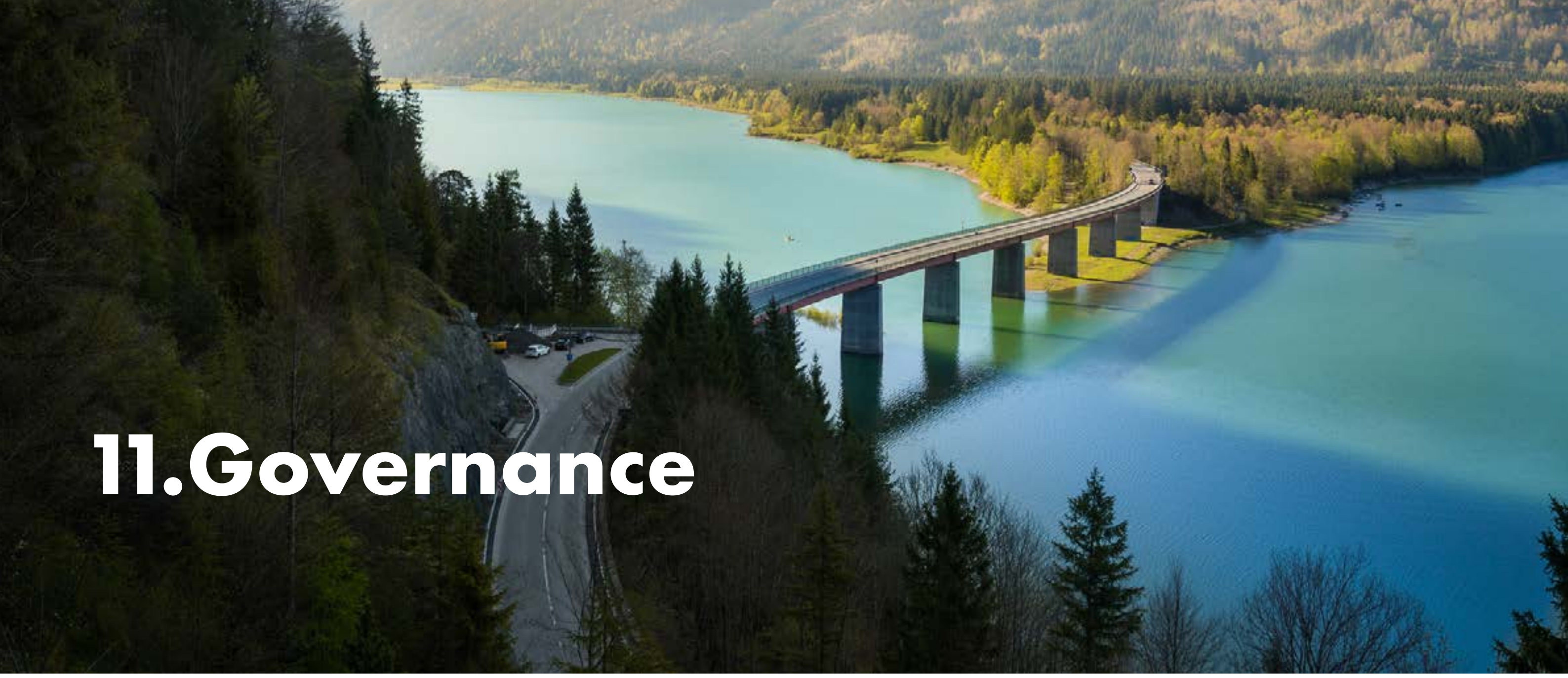
The liability hedging portfolio is the Fund's largest holding and is largely comprised of UK gilts.

Given the nature of the portfolio and its role in matching liabilities of the Fund, there is no specific action being undertaken or targets being set in relation to climate change risk with respect to the Fund's gilt holdings. This is because the value of the liability hedging portfolio is expected to move in line with the value of the liabilities that it is matching, irrespective of the future climate change path the world actually follows.

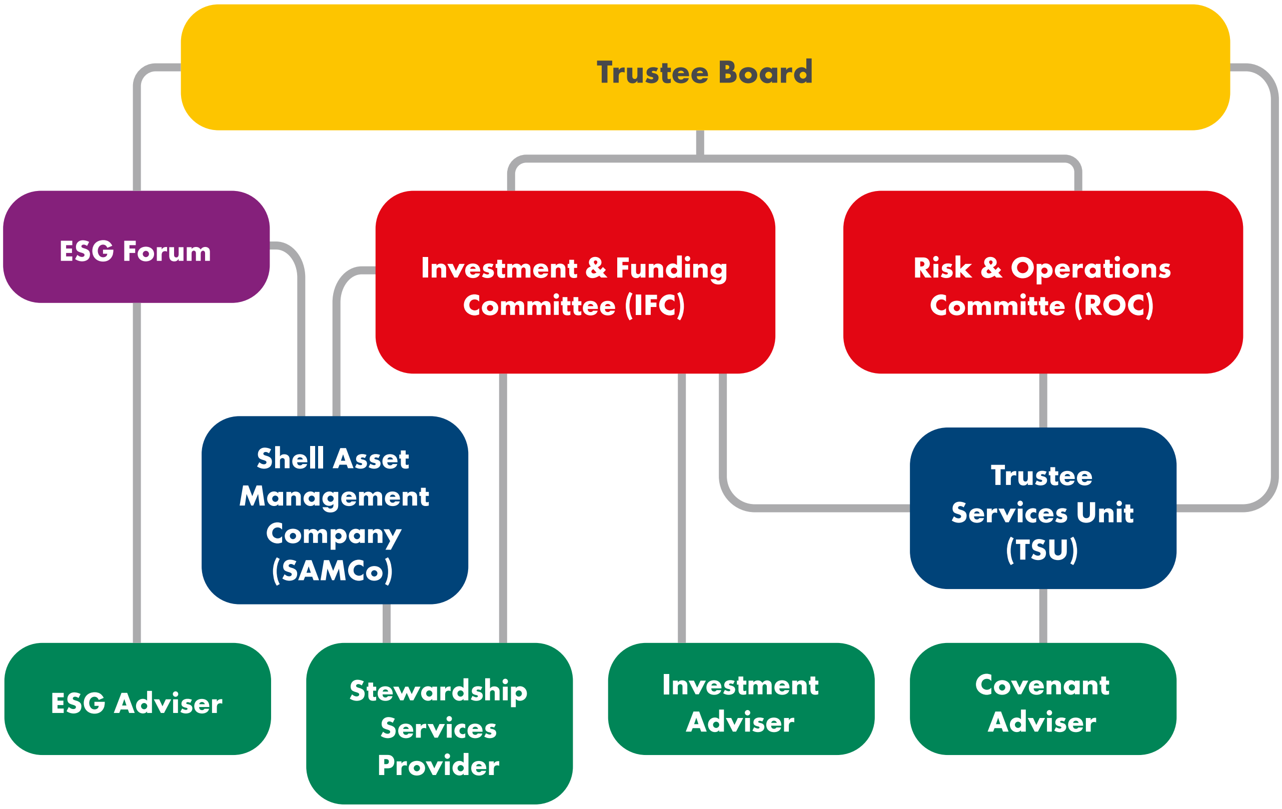
Unlike other asset classes, the Trustee has limited choice in selecting issuers for the liability hedging portfolio as this will be dominated by exposure to the UK Government. Therefore, and in line with emerging standards set out by net zero investment frameworks, the Trustee does not include domestic sovereign bonds within the scope of its overall climate policy. In essence, the degree of 'Paris-support' of this part of the portfolio depends on the UK Government's approach to climate change mitigation.

Opportunities

The investment manager has been instructed by the Trustee to seek out viable investment opportunities arising from and supporting climate change mitigation efforts. The custom ESG indices and the attention to resilience should also favour such investments, as long as the right level of reward is also available.



11.Governance


Trustee Board
ESG Forum
Investment & Funding Committee (IFC)
Risk & Operations Committe (ROC)
Shell Asset Management Company (SAMCo)
Trustee Services Unit (TSU)
ESG Adviser
Stewardship Services Provider
Investment Adviser
Covenant Adviser

The following sections describe in detail how the Trustee governs matters relating to climate change risk and where responsibility lies for climate-related matters for the Fund. As explained above, the Trustee operates an integrated risk management approach and takes account of a wide range of risks to the achievement of its core objective. The effects of climate change and societal response to them in most cases become incorporated in risks that the Trustee is managing in any case – such as investment performance risk or interest rate risk.

a. The Trustee Board

Shell Pension Trust Limited, a wholly owned company within the Shell plc group, is the Trustee of the SCPF. The Trustee Board (the 'Board') comprises eight Trustee Directors, of whom four are member nominated Trustee Directors and four are company nominated Trustee Directors.

The Trustee is responsible for the oversight of all strategic matters related to the Fund. This includes approval of the governance and management framework relating to environmental, social and governance (ESG) matters and responsible ownership considerations and the oversight of climate-related risks and opportunities. The Trustee Board is responsible for the implementation and oversight of the Fund's climate change risk management approach, which is integrated into the Trustee's overall risk register. Each quarter the Trustee Board receives a report from the ESG Forum (see below) covering climate-related risk, responses and reporting and discusses these points as appropriate. As far as opportunities are concerned, the Board sets investment strategy but delegates investment decision making to its investment manager. The targets relating to net zero encourage focus on defensive positioning against climate-related risks, as well as opportunities related to the transition to a low-carbon economy.

The Board has two committees, each comprising four of the Trustee Directors, which are concerned with different aspects of risk management and to which responsibility has been delegated for certain matters as detailed below.

The Investment and Funding Committee oversees investment and funding matters for the Fund. The Risk and Operations Committee is responsible, among other matters, for oversight of the SCPF's risk framework and financial reporting. It is also responsible for making recommendations to the Board on the assessment of the Sponsor covenant, a critical input into the Investment and Funding Committee's deliberations on the strategic asset allocation for the Fund.

Both committees meet once each quarter and hold additional ad-hoc meetings as required. At each committee meeting, the risk register is reviewed in order to identify, assess and manage all risks faced by the Fund, including those related to climate change. The committees report back to the Trustee at each quarterly Board meeting, enabling the Trustee to consider whether the committees have taken adequate steps to identify, assess and manage climate-related risks and opportunities.

In addition, the Trustee established an ESG Forum in 2023 to strengthen its focus in this area. Three of the Trustee Directors (two Trustee Directors from 1 July 2024) sit on this forum which advises both committees as well as the Trustee Board. Further detail on this forum is described in 11f below.

Given the importance of financial risk from climate change and the Fund's integrated risk management approach for investment returns, covenant and liability measurement, the Trustee Board itself takes responsibility for the Fund's approach to climate-related risks and opportunities, rather than delegating to a committee or forum. This includes setting policy, establishing a management framework and monitoring progress.

The Trustee Board receives training on climate-related issues from time to time to ensure that it has the appropriate degree of knowledge and understanding on these issues to support good decision making. The Trustee has no employees, but relevant members of the Trustee Services Unit (TSU) also receive this training, provided by the Trustee's advisers.

In 2023, the Trustee received training on net zero frameworks, climate policy considerations, global climate progress, fiduciary responsibilities with respect to climate change, alignment and engagement considerations, effective stewardship, and an update on the Taskforce on Nature-related Financial Disclosures (TNFD). Training continues throughout 2024 as developments occur in the area.

Extensive material on climate change developments and reporting is also available in the media and from organisations such as The Pensions Regulator, The Department for Work and Pensions (DWP), the UK's Climate Change Committee, Carbon Tracker and UN PRI.

The Trustee also expects SAMCo, LCP, Aon and other advisers to bring important and relevant climate-related issues and developments to the Trustee's attention in a timely manner and at such frequency as is appropriate.

Within the management guidelines established by the Trustee Board, day to day activities are delegated to the TSU or SAMCo. The Trustee Board monitors progress on a quarterly basis. The ESG Forum monitors progress against climate-related objectives including alignment of and engagement with investee companies. A portfolio-wide climate data metric pack is produced by SAMCo and issued to the Board once a year. Climate-related risks and opportunities at an asset class level are raised by the investment manager and considered by the Investment and Funding Committee during each annual asset class review, with material findings reported to the Board.

The TSU manages the operation of the Fund on behalf of the Trustee and therefore supports the Trustee across a broad range of activities connected with the implementation of the Trustee's climate risk management framework across investments, covenant assessment and monitoring and liability measurement.

The next sections describe the responsibilities of the Trustee's committees, forums and service providers, who undertake, advise and assist the Trustee with Fund governance activities. They describe their roles in identifying, assessing and managing climate-related risks and opportunities relevant to their activities and the processes the Trustee has established to satisfy itself that these entities take adequate steps to identify, assess and manage those risks and opportunities.

b. The Investment and Funding Committee

Under delegated authority from the Board, this committee oversees the work of the investment manager, SAMCo, and makes decisions on matters not reserved to the Board. ESG considerations are integrated into this and climate change risk is one of the most significant components in the ESG work. The ESG Forum provides input to this committee on ESG matters.

Under its Terms of Reference, key activities delegated to the Investment and Funding Committee in relation to climate change matters include:

- Reviewing the effectiveness of the Statement of Investment Principles, making recommendations to the Board for any changes.
- Oversight of the performance of SAMCo, including the integration of financially material ESG considerations.
- Reviewing each asset class on an annual basis. ESG considerations, including identification of potential new climate-related risks, form part of each review.
- Seeking investment proposals from SAMCo and the investment adviser to enhance the ESG and climate change focus of the Fund's portfolio.
- Having taken advice from SAMCo and the investment adviser, identifying and assessing climate-related risks in relation to Fund investments.
- Approving updates to the Investment Schedules of the Investment Manager Agreement, which may include changes to investment benchmarks to reflect ESG considerations.

c. The Risk and Operations Committee

The two main roles of this committee in connection with climate-related risks and opportunities are the maintenance of the Fund's risk framework and risk matrix, ensuring climate-related risk is integrated into the overall integrated risk management approach, and the monitoring and triennial assessment of the Sponsor covenant. The committee ensures that risk management processes are properly designed and operated. The committee considers the overall register, which includes climate-related risk, at each quarterly meeting.

The committee is also responsible for oversight of communications and ensuring that members are appropriately informed about the approach of the Trustee in this area.

d. Role of the Trustee Services Unit (TSU)

The TSU supports the Trustee and committees with the implementation of the Trustee's climate risk management framework across investments, covenant assessment and monitoring, and liability measurement, as well as being a member of the ESG Forum. The TSU seeks to ensure that decisions appropriately consider climate-related risks and opportunities and are appropriate within the context of the Fund's risk framework. Key activities may be summarised as follows:

- Ensuring the climate-related risks are incorporated in the assessment and monitoring of the Sponsor covenant.
- Working with SAMCo to seek investment opportunities which enhance the climate resilience of the Fund's portfolio.
- Ensuring investment proposals explicitly consider the impact of climate risks and opportunities.
- Engaging with SAMCo to understand how climate-related risks and opportunities are considered in its management of the Fund's assets.
- Engaging with the stewardship services provider to ensure that stewardship activities are being undertaken appropriately on the Trustee's behalf.

The work of the TSU is supervised by the Board and the committees.

e. Shell Asset Management Company B.V. (SAMCo)

SAMCo's responsibilities in relation to climate change risk, which are reflected in its engagement terms, are summarised as follows:

- Managing the Fund's assets on behalf of the Trustee, either directly or indirectly through external fund managers, in line with the Trustee's policies on climate change risk and opportunities.
- Implementing the investment portfolio in line with the Investment Management Agreement.
- Advising the Trustee Board, Investment and Funding Committee and ESG Forum (of which SAMCo is a member) on ESG policy (including climate-related risks) and implementation.
- Ensuring current and proposed investments consider the impact of climate risks and opportunities.
- Identifying investment opportunities which enhance the ESG and climate change focus of the Fund's portfolio, including through the implementation of custom ESG benchmarks in parts of the Fund's portfolio and the development of sustainability risk assessing.
- Engaging with the external investment managers to understand how climate risks are considered in their investment approach and, where appropriate, pushing for further development in this area, including reporting.
- Providing relevant climate-related metrics as needed for strategic decisions and climate reporting purposes, in addition to other ESG-related metrics.
- Providing training to the Trustee and committees on climate-related issues, climate-related developments and emerging regulatory trends in sustainable finance as well as risks and opportunities.
- Supporting corporate engagement activities undertaken by the stewardship services provider on behalf of the Trustee.

f. ESG Forum

The ESG Forum was established by the Trustee in 2023 to strengthen its focus on ESG-related matters, including climate change. The Forum is comprised of three Trustee Directors (two Trustee Directors from 1 July 2024), as well as having representation from both SAMCo and the TSU. The ESG Forum meets quarterly and provides support to both the committees, as well as directly to the Board. Input to the ESG Forum is provided by the ESG adviser, Stewardship services provider, investment adviser and other third parties as appropriate.

The ESG Forum's responsibilities in relation to climate risk include the following:

- Overseeing the monitoring and delivery of the Trustee's climate policy and providing recommendations to the Board on any future revisions to the climate policy.
- Overseeing the engagement and voting undertaken on behalf of the Fund by the Stewardship service provider, SAMCo and external managers; providing direction and monitoring engagement activities to ensure alignment with the Trustee's beliefs and areas of priority, taking action to address any concerns identified.
- Monitoring the alignment and engagement of investee companies, with delegated authority to enforce the Trustee's exclusion policy as appropriate.
- Acting as custodian of the Trustee's climate and ESG-related documentation, including the Responsible Ownership Policy, Implementation Statement, and this annual Climate Report, recommending to the Board for approval.
- Commissioning climate scenario modelling for the Fund from its ESG adviser.

g. External Advisers

Scheme Actuary

The Scheme Actuary, employed by Aon Solutions UK Limited (Aon), assists the Trustee in assessing the potential impact of climate-related risk on the Fund's valuation and funding assumptions. Because of the terms of the Trust Deed, the Scheme Actuary also has to make an independent judgement about the adequacy of the funding of the SCPF's liabilities.

At its most recent triennial valuation, the Trustee incorporated the potential expected effects of climate change on liability measurement, based on the advice of its Actuary and to the extent these could be quantified. Some of these effects are incorporated in market derived measures such as interest rates and inflation rates. The most significant other measures are the longevity assumptions for the Fund's membership, affected by many factors (not just the effects of climate change), and the expected return assumptions for the various classes of assets the Fund, now and in the future.

Investment Adviser

Aon is the Fund's Investment Adviser. Aon provides advice to the Trustee and the Investment and Funding Committee in respect of the investment aspects of climate-related risks and opportunities. This includes providing advice in relation to the impact of climate-related proposals made by SAMCo on the Fund's investment strategy. Aon may be invited to provide input into and attend the ESG Forum as appropriate.

ESG Adviser

LCP were appointed as the Fund's ESG Adviser in 2022. This was a new role established by the Trustee to increase focus on ESG matters. LCP provides strategic and practical support to the Trustee, the Investment and Funding Committee and the ESG Forum in respect of the management of climate-related risks and opportunities and the reporting associated with ESG matters. This includes provision of training and updates on climate-related issues and climate change scenario modelling to enable the Trustee to assess the Fund's exposure to climate-related risks.

Stewardship services provider

The Trustee employs EOS at Federated Hermes (EOS) in carrying out stewardship activities in line with the Fund's Responsible Ownership Policy. Climate change action was one of the four priority themes for engagement by EOS during 2023.

The Trustee, supported by the TSU and SAMCo, actively monitors and reviews the stewardship activities of its stewardship services provider on a quarterly basis. From Q3 2023, the Trustee delegated monitoring of stewardship to the ESG Forum (previously this was undertaken by the IFC). The Trustee and SAMCo provide feedback directly to EOS including through participation at EOS's Client Advisory Council.

In Q1 2024, the ESG Forum met with EOS and discussed in particular their approach to engagement in portfolios without equity holdings.

Legal Adviser

Hogan Lovells is the Trustee's external Legal Adviser and provides advice as necessary on legal risks and regulatory developments including those relating to climate change. The Legal Adviser also meets with the Board once a year in addition to less formal engagements throughout the year as necessary.

Covenant Adviser

Interpath provides support to the TSU and Trustee in relation to the framework for the assessment of the Sponsor covenant. The materials for the reporting to the Trustee are largely compiled by the TSU.

Adviser reviews

The Trustee takes an active role in assessing and reviewing its advisers. Advisers are reviewed on an annual basis and the Trustee's assessment includes consideration of their competency in relation to climate-related advice. For Aon, SAMCo and LCP, the investment consultancy objectives set by the Trustee include "the provision of quality advice in relation to the financial risk from climate change" as an objective; assessment against this objective forms part of the annual review. Feedback on service levels and performance in general is provided periodically both formally and informally. Competency in relation to climate-related advice is also a consideration for the appointment of new advisers.

12. Metrics, Targets and Results

Introduction

Metrics can provide data to support the process of identifying and assessing climate-related risks and opportunities, which in turn can usefully inform the Trustee's investment considerations.

In 2023, SAMCo continued its work to increase and improve climate-related data available to the SAMCo investment management teams and the Trustee Board. SAMCo sources data from multiple parties so that the climate-related risks of the investment portfolio can be better understood and managed. Significant progress has been made, though data remains incomplete in some areas and in other areas is not sufficiently reliable and has to be estimated. Work to develop climate metrics reporting will continue in the future as the quality and availability of data continues to improve and expand.

A summary of the climate data collected by SAMCo as at 31 December 2023 was presented to the Board in June 2024. The metrics presented covered both backward-looking GHG emissions data for the assets owned by the Fund (such as total greenhouse emissions, carbon footprint (tCO2e per £1m invested) and carbon intensity (tCO2e per £1m revenue) and forward-looking metrics (such as information on Science Based Targets for GHG reduction, carbon risk rating, implied temperature scores and physical climate risk scores). The summary also included comparison of the 2023 results against the equivalent 2022 figures.

The Trustee's chosen metrics for the purposes of this Climate Change Report are set out later in this section, with further information included in the appendix.

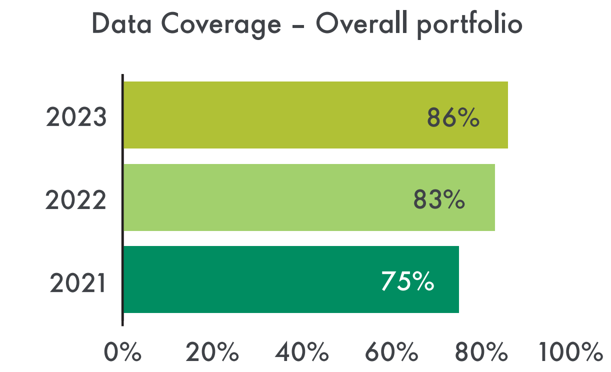
Scope 1, 2 and 3 emissions

For companies, GHG emissions are classified as Scope 1, Scope 2 or Scope 3 depending on their origin. As required by the regulations, the Trustee is separately reporting its Scope 3 emissions. However, obtaining Scope 3 data for investments is very challenging as many underlying entities do not disclose these emissions and the data that is reported may be incomplete or unreliable. Consequently, most Scope 3 data is currently estimated. Also, data vendors that supply Scope 3 data for investee companies use different in-house estimation methodologies. Because of this, there are large differences in Scope 3 data depending on the source used; at the total portfolio level, this may mean that Scope 3 GHG emissions from one source are up to double those from another source, despite both being from reputable vendors. Where available, SAMCo has opted for data sets which typically lead to estimated portfolio exposure at the higher end of the spectrum.

This is in line with their general principle of erring on overstating rather than understating emissions.

Scope 1	Scope 2	Scope 3
These are direct emissions from sources that are owned or controlled by the company.	These are indirect emissions from the generation of energy purchased by the company.	These are all other indirect emissions that come from value-chain-related activities of the company, but occur from sources not owned or controlled by the company.

Data coverage and quality


Data Coverage – Overall portfolio

Figures may not sum due to rounding

Sources: SCPF, SAMCo

We are pleased to report that data coverage in the Fund continues to improve.

At an individual asset class level, there has been a material improvement in the Investment Grade credit coverage from 49% to 81% due to both improvements in reporting by portfolio companies and estimated data becoming available. This occurred in a part of the portfolio where data coverage was subject to a dedicated engagement with GHG emissions data vendor, ISS-STOXX.

Private Equity coverage has improved from 89% to 100% due to a switch from a third-party to an in-house GHG emissions data set, though all GHG data remains estimated. On the other hand, there has been a slight fall in in the coverage for Other Property primarily due to data quality checks applied by SAMCo and GRESB, whilst noting that the percentage of reported GHG emissions (weighted average) has in fact increased year-on-year.

Changes in the asset allocation have also had a small positive impact on overall coverage as physical gilts (which have 100% data coverage) now make up a larger proportion of the physical asset holding.

Further detail on the data coverage and quality metrics and results is set out in the appendix.

Targets – Carbon footprint, Alignment, Engagement

Taking into account the current availability of data and tools to assess and achieve net zero alignment across relevant asset classes, the Trustee has set targets related to the activities of SAMCo in its capacity as investment manager for the SCPF's assets. These are set out in the table below.

Target[9]	Detail
1. Carbon footprint reduction	**Carbon footprint reduction (tCO2e per £1m invested, for Scope 1 and 2 emissions) from a 2020 baseline for all assets excluding liability matching UK Government bonds:** • 30% reduction by 2025 • 50% reduction by 2030 • 100% reduction by 2050 or earlier
2. Alignment	**Alignment[10] of assets (based on market value):** • At least 20% of issuers to be aligning by 2025 • At least 40% of issuers to be aligning by 2030 • 100% of issuers in high climate impact sectors[11] to be aligned by 2040
3. Engagement	**Financed emissions within high climate impact sectors which are within carbon budget[12], are aligning or subject to engagement:** • At least 70% by 2025 • At least 90% by 2030 • 100% by 2040

The Trustee's ultimate objective is to reduce its carbon footprint (tCO2e per £1m invested) to net zero by 2050 or earlier. Therefore, the primary target for reporting purposes will be the target in relation to carbon footprint (Target 1).

Targets 2 and 3 are intended to drive real-world alignment towards the Paris goals, which in turn is expected to help the Trustee in meeting Target 1.

In line with emerging market practice[13], the Trustee has excluded UK government bonds from the targets below. This is because they are held to protect the funding ratio from changes in interest and inflation rates, and climate change is not a relevant factor in this allocation decision (since no other asset class would meet this purpose).

The targets will be reviewed as and when considered appropriate by the Trustee and may be updated in light of progress and as data and methodologies improve.

[8] Net Zero Investment Framework: Implementation Guide (2021), p. 14.

[9] All physical holdings of relevant instruments are in scope, except for UK Government bonds held for liability matching purposes (i.e. UK gilts). Relevant instruments are those instruments for which sufficient data is available (as such the pool of 'relevant instruments' should grow as data availability improves across instrument types). Cash and derivatives are not considered relevant instruments, although work is underway to enable the inclusion of derivatives related to individual issuers.

[10] Defined initially for corporate assets as having an emissions reduction target validated by the Science-Based Targets initiative (SBTi). This will be extended to other asset classes and developed into a more comprehensive measure of alignment as data improves.

[11] High climate impact sectors are defined in accordance with the EU Sustainable Finance Disclosure Regulations (SFDR).

[12] Defined initially as within the International Energy Agency's (IEA's) Sustainable Development Scenario (SDS).

[13] UK Government bonds are excluded, as are hedge funds and other alternatives. Private equity is included for 2022 but not for 2021 (when insufficient data was available). The total carbon footprint figures shown represent an average of the carbon footprint figures for individual assets classes, weighted by the market value of assets for which data coverage was available.

Important note on the 2020 baseline for Target 1

The Fund's present climate reporting framework was developed in 2021 so the availability of consistent and fully comparable data sets for earlier years is limited. However, considerable improvement in the carbon footprint (tCO2e per £m invested) of the portfolio was achieved since 2020, with the observed improvement between 2021-2022 (during which a consistent reporting framework was available) being over 30%. Therefore, based on actions to limit the carbon exposure taken by the SCPF since 2020 (for example, the roll-out of custom ESG benchmarks), the Trustee understands there has been at least a 10% reduction in the carbon footprint for the total period 2020-2022.

This improvement is considerably less than the observed improvement of 30+% in the interim period between 2021-2022 because the Trustee wants to limit reliance on improvements triggered by de-risking. It should be noted that distinguishing between de-risking and other impacts in general is more art than science. Going forward, the Trustee's focus will be on achieving an additional 20% reduction between 2023-2025, and an additional 40% reduction between 2023-2030.

Target 1 – Carbon Footprint (tCO_2e per £1m invested)

Overall portfolio for assets in scope[13]	Scope 1 and 2 emissions tCO2e per £m invested[14]	Percentage of Fund assets in scope
2021	96	37%
2022	59	34%
2023	**40**	**26%**
2025 target	47	n/a

[14] For property, scope 1, 2 and 3 emissions have been used in this metric. See the Appendix for further details.

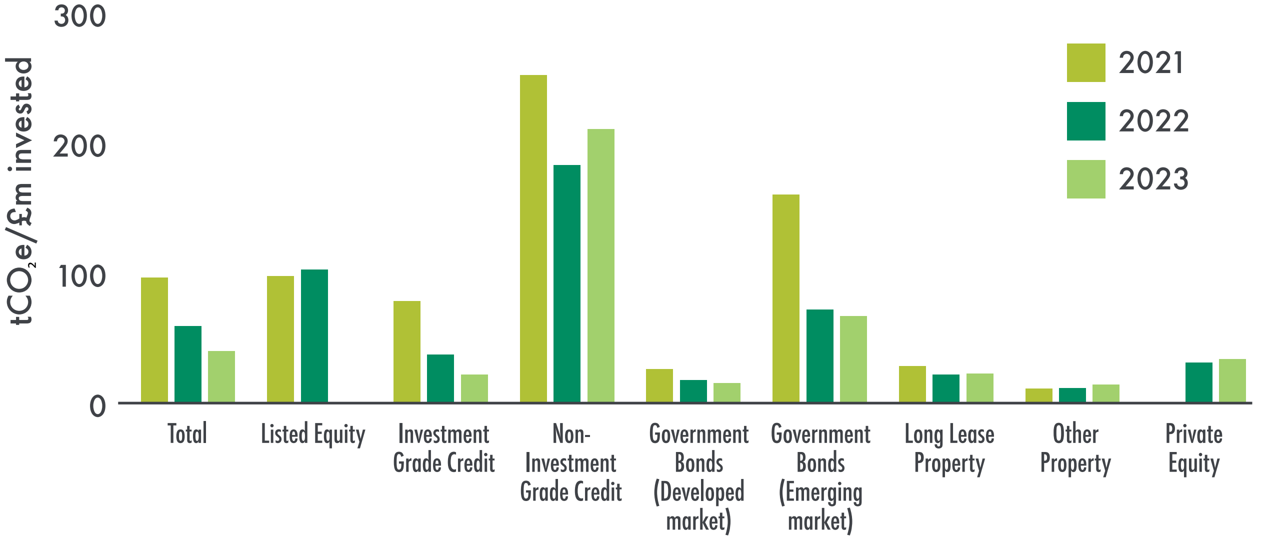
At an overall portfolio level, the carbon footprint (tCO2e per £1m invested) decreased by 29% over the year and is now below the Trustee's 2025 target. The percentage of total Fund assets covered by the carbon footprint metric has reduced to 26% since UK government bonds (which are excluded from the metric) have increased as a proportion of physical assets.

The majority of the fall in carbon footprint was due to the sale of the Fund's physical Listed Equity holding. As described earlier, this was not a strategic change but an implementation decision to improve investment efficiency. However, a corollary of this decision is that the Fund's carbon footprint has reduced (as has its total GHG emissions). This is because Listed Equity has a high carbon footprint relative to most other asset classes. Further drivers influencing the portfolio carbon footprint are described below.

It is important to note, however, that the Trustee expects to re-invest in Listed Equity as its holdings in illiquid assets (including Other Property and Private Equity) are sold down. This will have the effect of increasing the Fund's carbon footprint in future, all else being equal.

As discussed in Section 9, the Trustee does not aim to reach its net zero targets through divestment; instead, the Trustee focuses on using stewardship of investments to improve the net zero alignment of the entities in which it invests. Progress in this regard is best considered at an asset class level. The chart below sets out the carbon footprint by asset class, as well as the weighting of each asset class in deriving the overall carbon footprint metric.

Carbon footprint scopes 1 & 2, by asset class



Weighting of each asset class in deriving the overall carbon footprint metric

🟩 2021	46%	13%	10%	n/a	8%	9%	14%	n/a
🟩 2022	23%	4%	10%	n/a	4%	12%	20%	26%
🟩 2023	n/a	10%	7%	n/a	6%	16%	25%	35%

Figures may not sum due to rounding

Sources: SAMCo, ISS-STOXX, MSCI, Factset, LGT, GRESB

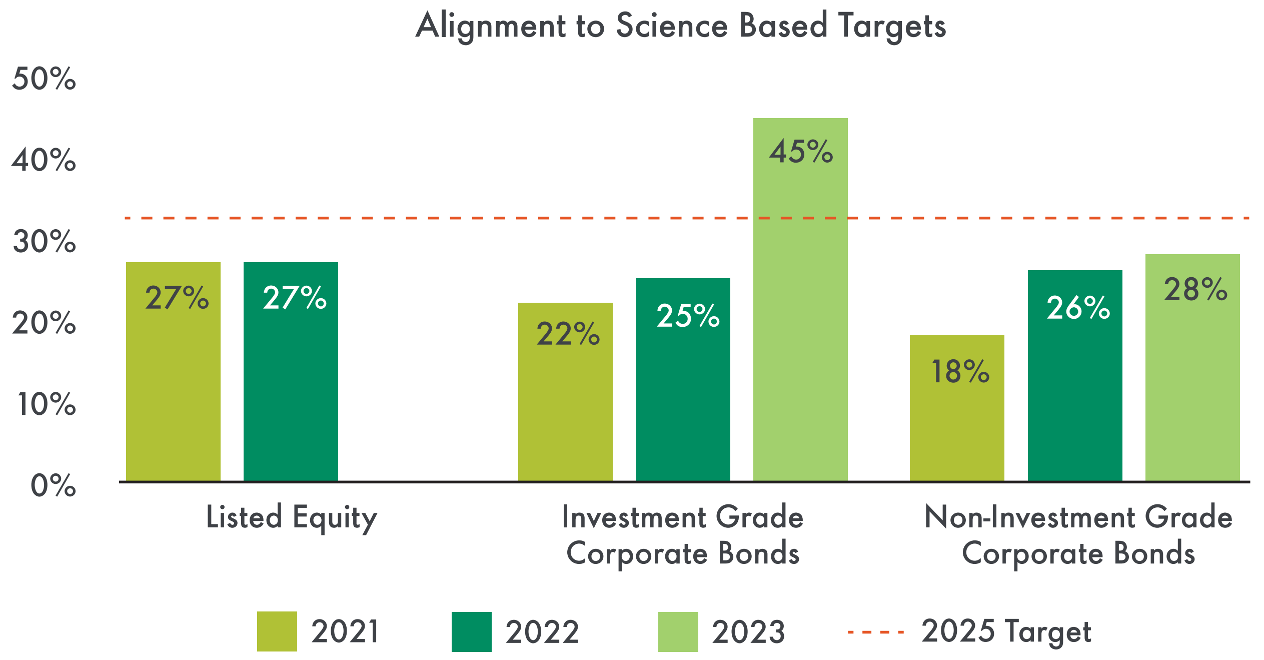
There has been a reduction in the carbon footprint for IG Credit, primarily due to improved data availability and the type of issuers to which the data pertains being lower carbon footprint companies. However, it should be noted that a matching IG Credit portfolio that largely contains issuers from low carbon footprint industries is expected to be sold when valuations improve. The remainder of the corporate bond universe that is part of TCFD reporting will then consist of more diversified, return-seeking bonds, which may lead the IG Credit carbon footprint to increase in future.

The carbon footprint for Non-IG Credit has increased over the year, primarily due to allocation changes following the reduction in the Non-IG Credit holdings towards the end of the year.

The year-on-year movement in carbon footprint of other asset classes has been relatively minor.

It should be noted that disclosed emissions may increase as more data becomes available and is not necessarily caused by a real-world increase in emissions. The main drivers of changes in the portfolio's carbon footprint and their influence on the targets set by SCPF are being reviewed and monitored by SAMCo.

Target 2 – Alignment



Data coverage for alignment target

🟩 2021	98%	76%	86%
🟩 2022	99%	57%	84%
🟩 2023	n/a	81%	83%

Figures may not sum due to rounding

Sources: SAMCo, ISS

For the Fund’s corporate (listed) assets, the current exposure to issuers with SBTi-validated reduction targets is 45% for investment-grade corporate bonds (22% in 2022) and 28% for non-investment-grade corporate bonds (18% in 2022). These material improvements in alignment are in part due to reporting improvements and new SBT commitments in the liability-matching portfolio, with several significant issuers newly committing to SBTi targets, and partly due to new IG holdings within the return-seeking portfolio in issuers with SBTi targets. However, it should be noted that a portfolio with a high proportion of issuers with SBTi-approved GHG reduction targets is expected to be sold in the near future due to newly introduced investment constraints, which could have a downside effect on the overall portfolio exposure.

For the Fund’s non-corporate (non-listed) assets, alignment information is not yet available. Work is ongoing by SAMCo to extend the definition of alignment to, and obtain alignment information for, these other asset classes.

At the current time, alignment is above the Trustee’s target. However, the Trustee has set its target cautiously because it expects the standard required for companies to be considered aligned will increase over time and hence the target will become more difficult to meet. It is conscious that the SBTi will require companies to review and, if necessary, revalidate their targets every five years (starting in 2025) and its requirements have become stricter through time. Moreover, companies can reset ambition levels, particularly as the targets previously set may be found to be unattainable. Hence, work is required to continue improvements in the alignment of investee companies.

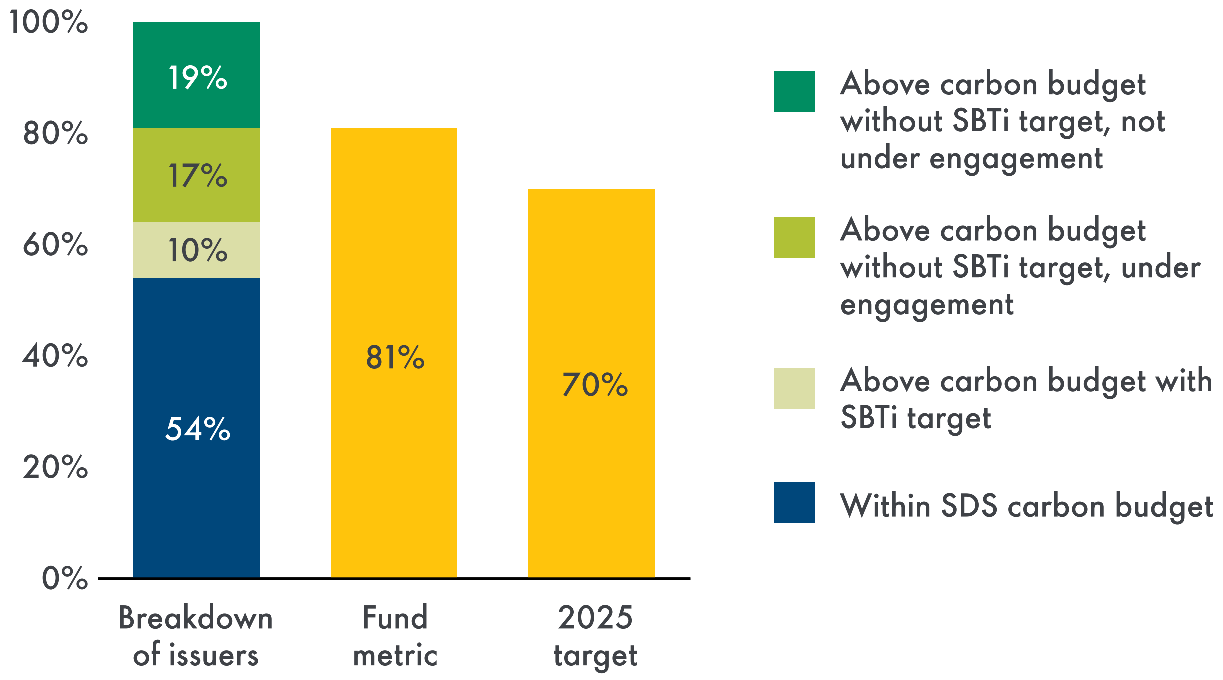
At the same time, the alignment targets may be strengthened if the Trustee feels faster progress is feasible based on observed real-world progress.

Data relating to alignment is a fast-evolving area and the Trustee will continue to monitor developments with a view to updating its alignment metric definition if and when appropriate. This includes looking for supporting and/or additional metrics to assess the quality of issuers' emissions reduction plans and their implementation, rather than basing the alignment assessment on issuers' emissions reduction targets alone. Further commentary on data coverage is set out in the appendix.

Target 3 – Engagement

To meet the engagement criteria, an entity from a high climate impact sector must either be within the IEA's SDS carbon budget, have set an emissions reduction target validated by the Science-Based Targets initiative (SBTi), or be subject to engagement by the Trustee.

Engagement in high climate impact sectors



Figures may not sum due to rounding

Approximately 81% of the financed GHG emissions in the Fund's listed equity and corporate bond portfolio associated with high climate impact sectors meet the criteria.

At the current date, the Fund is meeting the 2025 target of 70%. However, as carbon budgets decrease and requirements for SBTi targets become stricter over time, work will be required to continue meeting targets going forward. Furthermore, as data methodologies improve and as coverage for other asset classes becomes available, this may make the target more challenging as well. SAMCo are continuing to pursue improvements in data in this area.

Appendix

Metric	Description and overview of methodology
Total GHG emissions	This measures the portfolio's absolute emissions attributable to investments made by the Fund. This is shown in tonnes (t) of carbon dioxide (CO2) equivalent (e). The rationale for adopting the methodologies below is that they are in line with the DWP's statutory guidance, or in the case of emissions related to government bonds, a methodology more comparable to other asset classes. For equities and corporate bonds this is the Fund's share of the emissions of underlying entities, with the emissions being split between the equity and debt investors in the company on a proportional basis relative to the overall enterprise value including cash. For government bonds this is a government's total (production-based) emissions consisting of the operational emissions of the government and emissions attributable to investments made by that government. The emissions are calculated on the basis of the market value of the government bond position divided by the total government debt outstanding and multiplied by the government emissions. For property this is the Scope 1, Scope 2 and Scope 3 emissions for the underlying property assets, as reported by the asset manager, on a proportional basis relative to the Fund's share of the ownership in the property. Scope 3 emissions in the GRESB Assessment are calculated as the emissions associated with tenant areas, unless they are already reported as Scope 1 or Scope 2 emissions (if they cannot be disassociated from emissions from other areas owned or controlled by the organisation). Whether the emissions associated with tenant areas are classified as Scope 3 or under Scope 1 or 2 may also depend on the organizational boundaries chosen by the real estate manager and the type of lease that is in place in relation to a specific asset. Scope 3 emissions reported through GRESB do not include emissions generated through the entity's (real estate manager's) operations or by its employees, transmission losses or upstream supply chain emissions. In view of the above, for its reporting purposes the Fund considers combined Scope 1, 2 and 3 GHG emissions. For private equity, this is Scope 1 and 2 emissions only. For private companies without directly reported data, the GHG emissions are estimated using the relevant sub-industry's average carbon intensity, then using company revenues and valuation to compute carbon footprint and total GHG emissions. As for listed equities and corporate bonds, the emissions are then attributed to the Fund based on the size of the holding relative to the enterprise value including cash of the company.
Carbon footprint	This is the greenhouse emissions of the assets of the Fund per £1 million invested. It is the aggregation of the total greenhouse emissions divided by the value of the relevant part of the portfolio (in £ millions).
Alignment	This is defined initially for corporate assets as having an emissions reduction target validated by the Science-Based Targets initiative (SBTi). This will be extended to other asset classes and developed into a more comprehensive measure of alignment as data improves.

Metric	Description and overview of methodology
Engagement	This metric relates to corporate assets in high climate impact sectors, as defined in accordance with the EU Sustainable Finance Disclosure Regulations (SFDR). The targets set by the Trustee relate to the percentage of financed GHG emissions associated with entities from high climate impact sectors where the entity is within the IEA's SDS carbon budget, has set an emissions reduction target validated by the Science-Based Targets initiative (SBTi), or if not, is subject to engagement by the Trustee through its stewardship services provider.
Data coverage and quality	This measure presents the proportions of the various portfolios for which the Trustee has good quality GHG emission data. The table below provides a description of the quality and coverages for the various asset classes.

Note: There is overlap on emissions data between different companies and between companies and governments on some measures. As a result, aggregate total GHG emissions reported across all investments may include some double counting in relation to the actual level of GHG emissions, especially now Scope 3 is included. For example, fossil fuels sold by a producer to a utility to generate electricity would be Scope 3 for the producer, Scope 2 for the electricity consumer and Scope 1 for the utility. In addition, if the basis for attributing emissions to government bonds was total country emissions, they would also be included in the government bond emissions for the relevant country.

Data coverage and quality metric

Asset class	Description
Equity and corporate bonds	Reported emissions are those disclosed by the company itself and sourced through a third-party data vendor. Estimated emissions are provided by a third-party data vendor where reported emissions are not available or are deemed insufficiently reliable. These may be based on industry averages or other information sources. No coverage is when there is no reported or estimated data for the asset.
Government bonds	Carbon emissions allocated to government bonds are those (production-based) emissions that are financed by the relevant government, rather than total country emissions. The primary model calculates emissions based on a government's direct operations as well as from government financing in other sectors of society. Where data for the primary model is lacking, the secondary model calculates government emissions based on World Bank data on general government final consumption expenditure as part of a country's GDP.
Property	Coverage refers to the proportion of underlying funds reporting GHG emissions to the Fund. Additionally, for the underlying asset managers who report GHG emissions, the weighted average of the percentage of floor area (space) covered throughout the investment period is reported to indicate the completeness of the reporting. This additional detail is provided because not all tenants report GHG emissions to the underlying asset manager (as the landlord). The emissions will cover landlord-controlled areas of buildings and tenant-controlled areas only for those tenants who report.
Private equity	Coverage refers to the proportion of underlying funds for which GHG emissions data has been either reported by the manager or where it could be estimated by a third-party data provider. The split between reported and estimated data is not presently available but we will work with our data provider to facilitate its availability in the platform in the future. From the information currently available, we understand that the majority of the data is estimated.

Greenhouse Gas Emissions and Carbon Footprint

2023	Asset Allocation		Total GHG emissions tCO_2e		Carbon Footprint tCO_2e per £1m invested	
	Strategic	Actual	Scope 1 and 2	Scope 1,2 and 3	Scope 1 and 2	Scope 1,2 and 3
Listed Equity	9%	0%	0	0	0	0
Investment Grade Credit	10%	3%	8,000	101,000	22	297
Other Investment Grade Credit		7%	n/a	n/a	n/a	n/a
Non-investment Grade Credit	3%	2%	47,000	427,000	211	1,900
Government Bonds (developed market)	88%	88%	n/a	194,000	n/a	18
Government Bonds (emerging market)	4%	2%	n/a	13,000	n/a	67
Long lease property	3%	4%	n/a	12,000	n/a	23
Other property	0%	9%	n/a	12,000	n/a	14
Private Equity	0%	9%	39,000	n/a	34	n/a
Hedge funds	5%	5%	n/a	n/a	n/a	n/a
Other alternatives	0%	2%	n/a	n/a	n/a	n/a
Cash (incl. repos)	-22%	-33%	n/a	n/a	n/a	n/a
Total[15]	**100%**	**100%**				

Sources: SAMCo, ISS-STOXX, MSCI, Factset, LGT, Burgiss, GRESB

[15] Figures may not sum due to rounding

2022	Asset Allocation		Total GHG emissions tCO_2e		Carbon Footprint tCO_2e per £1m invested	
	Strategic	Actual	Scope 1 and 2	Scope 1,2 and 3	Scope 1 and 2	Scope 1,2 and 3
Listed Equity	8%	8%	103,000	991,000	103	983
Investment Grade Corporate Bonds	13%	3%	7,000	59,000	37	326
Other Investment Grade Credit		9%	n/a	n/a	n/a	n/a
Non-investment grade corporate bonds	3%	4%	76,000	1,132,000	183	2,712
Government bonds (developed market)	81%	80%	n/a	179,000	n/a	17
Government bonds (emerging market)	2%	2%	n/a	13,000	n/a	72
Long lease property	4%	4%	n/a	12,000	n/a	22
Other property	3%	10%	n/a	11,000	n/a	11
Private Equity	3%	9%	35,000	n/a	31	n/a
Hedge funds	5%	6%	n/a	n/a	n/a	n/a
Other alternatives	1%	2%	n/a	n/a	n/a	n/a
Cash (incl. repos)	-23%	-38%	n/a	n/a	n/a	n/a
Total[16]	**100%**	**100%**				

Sources: SAMCo, ISS-STOXX, MSCI, Factset, LGT, Burgiss, GRESB

[16] Figures may not sum due to rounding

Notes

- The total GHG emissions shown in the tables above (and, as a result, the carbon footprint shown) only relate to the assets held in the relevant portfolio where the emissions were reported or can be estimated, the proportion of which is shown in the data coverage tables below.

- The calculation of GHG emissions differs between asset classes, so the results cannot be compared across asset classes. In particular, the methodology for equities and corporate bonds differs from that for government bonds, which differs again for property.

- The actual asset allocations shown on page 12 reflect the value of the holding within each asset class mandate. However, for GHG emissions purposes, on pages 46 and 47 we have shown the actual allocation of the underlying assets across all mandates. This can lead to some differences; for example, an allocation to investment grade credit is currently held within the liability matching mandate.

- Non-investment grade corporate bonds are a combination of high-yield debt and quasi-sovereign emerging market bonds. The emission related to quasi-sovereign emerging market bonds instruments are much higher than other corporate high yield debt, which partly explains the high carbon footprint of this asset class. This is because state ownership is often present in strategically important sectors such as energy and mining, which tend to have relatively high emissions.

- Sovereign GHG emissions cannot be classified into Scope 1, 2 and 3 GHG emissions in the same way as corporate emissions. As the estimation methodology includes GHG emissions associated with investments made by the government, the Trustee has chosen to represent the emissions under ‘Scope 1, 2 and 3’, whilst also counting them toward its carbon footprint target (Scope 1 and 2) for the relevant part of its portfolio.

- The emissions data for long-lease property and other property is the aggregate of Scope 1, 2 and 3. This is because the underlying asset managers report the emissions data in different ways depending on organisational boundaries and the type of leasing arrangement. Therefore, the combined Scope 1, 2 and 3 emissions provide a more accurate view than only showing Scope 1 and 2 emissions. It should also be noted that emissions data related to property will be very different for a core property portfolio which is being rented out compared to other portfolios where there is ongoing development or improvements to the property.

- The Fund’s strategic asset allocation only specifies a net allocation to liability driven investments. The split shown in these tables between UK Government bonds and cash (repos) is a function of the target hedge ratio and the funding level at that date.

Data Coverage

As well as seeing the data coverage metric for the overall portfolio increase, improvements in coverage have generally been made at the individual asset classes too, as set out in the following table.

Asset Class	Physical Allocation 2021	Physical Allocation 2022	Physical Allocation 2023	Data coverage 2021	Data coverage 2022	Data coverage 2023
Listed Equity	17%	6%	0%	98%	99%	n/a
Investment Grade Credit	6%	2%	3%	71%	49%	81%
Other Investment Grade Credit	7%	6%	6%	n/a	n/a	n/a
Non-investment Grade Credit	4%	3%	2%	84%	81%	79%
Government Bonds (Developed Market)	38%	58%	66%	100%	100%	100%
Government Bonds (Emerging Market)	4%	1%	2%	96%	97%	97%
Long Lease Property	4%	3%	3%	88%	100%	100%
Other Property	7%	7%	7%	74%	77%	73%
Private Equity	7%	7%	7%	n/a	89%	100%
Hedge Funds	5%	5%	4%	n/a	n/a	n/a
Other Alternatives	2%	2%	2%	n/a	n/a	n/a
Total[17]	**n/a**	**100%**	**100%**	**n/a**	**n/a**	**n/a**

For this year's Climate Change Report, emissions data remains unavailable for Other Investment Grade Credit (which includes collateralised loan obligations, mortgage-backed securities, commercial real estate loans and a sub-set of credit default swaps), Hedge Funds and Other Alternatives. Such assets will be included in the reported figures as soon as data and methodologies become sufficiently available. However, some asset classes such as hedge funds will remain difficult to assess in future due to their nature.

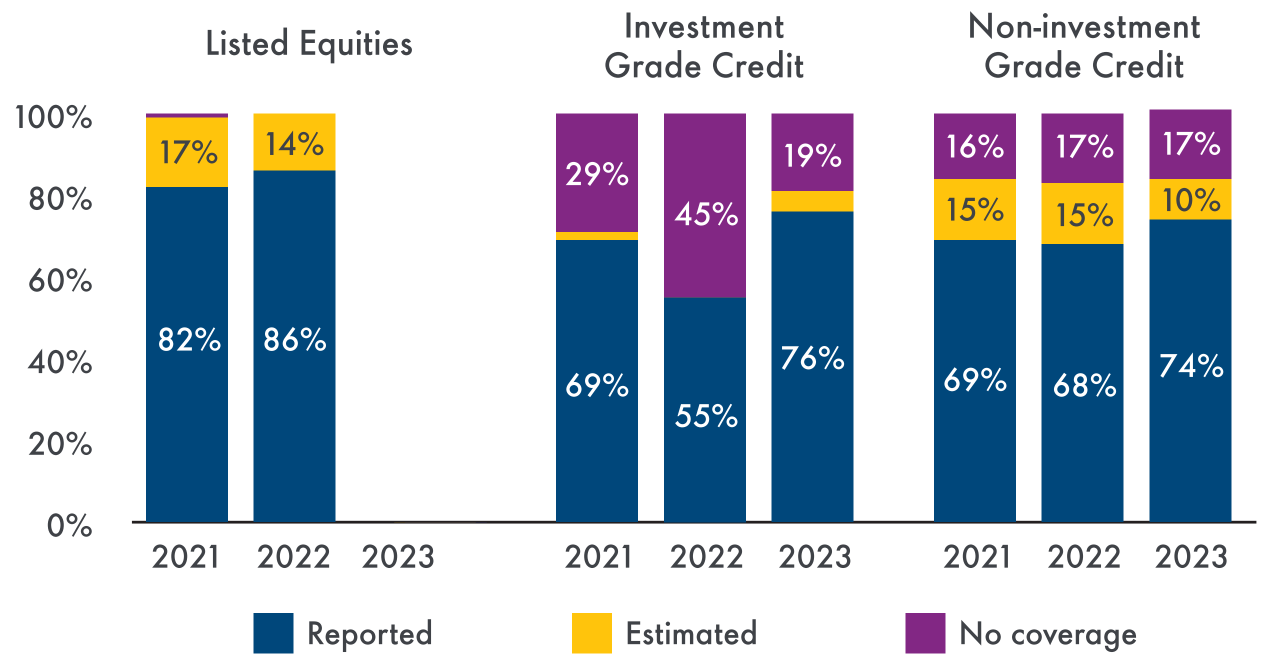
[17] The total figure is a weighted average of physical asset holdings, excluding cash and repos, by data coverage.

Explicit steps taken in 2023 to improve data coverage included:

- Targeted engagement with ESG data vendors to improve data availability for large portfolio holdings;
- Engagement with GRESB to introduce estimated GHG emissions into the data set, an improvement which is expected to be reflected in subsequent reporting iterations;
- The negotiation of contractual agreements with new external managers related to data collection and reporting, including the newly appointed private equity manager LGT;
- Engagement and monitoring of external alternative managers to stimulate improved data collection and reporting, particularly in low-coverage asset classes such as hedge funds and other alternatives.

Data Quality

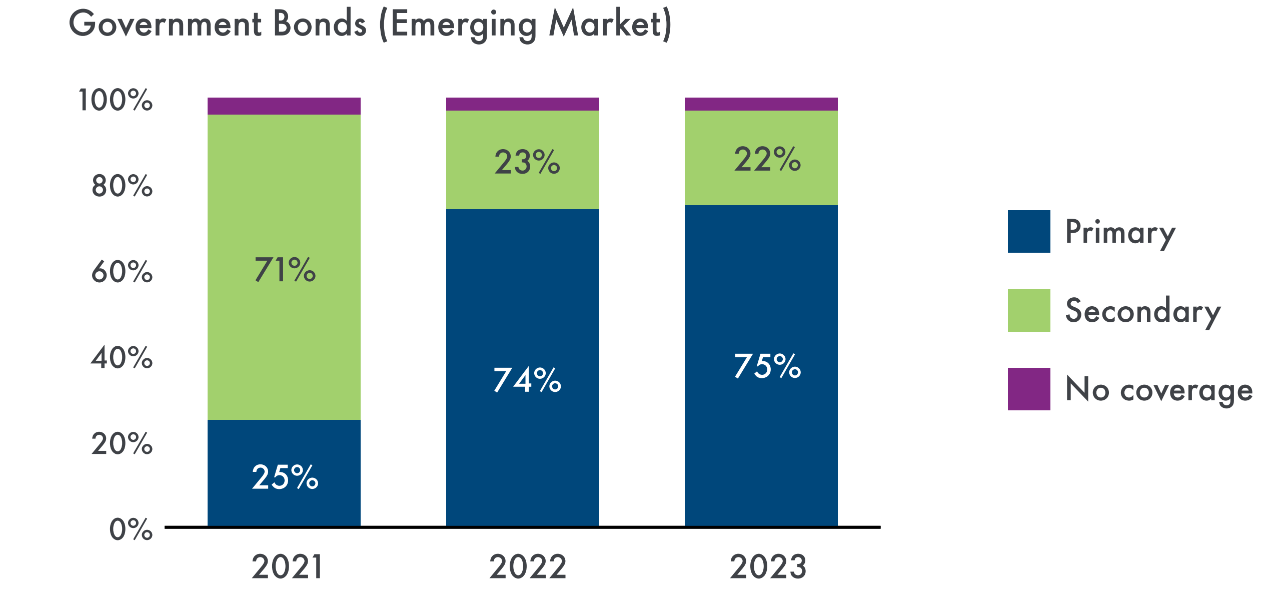
In addition to improvements in coverage, the quality of the data obtained by the Fund has also improved over the year.



Figures may not sum due to rounding

SAMCo, ISS-STOXX

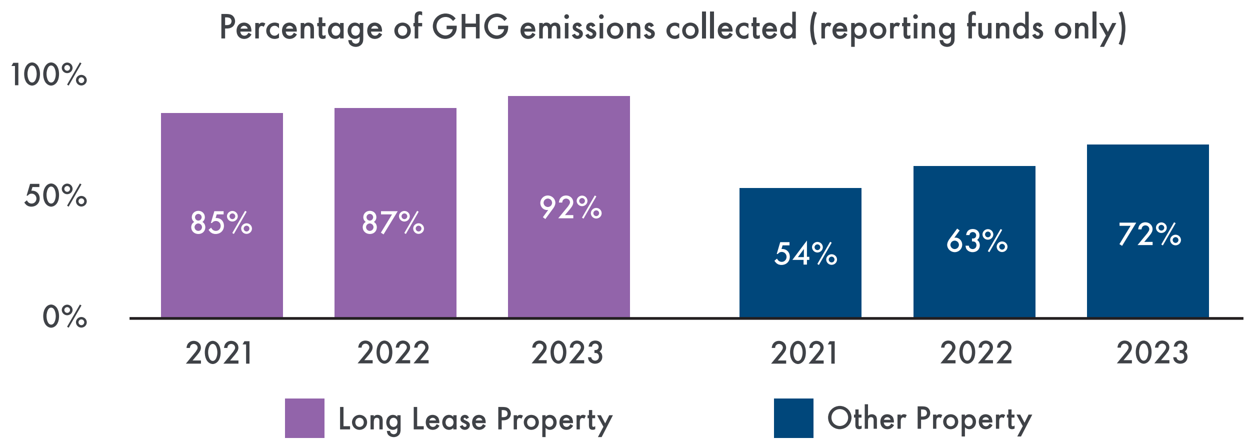
As last year, 100% of data for Government Bonds (Developed Market) uses the primary model for emissions reporting. For Government Bonds (Emerging Market), primary model coverage is broadly unchanged from 2022.



Figures may not sum due to rounding

Sources: SAMCo, ISS-STOXX

For both Long Lease Property and Other Property, the metric considers coverage through two dimensions: the percentage of the floor area covered through the reporting (space); and the holding time for the relevant asset during the reporting period (time). This is referred to as "coverage across space and time". Where managers reported data, the "coverage across space and time" had increased for both asset classes compared to 2022.



Figures may not sum due to rounding

Sources: SAMCo, GRESB

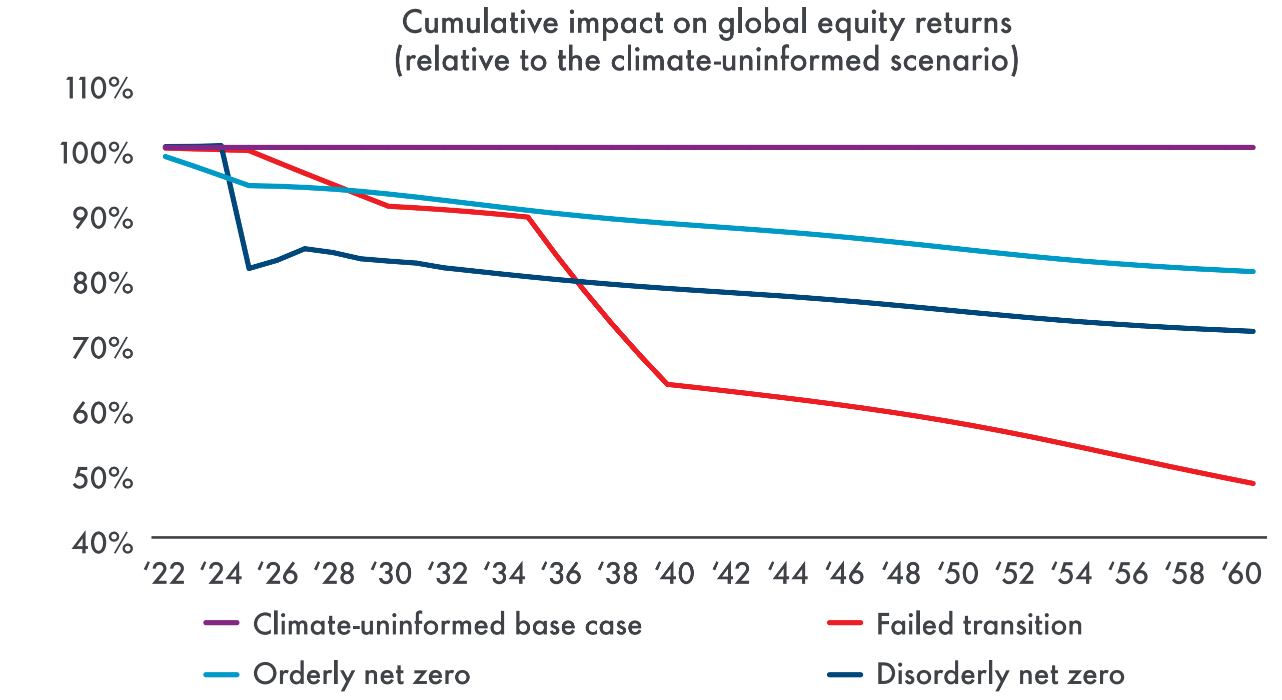
Scenario modelling

The most recent scenario modelling was undertaken as at 31 December 2022. The key features of the modelling are set out in the table below.

Scenarios:	Failed transition	Orderly net zero by 2050	Disorderly net zero by 2050
Low carbon policies	Continuation of current low carbon policies and technology trends	Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel	
Paris Agreement outcome	Paris Agreement goals not met	Paris Agreement goals met	
Global warming	Average global warming is about 2°C by 2050 and over 4°C by 2100, compared to pre-industrial levels	Average global warming stabilises at around 1.5°C above pre-industrial levels	
Physical impacts	Severe physical impacts	Moderate physical impacts	
Impact on GDP	Global GDP is significantly lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be 50% lower than in the climate uninformed scenario (albeit that UK GDP is still projected to double by 2100 in this case).	Global GDP is lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be about 5% lower than in the climate-uninformed scenario.	In the long term, global GDP is slightly worse than in the Paris Orderly scenario due to the impacts of financial markets volatility.
Financial market impacts	Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks	Transition and physical risks priced in smoothly over the period of 2022-2025	Abrupt repricing of assets causes financial market volatility in 2025

These scenarios show that equity markets could be significantly impacted by climate change, as shown in the chart below, with lesser but still noticeable impacts in bond markets. All three scenarios envisage, on average, lower investment returns and a worsening of the funding position.

As stated in the main body of the report, there are significant limitations with scenario modelling and the output should be considered in that light.



Figures may not sum due to rounding

Modelling methodology and limitations

- The scenario analysis is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics, and was then applied to the SCPF's assets and liabilities by LCP. The three climate scenarios were projected year by year, over the next 30 years.

- ClimateMAPS uses a top-down approach that consistently models climate impacts on both assets and liabilities, enabling the resilience of the funding strategy to be considered. The model output is supported by in-depth narratives that bring the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities.

- ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is one of the most comprehensive models of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.

- Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate impacts that may be possible, under each scenario's climate pathway. LCP takes the median (i.e. the middle outcome) of this range of impacts for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions.

- LCP then uses these adjusted median impacts to project the assets and liabilities of the SCPF to illustrate how the different scenarios could affect its funding level. The modelling summarised in this report used scenarios based on the latest scientific and macro-economic data at 30 June 2022, calibrated to market conditions at 31 December 2022.

- The modelling included contributions assumed to be paid in line with the current Schedule of Contributions, and the Trustee discussed how future planned changes to the investment strategies would impact the analysis. No allowance was made for changes to the investment strategy or contributions in response to the climate impacts modelled.

- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, i.e. assuming that the SCPF's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the SCPF's investment portfolio. As such, it does not require extensive scheme-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the SCPF's assets.

- In practice, the SCPF's investment portfolio may not experience climate impacts in line with the market average. The Trustee considers, on an ongoing basis, how the SCPF's climate risk exposure differs from the market average using climate metrics (which are compared with an appropriate market benchmark) and its annual responsible investment review which considers the investment managers' climate approaches.

- The Trustee notes that the three climate scenarios chosen are intended to be plausible narratives of how the future could unfold. It therefore illustrates how the centre of the "funnel of doubt" surrounding funding projections might be affected by climate change. It does not consider tail risks within that funnel, nor does it consider how the funnel might be widened by the additional uncertainties arising from climate change. In addition, only three scenarios out of infinitely many have been considered. Other scenarios could give better or worse outcomes for the SCPF.

- Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts include how climate change might affect interest rates and inflation, and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the Failed Transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts. In addition, the model presumes that the UK government will remain solvent, thereby making no allowance for credit risk on government bonds. However, in a scenario where global warming exceeds 4°C, this assumption may no longer be valid.

Glossary

Term	Definition
Board	Board of Directors of the Trustee
Carbon footprint	tons of Carbon Dioxide-equivalent emissions per £1m invested
Chair	Chair of the Board of Directors of the Trustee
Covenant	The Sponsor's legal obligation and financial ability to provide additional contributions to the Fund, should these be necessary
DWP	The Department for Work and Pensions
EOS	EOS at Federated Hermes Limited
ESG	Environment, Social and Governance
Factset	FactSet Research Systems Inc.
Fund	Shell Contributory Pension Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
Gilt	UK Government Bond
Greenhouse Gas	Gases that trap heat in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide and fluorinated gases
GRESB	Global Real Estate Sustainability Benchmark
IEA	International Energy Agency
ISS-STOXX	Institutional Shareholder Services Inc. – STOXX Ltd.
Low Reliance	This is a position in which the Trustee is assumed to hold a low-risk investment strategy and has a low level of reliance on the Sponsor covenant. This was the strategic target for the initial Journey Plan.
MSCI	Morgan Stanley Capital International Inc.
Net zero	A state in which the greenhouse gases going into the atmosphere are balanced by the removal of greenhouse gases from the atmosphere
Paris Agreement	The international treaty on climate change, adopted in 2015
Repo	A transaction in which a UK Government bond is sold with an agreement to repurchase it at a later date. The proceeds from the sale are then used to buy additional or replacement UK Government bonds.

Glossary

Term	Definition
SAMCo	Shell Asset Management Company B.V.
Scope 1 emissions	These are direct emissions from sources that are owned or controlled by the company.
Scope 2 emissions	These are indirect emissions from the generation of energy purchased by the company.
Scope 3 emissions	These are all other indirect emissions that come from value-chain-related activities of the company but occur from sources not owned or controlled by the company.
SCPF	Shell Contributory Pension Fund
SDS	The IEA's Sustainable Development Scenario that aligns with the Paris Agreement
Self-sufficiency	This is a position in which the Trustee is assumed to hold a very low-risk investment strategy and would not expect to require additional support from the Sponsor in all but the most extreme circumstances. This is the strategic target for the revised Journey Plan.
Sponsor	The principal holding companies in the Shell plc group and the employing companies of the members of the SCPF
Stewardship	The use of engagement and voting to influence the actions of companies in which the Fund invests.
TCFD	Taskforce on Climate-related Financial Disclosures
tCO2e	Tons of Carbon Dioxide-equivalent emissions
Trustee	Shell Pensions Trust Limited
TSU	Trustee Services Unit, the executive function supporting the Trustee
UN PRI	UN Principles for Responsible Investment

Explanatory wording for graphs and tables for screen readers

Page 20
The table shows the low reliance surplus projections based on different climate scenarios, all starting at around £1,500 million in 2022:

- Climate uninformed base case shows a steady increase to an estimated surplus of approximately £6,000 million by 2050
- Orderly net zero shows a similar curved increase, but to a lower estimated surplus of approximately £5,200 million by 2050
- Failed transition starts strongly but ultimately reaches the lowest estimated surplus of approximately £4,000 million at 2050
- Disorderly net zero goes down to £1,000 million in the first few years of the projection, before recovering to an estimated surplus of approximately £4,300 million at 2050.

Page 29
This chart shows how each group connects to each other, starting with the Trustee Board and ending with advisers:

- The Trustee Board connects to the ESG Forum, Investment and Funding Committee, the Risk and Operations Committee and the Trustee Services Unit.
- The ESG Forum also connect to the Shell Asset Management Company and the ESG Adviser.
- The Investment and Funding Committee also connects to the Risk and Operations Committee, the Shell Asset Management Company, the Stewardship Services Provider, the Investment Adviser and the Trustee Services Unit.
- The Risk and Operations Committee also connects to the Trustee Services Unit.
- The Shell Asset Management Company also connects to the Stewardship Services Provider.
- The Trustee Services Unit also connects to the Covenant Adviser.

Page 37
This table define scope 1, 2 and 3:

- **Scope 1:** These are direct emissions from sources that are owned or controlled by the company.
- **Scope 2:** These are the indirect emissions from the generation of energy purchased by the company.
- **Scope 3:** These are other indirect emissions that come from value-chain-related activities of the company, but occur from sources not owned or controlled by the company.

Page 37
This graph shows the data coverage for the overall portfolio:

- In 2021 coverage was 75%.
- In 2022 it had increased to 83%.
- In 2023 it stood at 86%.

Page 40
This graph shows carbon footprints 1 and 2, by asset class. The table grid shows the weighting of each asset class in deriving the overall carbon footprint metric as a percentage.

In 2021:

- Non-Investment Grade Credit had the highest carbon footprint, followed by Government Bonds (Emerging market), Listed Equity and Investment Grade Credit.
- Government Bonds (Developed market), Long Lease Property and Other Property had a much lower footprint, with Private Equity showing next to nothing.

In 2022:

- Though still generating the largest carbon footprint, Non-Investment Grade Credit was lower than the previous year, followed by Listed Equity and Government Bonds (Emerging market), although this last asset class cut its carbon footprint in half compared to 2021.
- Investment Grade Credit also dropped significantly, but there was a slightly higher footprint for Listed Equity and a higher showing for Private Equity.
- Long Lease Property and Other Property remained low, as did Government Bonds (Developed market).

In 2023:

- Non-Investment Grade Credit had a higher carbon footprint than in 2022.
- Government Bonds (Developed market), Government Bonds (Emerging market), Long Lease Property, Other Property, Private Equity and Listed Equity remain at similar levels to the previous year.
- Investment Grade Credit dropped again, making its footprint at around 30% of its 2021 level.

The table beneath the graph shows the proportion of each asset class contributing to the total carbon footprint calculation as a percentage:

In 2021:

- Listed Equity – 46%
- Investment Grade Credit – 13%
- Non-Investment Grade Credit – 10%
- Government Bonds (Developed market) – n/a
- Government Bonds (Emerging market) – 8%
- Long Lease Property – 9%
- Other Property – 14%
- Private Equity – Not available.

In 2022:

- Listed Equity – 23%.
- Investment Grade Credit – 4%.
- Non-Investment Grade Credit – 10%.
- Government Bonds (Developed market) – Not available.
- Government Bonds (Emerging market) – 4%.
- Long Lease Property – 12%.
- Other Property – 20%.
- Private Equity – 26%.

In 2023:

- Listed Equity – Not available.
- Investment Grade Credit – 10%.
- Non-Investment Grade Credit – 7%
- Government Bonds (Developed market) – Not available.
- Government Bonds (Emerging market) – 6%
- Long Lease Property – 6%
- Other Property – 25%
- Private Equity – 35%

Please be aware that figures may not sum due to rounding.

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This graph shows Listed Equity, Investment Grade Corporate Bonds and Non-Investment Grade Corporate Bonds for 2021, 2022 and 2023 compared to the science based 2025 target of 35%:

- Listed Equity is at 27% for 2021 and 2022. There is no Listed Equity for 2023.
- Investment Grade Corporate Bonds is at 22% for 2021, 25% for 2022 and 45% for 2023.
- Non-Investment Grade Corporate Bonds is 18% for 2021, 26% for 2022 and 28% for 2023.

The table below the graph shows the data coverage Shell has for each alignment target:

- Listed Equity is based on 98% data coverage for 2021 and 99% for 2022. It is not applicable for 2023.
- Investment Grade Corporate Bonds shows 76% data coverage for 2021, 57% for 2022 and 81% for 2023.
- Non-Investment Grade Corporate Bonds has 86% data coverage for 2021, 84% for 2022 and 83%% for 2023.

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The graph shown here gives a breakdown of engagement in high climate impact sectors. The breakdown of issuers shows:

- 54% are within the SDS carbon budget
- 10% are above the SBTi target
- 17% are above carbon budget without SBTi target but are under engagement
- 19% are above carbon budget without SBTi target and not under engagement.
- The fund metric currently sits at 81% meeting the criteria, with a 2025 target of 70%.

Please note that figures may not add to 100% due to rounding.

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This graph shows how the quality of data obtained by the Fund has improved.

Listed Equities:

2021 – Reported 82%, Estimated 17%, No coverage 1%.

2022 – Reported 86%, Estimated 14%, No coverage 0%.

2023 – Reported not available, Estimated not available, No coverage not available.

Investment Grade Credit:

2021 – Reported 69%, Estimated 2%, No coverage 29%:

2022 – Reported 55%, Estimated 0%, No coverage: 45%

2023 – Reported 76%, Estimated 5%, No coverage 19%

Non-Investment Grade Credit:

2021 – Reported 69%, Estimated 15%, No coverage 16%

2022 – Reported 68%, Estimated 15%, No coverage 17%

2023 – Reported 74%, Estimated 10%, No coverage 17%

Please note that these percentages may not add up to 100% due to rounding.

Page 51
The graph shows the primary and secondary models for emissions reporting in relation to Government Bonds (Emerging Market):

- **2021:** primary 25%, secondary 71%, no coverage 4%.
- **2022:** primary 74%, secondary 23%, no coverage 3%.
- **2023:** primary 75%, secondary 22%, no coverage 3%.

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The next graph shows the percentage of GHG emissions collected for reporting funds only, in relation to Long Lease Property and Other Property.

Long Lease Property:

- 2021: 85%.
- 2022: 87%.
- 2023: 92%.

Other Property:

- 2021: 54%.
- 2022: 63%.
- 2023: 72%.

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This table shows each scenario alongside the modelling for failed transition, orderly net zero by 2050 and disorderly net zero by 2050.

Scenario: Low carbon policies

- Failed transition: Continuation of current low carbon policies and technology trends.
- Orderly net zero by 2050 and disorderly net zero by 2050: Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel.

Scenario: Paris Agreement outcome

- Failed transition: Paris Agreement goals not met.
- Orderly net zero by 2050 and disorderly net zero by 2050: Paris Agreement goals met.

Scenario: Global warming

- Failed transition: Average global warming is about 2°C by 2050 and over 4°C by 2100, compared to pre-industrial levels
- Orderly net zero by 2050 and disorderly net zero by 2050: Average global warming stabilises at around 1.5°C above pre-industrial levels

Scenario: Physical impacts

- Failed transition: Severe physical impacts
- Orderly net zero by 2050 and disorderly net zero by 2050: Moderate physical impacts

Scenario: Impact on GDP

- Failed transition: Global GDP is significantly lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be 50% lower than in the climate uninformed scenario (albeit that UK GDP is still projected to double by 2100 in this case).
- Orderly net zero by 2050: Global GDP is lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be about 5% lower than in the climate-uninformed scenario.
- Disorderly net zero by 2050: In the long term, global GDP is slightly worse than in the Paris Orderly scenario due to the impacts of financial markets volatility

Scenario: Financial market impacts

- Failed transition: Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks
- Orderly net zero by 2050: Transition and physical risks priced in smoothly over the period of 2022-2025
- Disorderly net zero by 2050: Abrupt repricing of assets causes financial market volatility in 2025

Page 53
This graph shows the cumulative impact on global equity returns, relative to the climate-uninformed scenario.

- Climate-uninformed base case remains at 100% to 2060.
- Orderly net zero drops from 100% to approximately 85% in 2060.
- Disorderly net zero drops sharply from 100% to approximately 80%, improves slightly but then finishes back at 80% in 2060.
- Failed transition sees a downward trend from 2026 onwards, reaching approximately 50% by 2060.