



TCFD report for year ending 31 March 2022

Boots Pension Scheme

Produced by: Boots Pension Limited, as Trustee of the Boots Pension Scheme

Date: September 2022

Introduction

Climate change is affecting the planet, causing extreme weather events, impacting crop production, and threatening the Earth's ecosystems. Understanding the impact of climate change and the Scheme's vulnerability to climate-related risks will help us to mitigate the risks and take advantage of any opportunities.

The Taskforce on Climate-related Financial Disclosure ("TCFD") is an initiative that developed some best practice guidance for climate-risk reporting. New UK regulations require the trustees to meet climate governance requirements and publish an annual TCFD-aligned report on their pension scheme's climate-related risks.

Better climate reporting should lead to better-informed decision-making on climate-related risks. And on top of that, greater transparency around climate-related risks should lead to more accountability and provide decision-useful information to investors and beneficiaries.

This document is the first annual TCFD report for the Boots Pension Scheme (the "Scheme"). It has been prepared by Boots Pensions Limited (the "Trustee") for the year ending 31 March 2022.

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Executive summary

The Trustee believes that climate change poses a major risk to the global economy, affecting the prosperity of all nations and the security of ecosystems globally. Climate change will have major impacts on the availability of resources, the price of energy, the vulnerability of infrastructure and the valuation of companies.

The Trustee believes that the risks associated with climate change could have a material detrimental impact on the Scheme's investment returns within timeframes that the Trustee is concerned about and, as such, the Trustee integrates assessments of climate change risk into its investment decisions.

Climate-related factors may also create investment opportunities. Where possible, and appropriately aligned with the Trustee's strategic objectives and fiduciary duty, the Trustee will seek to capture such opportunities through its investment portfolio.

The Trustee acknowledges that there are both long and short term risk associated with climate change, and so considers differing time horizons over the short, medium and long term.

This statement has been prepared in accordance with the regulations set out under "The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021" (the "Regulations") and provides a status update on how the Scheme is currently aligning with each of the four elements set out in the Regulations (and in line with the recommendations of the TCFD). The four elements covered in the statement are detailed below:

- **Governance:** The Scheme's governance and oversight of climate-related risks and opportunities.
- **Strategy:** The actual and potential impacts of climate-related risks and opportunities on the Scheme's strategy and financial planning.
- **Risk Management:** The processes used 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.

Below is a summary of the Scheme's current position with regards to the TCFD disclosure recommendations and those set out in the Regulations.

Strategy

After undertaking both qualitative and quantitative analysis, the Trustee has identified:

- From the qualitative analysis, it became apparent that climate related risks and opportunities impact all the different asset classes in which the Scheme invests. Over time, there was a general expectation that the impact of both physical and transition risks increases. Alongside this, climate change provided numerous opportunities for the different asset classes.
- The Scheme has a high degree of resilience relative to climate related risks, which was a key outcome from the quantitative climate scenario analysis. This was demonstrated under all four climate scenarios. This was driven by the high level of diversification in the assets, low risk strategy and high levels of hedging against changes in interest rates and inflation expectations.

Risk Management

The Trustee has begun to integrate climate related risks into its various document and processes. The process started by outlining a climate risk plan, which is detailed later in this report.

Alongside this, the Trustee has updated its various documents, such as the risk register, to include climate related risks.

Metrics and Targets

The Trustee gathered the carbon metrics data from a range of different sources, including its investment managers, investment adviser and other data vendors.

As required, the Trustee has, as far as it is able, collated the data for the total greenhouse gas emissions and carbon footprint. Whilst all of the Scheme's investment managers and underlying asset portfolios were contacted for carbon metrics information, not all was able to be collated. There were also differences in the methodologies for calculating these, and also availability of information for scopes 1, 2 and 3.

It became apparent that there is much room for improvement in the carbon metrics data, to enable the Trustee to obtain a clear overview of the Scheme's total greenhouse gas emissions and carbon footprint. With that in mind, the Trustee has opted to report on data quality for its third metric, and has focused its target on improving the data quality over the next 5 years. Once carbon data is of a reasonable quality, the Trustee will consider setting any further targets.



Governance

Governance

Role of the Trustee

The Trustee Board is ultimately collectively responsible for oversight of all strategic matters related to the Scheme. This includes approval of the governance and management framework relating to environmental, social and governance (“ESG”) considerations and climate-related risks and opportunities. Given its importance, the Trustee has not identified one individual to specifically be responsible for the Trustee’s response to climate risks and opportunities. Rather, the Trustee Board has collective responsibility for setting the Scheme’s climate change risk framework.

The Trustee has discussed and agreed its climate-related beliefs and overarching approach to managing climate change risk. Details are set out in the Statement of Investment Principles (“SIP”), which is reviewed annually by the Board.

In summary, the Trustee believes that:

- the risks associated with climate change can have a materially detrimental impact on the Scheme’s investment returns within the timeframe that the Trustee is concerned about and, as such, the Trustee integrates assessments of climate change risk into its investment decisions.
- climate-related factors may create investment opportunities. Where possible, and appropriately aligned with the Trustee’s strategic objectives and fiduciary duty, the Trustee will seek to capture such opportunities through its investment portfolio.
- the most appropriate time horizons for the Scheme are as follows:
 - short term: 1-3 years
 - medium term: 4-10 years
 - long term: 11-20 years

Climate-related risks and opportunities are assessed over the above time horizons. Where appropriate, the Trustee considers transition and physical risks separately.

The Trustee Board receives training – at least on an annual basis but more frequently if required – on climate-related issues to ensure that it has the appropriate degree of knowledge and understanding on these issues to support good decision-making. The Trustee expects its advisers to bring important and relevant climate-related issues and developments to the Trustee’s attention in a timely manner and expects its advisers to have the appropriate level of knowledge on climate-related matters. This is captured by the annual training in relation to climate related issues being included on the Trustee’s business plan.

The Trustee Board has delegated oversight of the Scheme’s climate change risk management framework to the Investment Committee (“IC”) where they relate to investment matters and the Valuation Committee (“VC”) where they relate to actuarial matters. Both committees are sub-committees of the Trustee Board and both committees keep the Trustee Board apprised of material climate-related developments on a regular basis (at least annually).

Role of the Investment Committee

The Trustee Board has delegated the ongoing monitoring of the Scheme's climate change risk management framework to the IC where they relate to investment matters.

Implementation is detailed later in this report, but key activities undertaken by the IC, with the support of the Trustee's advisers, are:

- ensuring investment proposals explicitly consider the impact of climate risks and opportunities.
- proactively seeking investment opportunities which enhance the ESG and climate change focus of the Scheme's portfolio.
- engaging with the Scheme's investment managers to understand how climate risks are considered in their investment approach.
- working with the investment managers to disclose relevant climate-related metrics as set out in the TCFD recommendations.
- ensuring that stewardship activities are being undertaken appropriately on the Scheme's behalf.

The IC will monitor and review progress against the Scheme's climate change risk management approach on a biannual basis, once the initial framework was agreed by the CWG and approved Trustee Board.

The IC will keep the Trustee Board apprised of any material climate-related developments through regular (at least annual) updates.

Role of the Valuation Committee

The Trustee Board has delegated the ongoing monitoring of the Scheme's climate change risk management framework to the VC where they relate to actuarial matters.

Implementation is detailed later in this report but key activities undertaken by the VC, with the support of the Trustee's advisers, are:

- ensuring that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material.

The VC will monitor and review progress against the Scheme's climate change risk management, as part of the triennial valuation cycle, annual funding updates and monitoring of the covenant, once the initial framework was agreed by the Climate Working Group (CWG) and approved by the Trustee Board.

The VC will keep the Trustee Board apprised of any material climate-related developments through regular (at least annual) updates.

Role of the Climate Working Group

The Trustee Board set up a temporary CWG in Q1 2021, which is comprised of two Trustee Directors, to help the Trustee Board align the Scheme to the new climate governance requirements.

The CWG was given a mandate to recommend an appropriate climate risk framework, in line with the TCFD, to the Trustee Board. The CWG was aided in this by the Trustee's advisers.

The CWG met four times over the course of 2021 and was disbanded in Q4 2021, after which responsibility for monitoring of the Scheme's climate risk approach was taken up by the Investment Committee and Valuation Committee as described above.

Role of the Boots Pensions Team

The Boots Pensions Team may assist the Investment Committee and Valuation Committee, with the day-to-day aspects of the implementation of the TCFD framework, as and when required.

Role of external advisors

The Trustee expects its advisers and investment managers to bring important climate-related issues and developments to its attention in a timely manner and to have the appropriate knowledge on climate-related matters.

Investment consultant: the Trustee's investment consultant, Aon, provides investment-related strategic and practical support to the CWG, IC and Trustee in respect of the management of climate-related risks and opportunities. This includes provision of regular training and updates on climate-related issues, climate change scenario modelling and ESG ratings.

Scheme Actuary: the Scheme Actuary, Robert Mellor, will help the Trustee and VC assess the potential impact of climate change risk on the Scheme's funding assumptions where appropriate.

Covenant adviser - the Trustee's covenant adviser will help the Trustee understand the potential impact of climate-related risk on the sponsor covenant of the principal employer of the Scheme.



Strategy

Assessing climate-related risks and opportunities

Assessing the climate-related risks and opportunities the Scheme is exposed to is key to understanding the impact climate change could have on the Scheme in the future.

The Trustee has carried out a qualitative risk assessment on each asset class the Scheme is invested in. From this, the Trustee has identified which of the climate-related risks and opportunities could have a material impact on the Scheme.

The Scheme's DB investment portfolio is diversified across a range of different asset classes including equities, credit (including emerging market debt), property, ILS, LDI, and cash.

Given the number of strategies used in the Scheme, the Trustee has completed a best endeavours exercise to analyse the climate-related risks of each asset class. The Trustee has completed this analysis after asking its investment managers, which invest the Scheme's assets on behalf of the Trustee, as to how climate risks and opportunities are incorporated into the current mandates.



Risk categories

In the analysis, the climate-related risks have been categorised into physical and transitional risks.

Transitional risks are associated with the transition towards a low-carbon economy. For example, shifts in policy, technology or supply and demand in certain sectors.

Physical risks are associated with the physical impacts of climate change on companies' operations. For example, risks associated with extreme temperatures, floods, storms or wildfires.



Ratings

The analysis uses a RAG rating system where:

Red denotes a high level of financial exposure to a risk.

Amber denotes a medium level of financial exposure to a risk.

Green denotes a low level of financial exposure to a risk.



Time horizons

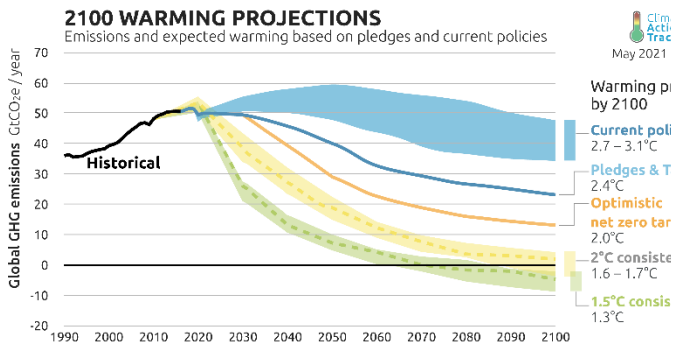
The Trustee assessed the climate-related risks and opportunities over multiple time horizons. The Trustee has decided the most appropriate time horizons for the Scheme are:

- short term: 1-3 years.
- medium term: 4-10 years
- long term: 11-20 years

When deciding the relevant time horizons, the Trustee has considered the liabilities of the Scheme and its obligations to pay benefits.

Climate Change background

The world's climate is already, on average, 1°C warmer than in preindustrial times (broadly the period up to 1850). The vast majority of climate scientists anticipate that with current action on climate change, by 2100, the world will be between 2°C and 3°C warmer (current commitments made as part of the Paris Agreement, if implemented, put the trajectory at 2.3 to 2.6°C), noting that averages mask the differences that will be felt regionally.



Humans have never lived in a world much warmer than today and experiencing such a material temperature change in less than a century will have substantial and damaging effects on society and nature.

As an example, for a 2°C scenario by 2100, the expected physical damages include:

- Increase in average sea level of 50 cm;
- Increase in annual maximum daily temperature of 2.6°C
- 25% increase in number of hot days
- 36% increase in frequency of rainfall extremes over land

There is scientific consensus that greenhouse gas (GHG) emissions from human activity are being trapped in the atmosphere and creating a “greenhouse effect,” which is causing the increase in global mean surface temperature and the consequent effects on underlying weather patterns. Fossil-fuel use is the principal source of GHG emissions, primarily carbon dioxide (CO₂). The second largest contributor to GHG emissions is methane, primarily related to agricultural activities, fossil fuel production and waste/landfills. Agriculture and the built environment are the principal drivers behind deforestation, which not only reduces CO₂ absorption capacity but also is a major source of

emissions as the carbon stored in vegetation and soils is released into the atmosphere.

Climate-related risk assessment

The notion that there are “climate risks” in financial portfolios is now a well-established one. So, what are climate risks? In short, the idea is that climate change impacts the financial performance of companies and therefore also the risk-return profile of the securities they issue. Climate risks are typically categorized along two dimensions – Transition risks and Physical risks.

Transition risks

Transition risks relate to the need to transition to a low-carbon economy, including development of, and investment in, new technologies and services that support this transition as well as government policy to aid in the transition. Specific market-based activities comprise the mitigation of carbon emissions, and/or adaptation to be resilient against climate change:

- **Mitigation:** technologies and services that increase energy efficiency, relate to increased renewable energy uptake and decreased demand for fossil fuels, and/or capture or sequester carbon dioxide.
- **Adaptation:** infrastructure resiliency efforts, business model shifts (e.g., changing geographic location of production and/or sales, introduction of new products and services and aligning business models with new environmental conditions).

Potential financial impacts from this transition include:

- **Revenue loss (demand contraction):** reduced demand for fossil fuels, related services, and energy consuming products.
- **Stranded assets:** devaluation/impairment or “asset stranding” of fossil fuel reserves.
- **Revenue growth:** growth in renewable energy, emergence of new industries, including carbon capture and sequestration, smart grid technologies, energy-efficient products, infrastructure adaptations, and green chemistry solutions.

- **Long-term cost reductions:** operational cost reduction from investments in updated infrastructure and technologies that facilitate the transition to a low-carbon, resilient economy.

Furthermore, the transition comes with policy and legal risks, including:

- **Carbon pricing risks:** mechanisms (e.g. carbon taxes) already implemented in over 25 countries.
- **Litigation risk:** driven by the failure of companies to mitigate impacts of climate change, failure to adapt to climate change, and the insufficiency of disclosure around material financial risks.

There are more details outlined in the appendix in relation to the types of transition risks and the financial impact these may have.

Physical risks

A changing climate can lead to changes in the frequency and severity of extreme or incremental hazards. The TCFD recommendations refer to these hazards as acute and chronic, respectively. Acute hazards represent severe and extreme events and are location specific (e.g., droughts, heatwaves, storms, wildfire, etc). Chronic climate change represents the background incremental changes in, for example: temperature, precipitation and sea-level rise over several decades.

Acute and chronic climate-related hazards

Acute	Chronic
▪ Extreme heat	▪ Water stress
▪ Extreme rainfall	▪ Sea level rises
▪ Floods	▪ Land degradation
▪ Droughts	▪ Variability in temperature
▪ Storms (e.g., hurricanes)	▪ Variability in precipitation

Scheme specific risks

The Scheme has a portfolio that is diversified across a range of asset classes. Our focus is on the following assets:

▪ Return seeking assets

- **Equities:** c.7.5% strategic allocation with Legal & General Investment Management ("LGIM"), c.3.5% allocation to impact managers Ownership Capital and Mirova;
- **Property:** 5% strategic allocation with Schroders; and,
- **Illiquids:** 9% strategic allocation via a number of different managers, excluding Ownership Capital and Mirova above.

▪ Matching assets

- **Global corporate bonds:** within the 75% strategic matching allocation, via Wellington, LGIM and GSAM.
- **Sterling corporate bonds and other bond assets:** (including government bonds and Liability Driven Investments ("LDI")) via LGIM.

The government bonds and LDI portfolio are less affected by climate risk compared to the Scheme's other assets. The government bonds and LDI portfolio are in place to match movements in the Scheme's liabilities, and therefore we have excluded these based on the limited impact we expect for climate risks and opportunities. In addition, we have excluded the Scheme's holdings in infrastructure, direct lending, private debt, opportunistic credit and Mirova from this assessment on materiality grounds as the holdings in these assets are each <2% of the Scheme's portfolio).

The Trustee has completed a best endeavours exercise to analyse the climate-related risks of each asset class in which it invests and its investment managers. As such, the Trustee's ability to influence how each manager incorporates climate related issues varies depending on the mandate. The Trustee asked its managers for details how they were incorporating climate risks and opportunities into the funds and asset classes in which the Scheme invests. These are summarised overleaf.

Global Equities

Time horizon	Physical risks		Transition risks			
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short						
Medium						
Long						

Transition risks are the main climate-related risks associated with global equities over the long term. Regulatory changes (e.g. carbon taxes, increased compliance costs), market factors (e.g. increased raw material costs, changing consumer behaviour), and reputation risks are viewed as key risks that could negatively impact global equities over the long term.

Property

Time horizon	Physical risks		Transition risks			
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short						
Medium						
Long						

Property assets are likely to be impacted by a combination of physical and transition risks. Physical risks arising from climate change could lead to property damage and material financial impacts, particularly, in geographically vulnerable areas.

The Scheme's investment in property is via a segregated mandate. The investment manager, when making investment decisions, is supported by extensive climate data to assess climate risks and potential adaptation strategies. The analysis is also being used to support the investment manager's move to Net Zero and setting new energy and carbon targets.

Energy and carbon emissions are a significant climate related strategic issue. Both create an opportunity to improve operational efficiency, maintenance costs and generate new income streams. The investment manager is also preparing portfolio assets for energy efficiency regulations, increases in energy costs, carbon taxes, changing tenant preferences, and valuation considerations.

The transition risks are expected to increase over time due to regulation, technology, and market risks, particularly in relation to the phase-out of fossil-fuel dependent technologies and the use of low-carbon technologies.

Credit

	Physical risks		Transition risks			
Time horizon	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short						
Medium						
Long						

Markets risks are considered an area of high risk over the medium term, driven by costs for those who are slower to participate in the transition to a low carbon economy. This could lead to risks of downgrade or default if there are economic sustainability issues. Furthermore, reissuance of bonds may be difficult if issuers have not demonstrated a clear alignment with the climate transition.

Within transition risks, the potential for unexpected and aggressive emissions regulation may create higher costs for companies. Unanticipated regulation could leave some industries (for example, energy) with significant stranded assets or large carbon emitters experiencing a higher degree of risk, including potential fines. Technology risks increased over time, as the technology to complete the transition to a carbon free world is still being developed, and the large cost associated with this.

The Trustee again noted the efforts its investment manager was undertaking to manage the climate related risks and opportunities, including research using geospatial maps. In terms of physical risks, the investment manager noted that some countries, such as those close to the equator, may face an elevated risk due to warmer climates.

ILS

	Physical risks		Transition risks			
Time horizon	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short						
Medium						
Long						

Physical Risks

The physical risks were largely associated with long term changes in weather patterns.

The ILS portfolio assesses each investment relative to climate hazards (e.g. hurricanes) via catastrophe models. These models are calibrated against long-term observations of hazard activity and exposure trends, and the near-term impacts of climate change are expected to fall within the uncertainty bounds currently represented in the models.

Over time, it is expected that the physical risks will increase, as a result of climate related risks. For chronic risks, such as increasing temperatures and sea-levels, medium and long term risks increased. The impact of certain hazards, such as wildfire and flooding, will require ongoing analysis to understand:

- The impact on communities and how associated exposures adapt to changing risk levels
- Any associated mitigation measures and demand for insurance protection.

Transition risks

Short term risks were largely lower risk largely due to the insurance industry using sophisticated technology and analytical approaches for many years now, as part of risk management.

Over the medium and long term, transition risks were largely increasing. This was assessed due to

- Acceptance of and the associated impact on supply and demand relative to specific exposed classes of business, such as the provision of insurance to high-carbon industries (e.g. the energy sector).
- The potential influence of changing risk profiles, loss experience and risk perception on capital requirements and supply, which may impact product availability and returns.

Climate-related opportunities

The Trustee has identified some climate-related opportunities:



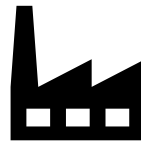
Cleaner energy

Green power generation,
clean technology innovation,
sustainable biofuels



Environmental resources

Water,
agriculture,
waste management



Energy and materials efficiency

Advanced materials,
building efficiency,
power grid efficiency



Environmental services

Environmental
protection,
business services

The Trustee is liaising with its investment managers, to understand the developments in this area which may be of benefit to the Scheme. For the types of investments the Scheme makes, there were many opportunities noted and these are summarised below.

Equities

The Scheme's investment managers actively engage with companies on an ongoing basis and assess areas such as carbon emissions within this. Where active management is permitted, the investment managers look to source and create investment opportunities that will be resilient to and further aid the transition to a low carbon economy.

Credit

Following assessment of the physical and transitional risks, the Scheme's managers focused their research on:

1. Companies that may experience profitability tailwinds or headwinds
2. Sectors likely to become larger and more important, or smaller and less relevant over time
3. How to structure portfolio exposures to best align with these shifts

Opportunities to invest in climate adaptation solutions should continue to expand, and companies whose innovations help society become more resilient to climate change will likely attract significant capital in coming years. Engaging with companies to help them build climate resiliency may also lead to better outcomes. For example, the increasing opportunities in low carbon transport offer opportunities focused on mitigation (such as electric vehicles and battery technology) and adaptation (such as the redesign of transport infrastructure) of climate related risks.

ILS

Multiple opportunities exist with regards to the physical impacts of climate change and the response to transitional climate change risks. Any changes to the frequency or severity of acute or chronic climate hazards will influence the demand for insurance coverage. For example:

- Some natural hazards, such as floods, currently observe a large protection gap; i.e. those at risk have no financial support in place when a catastrophe occurs and ultimately the financial burden falls on the individual. Flood risk may increase in some areas, which will likely increase demand for insurance protection and additional investment opportunities for the funds.
- Green industries that develop as a response to combat climate change (e.g. the growth of green energy) will provide further investment opportunities as these sectors will require insurance protection to ensure appropriate risk management and financial stability.

Portfolio resilience and scenario analysis

The Trustee has undertaken climate change scenario analysis to better understand the impact climate change could have on the Scheme's assets and liabilities.

The analysis undertaken by the Trustee looks at four climate change scenarios. Each scenario considers what might happen when transitioning to a low carbon economy under different conditions. The Trustee has chosen these scenarios because it believes that they provide a reasonable range of possible climate change outcomes. The Trustee was supported in this analysis by its investment adviser, Aon. The Trustee recognises that these scenarios are illustrative and are subject to considerable uncertainty.

The Trustee established a "base case" scenario against which the four climate change scenarios are compared.

Scenario	Degree warming vs pre-industrial levels by 2100	Scenario description
Base case	~2°C – 2.5°C	Emission reductions start now and continue in a measured way in line with the objectives of the Paris Agreement and the UK government's legally binding commitment to reduce emissions in the UK to net zero by 2050.
Disorderly Transition	<4°C	The world economy remains oriented towards improving near-term economic prospects, with companies and governments taking a "business as usual" approach. Eventually, market participants begin to fully grasp the implications of climate change and there is a growing realisation that current levels of action are inadequate. Market values price in high levels of economic damage and the irreversible loss.
Orderly Transition	<2°C	Increased public awareness of climate change risks galvanises opinion and leads to governments undertaking widespread action globally to aggressively mitigate and adapt to climate change. A high global greenhouse gas tax and carbon cap is introduced.
Abrupt Transition	<2°C	The effects from increasingly extreme weather events in the next five years lead to widespread public concern over climate change. This leads to governments introducing policies to drive a rapid reduction in greenhouse gas. Delayed action on reducing emissions mean that the costs of tackling the problem are higher.
Smooth Transition	<1.5°C	Private sector innovation and a green technology revolution, combined with government coordination, help drive progress towards tackling climate change.

When undertaking the scenario analysis, the Trustee undertook this based on the Scheme's current strategic asset allocation, which invests across a diverse range of asset classes. Alongside this the Scheme has an LDI strategy, where the assets are designed to perform in a similar way to the liabilities.

Impact Assessment

The Scheme's portfolio exhibits a relatively **high degree of climate resilience under all four climate scenarios**. This was driven by the high level of diversification in the assets, low risk strategy and high levels of hedging against changes in interest rates and inflation expectations.

Under the *Disorderly Transition*, which should be considered a "worst case" scenario. After 10 years the funding level deteriorates sharply and does not recover within the 20 year time horizon, relative to the base case, leaving the Scheme materially worse off.

Under the *Abrupt Transition* scenario, the Scheme sees a significant reduction in the funding level between in the near term, driven by a sell-off in risk assets as increased physical effects lead to the introduction of strong policies to tackle climate change. However, the 5-year delay leads to higher costs and a greater drawdown in risk assets. This was the second worst case scenario for the Scheme.

Under the *Orderly Transition* scenario, after an initial dip in the funding level (after approximately 2-3 years), the Scheme broadly follows the path of the base case, albeit with a smaller surplus, as policies are put in place to mitigate against the worst effects of climate change.

Under the *Smoothed Transition* scenario, the Scheme is expected to benefit, relative to the base case, following innovation and a green technology revolution, to help drive progress towards tackling climate change. The Trustee noted that this was the scenario which provided the best outcome for the Scheme, based on the current strategic asset allocation.

Business, strategy, and financial planning

The Trustee recognises the importance of climate change and the risk it poses to the Scheme. The Trustee takes climate-related risks into account in determining its investment strategy.

Another key risk identified from the analysis is the volatility of the funding level. Under the *abrupt transition* and the *disorderly transition*, the Scheme experiences sudden falls in the funding level before recovering (with the Scheme remaining in deficit for most of the period under analysis for the disorderly transition). Deterioration of the funding level will place a strain on the Employer covenant if it must make up a bigger shortfall through deficit contributions. It may also require the Scheme to re-risk its portfolio or extend the time frame for achieving full funding.

The Trustee therefore recognises that climate change may have an impact on the Employer covenant. The Trustee monitors the covenant on a regular basis, with the support of its covenant adviser, and maintains a regular dialogue with the Employer.



Risk management

Our process for identifying and assessing climate-related risks

The Trustee has established a process to identify, assess and manage the climate-related risks that are relevant to the Scheme. This is part of the Scheme's wider risk management framework and is how the Trustee monitors the most significant risks to the Scheme in its efforts to achieve appropriate outcomes for members.



Qualitative assessment

The first element is a qualitative assessment of climate-related risks and opportunities which is prepared by the Trustee's investment adviser and reviewed by the Trustee.



Quantitative analysis

The second element is quantitative in nature and is delivered by means of climate change scenario analysis, which is provided by the Trustee's investment adviser and reviewed by the Trustee.

Together these elements give the Trustee a clear picture of the climate-related risks that the Scheme is exposed to. Where appropriate, the Trustee distinguishes between transition and physical risks. And all risks and opportunities are assessed with reference to the time horizons that the Trustee has identified as relevant to the Scheme.

When prioritising the management of risks, the Trustee assesses the materiality of climate-related risks relative to the impact and likelihood of other risks to the Scheme. This helps the Trustee focus on the risks that pose the most significant impact.

Our process for managing climate related risks

The Trustee recognises the long-term risks posed by climate change and has taken steps to integrate climate-related risks into the Scheme’s risk management framework.

The Trustee has developed the following risk management plan, to help with its ongoing management of climate related risks and opportunities. The Trustee has delegated a number of tasks, but still retains the final approval responsibility.

Activity	Actions	Owner	Input	Frequency of review	First year schedule
Governance (incorporating content and commitments set out in the Governance statement)					
Framework	Approve climate risk management framework	Trustee	IC, CWG	One off	IC agreed 2 September 2021. Trustee ratified on 6 September 2021.
Training	Receive training on climate-related issues	Trustee	Advisors	Annual	Schedule within existing training plan
Advisers	Review advisor objectives to ensure advisors have appropriate climate capability, and bring important, relevant and timely climate-related issues to the Trustee’s attention	Trustee	Advisors	Annual	Incorporate climate objectives into existing annual review
Investment strategy	Ensure investment proposals explicitly consider the impact of climate risks and opportunities, and seek investment opportunities.	IC	Investment advisor	Ongoing	Instruct Aon to factor climate-related considerations into future investment proposals and advice
Actuarial and covenant	Ensure that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material.	VC	Scheme Actuary, Covenant advisor	Triennial	Ensure considered in 2021 funding valuation process, and future valuations.
Managers	Engage with the investment managers to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately	IC	Fund managers, Investment advisor	Annual	Considered as part of Climate Risk Assessment undertaken in Q1 2022 (see page 10).
Strategy					
Climate Scenarios	Undertake quantitative scenario analysis to understand the impact of climate related risks	IC	Investment advisor	First year, Triennial thereafter (with annual review)	Complete. IC to reviewed in October 2021 for first year reporting. To be reviewed annually to ensure suitability.

Activity	Actions	Owner	Input	Frequency of review	First year schedule
Risks and opportunities	Identify the climate-related risks and opportunities for investment & funding strategy and assess their likelihood and impact.	IC	Advisors	Annual	Considered as part of Climate Risk Assessment undertaken in Q1 2022 .
Risk management					
Risk prioritisation	Consider the prioritisation of those climate-related risks, and the management of the most significant in terms of potential loss and likelihood.	IC	Advisors	Annual	Considered as part of Climate Risk Assessment undertaken in Q1 2022.
Scheme documentation	Include consideration of climate-related risks in the Scheme's other risk processes and documents, such as the risk register and the SIP, and regularly review these.	IC	Advisors	One-off, ongoing thereafter	IC to incorporate into existing SIP at next review. Audit Committee to incorporated climate-related risks into risk register in December 2021.
Covenant	Seek to understand the climate-related risks to the employer over the short, medium and long term.	Trustee, VC	Covenant advisor	Annual	Ensure considered in 2021 funding valuation process, and future valuations.
Metrics and targets					
Metrics	Obtain data for metrics	IC	Investment advisor, fund managers	Annual	Obtain via a combination of MSCI data, Aon and investment managers.
Targets	Review continued appropriateness of metrics	IC	Investment advisor	Annual	Review in Q2 2022, alongside production of TCFD disclosure.

The Trustee has taken the following steps to integrate climate-related risks into its risk management framework and processes.



Training

The Trustee receives regular training on climate-related issues, at least annually, to develop the appropriate degree of knowledge and understanding on these issues to support good decision-making.



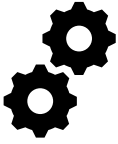
Monitoring

As part of ongoing monitoring of the Scheme's investment managers, the Trustee monitors the level of ESG integration, including climate related risks.



Annual ESG assessment

On an annual basis, the Trustee request that investment managers provide their responsible investment policy; details of how ESG is integrated within their decision-making process.



Integrated into risk framework

Climate-related risks are included in the Scheme's wider risk management framework, which is overseen by, which is overseen the IC (investment) and VC (actuarial and covenant), on an ongoing basis



ESG focussed investments

The Trustee's investment consultant keeps it informed on investment opportunities that could contribute to the Scheme's ESG aims.

As part of the assessment of the managers' policies and processes to assess climate related risks, the Trustee has posed "top" questions as outlined in guidance from the Pensions Climate Risk Industry Group¹ to its investment managers. The questions were designed to assist the Trustee with its assessment of each managers' capabilities and approach to climate management and focused on areas such as TCFD reporting, managers ability to conduct climate scenario analysis, engagement and escalation policies, managers ability to provide carbon related data and align their strategies to a particular temperature level.

The table below summarises the responses from the investment managers. Some managers were excluded on the basis of materiality.

The Trustee viewed this as a suitable starting position to understand what its investment managers are doing more broadly in relation to climate risk. Over time, the Trustee expects to see improvements from its managers.

Manager	TCFD report	Climate-related risks analysis	Industry initiatives	Carbon reporting	Temperature alignment ¹
GSAM	✓	✓	✓	✓	-
Leadenhall	-	✓	✓	✓	-
LGIM	✓	✓	✓	✓	Fund dependent
Ownership Capital	-	✓	✓	✓	✓
Schroders	✓	-	✓	✓	✓
Wellington	✓	✓	-	-	✓

Source: Managers.

¹ Even though majority of the managers do not have explicit temperature alignment goals on portfolio levels, all managers have committed to managing investment portfolios towards Paris Agreement goals.

¹ [Aligning your pension scheme with the TCFD recommendations: Part II - Trustee governance, strategy and risk management: how to integrate and disclose climate-related risks \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784211/Aligning_your_pension_scheme_with_the_TCFD_recommendations_Part_II_-_Trustee_governance_strategy_and_risk_management_how_to_integrate_and_disclose_climate-related_risks.pdf)



Metrics and Targets

Our climate-related metrics

The Trustee uses quantitative measures to help it understand and monitor the Scheme’s exposure to climate-related risks.

The Trustee, supported by its investment adviser, Aon, collected information from the Scheme’s managers on their greenhouse gas emissions. Aon collated this information to calculate climate-related metrics for the Scheme’s portfolio.

Measuring greenhouse gas emissions

Measuring greenhouse gas emissions is a key way for pension schemes to assess their exposure to climate change. Greenhouse gases are produced by burning fossil fuels, meat and dairy farming, and some industrial processes. When greenhouse gases are released into the atmosphere, they trap heat in the atmosphere causing global warming and contributing to climate change.

Greenhouse gases are categorised into three types or ‘scopes’ by the Greenhouse Gas Protocol, the world’s most used greenhouse gas accounting standard.

Scope 1	Scope 2	Scope 3
All direct emissions from the activities of an organisation which are under their control; these typically include emissions from their own buildings, facilities and vehicles	These are the indirect emissions from the generation of electricity purchased and used by an organisation	All other indirect emissions linked to the wider supply chain and activities of the organisation from outside its own operations – from the goods it purchases to the disposal of the products it sells

Scope 3 emissions are often the largest proportion of an organisation’s emissions but they are also the hardest to measure. The complexity and global nature of an organisation’s value chain make it hard to collect accurate data.

These are the Scheme’s metrics:

Total Greenhouse Gas emissions	708,548 tons CO ₂ e	This is the total greenhouse gas (“GHG”) emissions associated with the portfolio. It is an absolute measure of carbon output from the Scheme’s investments
Carbon footprint	437 tons CO ₂ e/£m	Carbon footprint is an intensity measure of emissions that takes the total GHG emissions and weights it to take account of the size of the investment made.
Data quality	62%	A measure of the proportion of the portfolio that the Trustee has high quality (verified and estimated) data for.

Source: Aon. Managers

Because not all the Scheme’s managers were able to provide all the requested data, the reported emissions metrics do not include all the Scheme’s GHG emissions. Therefore, the metrics show the Scheme’s GHG emissions to be lower than they really are.

The Trustee expects that in the future better information will be available from managers and this improvement will be reflected in the coming years' reporting.

The Trustee's investment adviser, Aon, requested data from all the Scheme's managers. The Trustee plans to engage with its managers that were unable to supply emissions data for this analysis



Current position

Aon requested emissions data from managers that cover **97%** of the Scheme's asset portfolio, which represented all of the assets except for the cash in the trustee bank account and Land at Hilton.



Data availability

Data was received from the managers in some form covering **87%** of the portfolio. Aon obtained/estimated data (using MSCI/ government data) covering **86%** of the portfolio. Data was not available for around **10%** of the assets.



Data consistency

Emissions data that came from reported and estimated sources covered **62%** of the assets. However, some of this data include scope 3 emissions since most managers were not able to split them out between scope 1 & 2 and 3.

The tables below shows a more detailed breakdown of the emissions from each asset class on the fund level in the Scheme's portfolio (where available).

Total GHG emissions (tons CO₂e)

Asset class	Growth Assets	Matching & Other Assets	Total
Equity	230,741	n/a	230,741
Property	1,305	n/a	1,305
Alternatives	-	-	
Fixed Income	n/a	176,654	176,654
Emerging Market Debt	n/a	n/a	n/a
Hedging	n/a	299,848	299,848
Total	232,046	476,502	708,548

Source: Investment managers/ Aon / MSCI.

The Trustee was not able to obtain data for its alternatives holdings, which includes infrastructure, private credit and insurance linked securities.

Carbon footprint (tons CO₂e/£m)

Asset class	Growth Assets	Matching & Other Assets
Equity	257.0	n/a
Property	2.9	n/a
Alternatives	-	-
Fixed Income	n/a	78.8
Emerging Market Debt	n/a	n/a
Hedging	n/a	98.2

Source: Investment managers/ Aon / MSCI.

The Trustee was not able to obtain data for its alternatives holdings, which includes infrastructure, private credit and insurance linked securities.

Data availability (%)

Asset class	Growth Assets	Matching & Other Assets	Total
Equity	96.3	n/a	96.3
Property	83.1	n/a	83.1
Alternatives	-	-	-
Fixed Income	-	75.1	75.1
Emerging Market Debt	n/a	n/a	n/a
Hedging	n/a	63.0	63.0
Total	68.0	61.0	62.0

Source: Investment managers/ Aon / MSCI.

The Trustee noted that overall, the availability of data for equity was very high, whereas this was much lower for other asset classes such as fixed income, emerging market debt and alternatives.

The Trustee was not able to obtain data for its alternatives holdings, which includes infrastructure, private credit and insurance linked securities. These are areas where the Trustee expects to see significant improvements over the next 5 years.

When collecting the data, the Trustee also noted the following:

- Data for some of its equity, fixed income and hedging assets were provided in USD. It has therefore been estimated in GBP. The data provided covers scope 1 and 2 emissions.
- There was some inconsistency with data provided for carbon footprint, such as tCO₂e/£m EVIC or tCO₂e/£m invested. Where data has been provided as tCO₂e/£m EVIC, it has been used as a proxy for tCO₂e/£m.
- For its property holding, total GHG and carbon footprint was provided for scopes 1, 2 and 3 – its underlying manager was not able to provide scope 3 data separately. Reported data covered 45.6% of the portfolio. Data was further estimated to cover 83.1% in total for the property portfolio. There remains no coverage for the remainder.
- No data was available for the alternatives portfolio, such as private markets or insurance linked securities (a framework is expected to be developed in 2022, so the Trustee expects to receive data for this asset in future years).
- Whilst the Trustee received carbon data covering a small portion of its emerging markets debt portfolio, it was unable to verify this data and took the decision to exclude from this year's disclosure.

Looking to the future

Our climate-related target

Climate-related targets help the Trustee track its efforts to manage the Scheme's climate-change risk exposure.

The Trustee has set a target for improving the data quality metric over the next **five years**. Without meaningful data from the investment managers, it is very hard for the Trustee to accurately measure its carbon emissions. So, it is important to set a target to improve the quality of GHG emissions data from the managers. The Trustee will initially focus on coverage of data, with the following targets set:



Asset Class	Target data coverage
Equity	>95%
Property	90.0%
Fixed Income	80.0%
Hedging	75.0%
Alternatives and Emerging Market Debt	25.0%

Notes in relation to the target data coverage:

- The data coverage targets have been set to collate carbon emission data across scopes 1 and 2.
- The Trustee will consider an appropriate target to set covering the scope 3 emissions in its next disclosures report.
- The Trustee recognises that the data coverage and quality for equities is already strong. It therefore plans to ensure reporting remains over 95% in future years.

The Scheme's performance against the target will be measured and reported on every year, which will build up over time. The Trustee will be taking the following steps to reach the target:

Step1: Increasing mandate coverage of data

The Trustee observed that:

- the coverage of data for equity mandates is greater versus other assets (such as fixed income or property). For equity holdings, data available was in excess of 90%.
- The coverage of carbon data for fixed income assets was much lower (c. 75%).
- Data was not available for most of the alternative mandates, including emerging market debt.

Actions for the Trustee to improve coverage

- The Trustee will engage with its investment managers, supported by its investment consultant, to request higher data availability and coverage for fixed income and alternative mandates.
- Through engagement, identify opportunities to improve coverage, or investigate alternative sources of data.
- In addition to engagement undertaken, the Trustee expects that improvement in data availability and reporting will in part be dependent on improved industry methodologies to calculate carbon metrics, including increased regulatory requirements for reporting carbon metrics.

Step 2: Making the reporting consistent

The Trustee observed that there were some managers who were able to provide high coverage, but were not able to split out the data between scope 1, 2 and 3 emissions.

Actions for the Trustee to improve consistency of reporting

- The Trustee will engage with its investment managers, supported by its investment consultant, to understand the challenges for splitting out this data and find an appropriate solution.

Appendices

Climate Risk Assessment – transition risks

Transition risks relate to the need to transition to a low-carbon economy, including development of, and investment in, new technologies and services that support this transition as well as government policy to aid in the transition. Examples of climate-related risks and potential financial impacts include:

	Climate-related risks	Potential financial impacts
Policy and legal	<ul style="list-style-type: none"> ▪ Increased pricing of GHG emissions ▪ Enhanced emissions-reporting obligations ▪ Mandates on and regulation of existing products and services ▪ Exposure to litigation 	<ul style="list-style-type: none"> ▪ Increased operating costs (e.g. higher compliance costs, increase insurance premiums) ▪ Write-offs, asset impairment and early retirement of existing assets due to policy changes ▪ Increased costs and/or reduced demand for products and services resulting from fines and judgments
Technology	<ul style="list-style-type: none"> ▪ Substitution of existing products and services with lower emissions options ▪ Unsuccessful investment in new technologies ▪ Costs to transition to lower emissions technology 	<ul style="list-style-type: none"> ▪ Write-offs and early retirement of existing assets ▪ Reduced demand for products and services ▪ Research and development (R&D) expenditures in new and alternative technologies ▪ Capital investments in technology development ▪ Costs to adopt/deploy new practices and processes
Market	<ul style="list-style-type: none"> ▪ Changing customer behaviour ▪ Uncertainty in market signals ▪ Increase cost of raw materials 	<ul style="list-style-type: none"> ▪ Reduced demand for goods and services due to shift in consumer preferences ▪ Increased production costs due to changing input prices (e.g. energy, water) and output requirements (e.g. waste treatment) ▪ Abrupt and unexpected shifts in energy costs ▪ Change in revenue mix and sources, resulting in decreased revenues ▪ Re-pricing of assets (e.g. fossil fuel reserves, land valuations, securities valuations)
Reputation	<ul style="list-style-type: none"> ▪ Shifts in consumer preferences ▪ Stigmatisation of sector ▪ Increased stakeholder concern or negative stakeholder feedback 	<ul style="list-style-type: none"> ▪ Reduced revenue from decreased demand for goods / services ▪ Reduced revenue from decreased production capacity (e.g. delayed planning approvals, supply chain interruptions) ▪ Reduced revenue from negative impacts on workforce management and planning (e.g. employee attraction and retention) ▪ Reduction in capital availability

Climate related opportunities

Cleaner energy	Environmental resources	Energy and material efficiency	Environmental services
<p>Power generation</p> <ul style="list-style-type: none"> • solar • wind • other clean power • increased efficiency • fuel switch: gas, biomass • nuclear <p>Clean technology innovation</p> <ul style="list-style-type: none"> • carbon capture • infrastructure management • supply chain management <p>Transport</p> <ul style="list-style-type: none"> • emissions reduction • propulsions system • battery technology <p>Sustainable biofuels</p> <ul style="list-style-type: none"> • biodiesel • ethanol 	<p>Water</p> <ul style="list-style-type: none"> • desalination / purification • wastewater treatment • distribution and management <p>Agriculture</p> <ul style="list-style-type: none"> • irrigation innovation • clean pesticides • consumer food purity • seeds and breeding technology <p>Waste management</p> <ul style="list-style-type: none"> • Recycling • toxin management • Waste to energy • Land remediation 	<p>Advanced materials</p> <ul style="list-style-type: none"> • advanced coatings • lightweight substitutes • solvents and biodegradables <p>Building efficiency</p> <ul style="list-style-type: none"> • building management • green data management • heating and cooling systems • lighting systems • insulation on materials • micro generation or micro CHP <p>Power grid efficiency</p> <ul style="list-style-type: none"> • transmission (including smart grids) • Distribution • Storage (e.g., batteries, pump storage) • Infrastructure • energy management systems 	<p>Environmental Protection</p> <ul style="list-style-type: none"> • land conservation • environmental restoration • timberland • forestry • sea defences <p>Business services</p> <ul style="list-style-type: none"> • insurance • logistics • green focused banking • micro finance • consultancy or advisory • intellectual property