The Willis Pension Scheme TCFD Statement
for the Scheme Year ending 31 December 2022

Trustee's Report in respect of the Occupation Pension Schemes (Climate Change Governance and Reporting) Regulations 2023

Website where this Statement can be found:
https://epa.towerswatson.com/accounts/wps/

Table of Contents

Chair Foreword

A word from the Chair of the Willis Pension Scheme

On behalf of the Willis Pension Scheme, we are excited to present our first annual climate change report, displaying some of the important work we've been doing in this area. To help with your interpretation of this report, we have also included a glossary in the appendix for some of the key terms we reference throughout.

We believe that Sustainable Investing (SI), and climate change in particular, can have a material financial impact on investment outcomes, and so investing responsibly is a key part of successful mission delivery for our members. This covers all aspects of the Scheme's funding strategy, whether it be the Scheme's investments, the benefits we expect to pay to members or the support the Sponsor provides to ensure those benefits are paid.

Over the last couple of years, we made the decision to appoint a Fiduciary Manager (FM) for the Scheme's investments, WTW. As part of this appointment, we undertook an extensive selection exercise considering criteria such as investment expertise, operational capabilities and fees. One of the key focuses of the search was also on the FM's approach to SI and climate change. As a group of Trustees, we were pleased that WTW shared similar beliefs about the importance of Sustainability. You will see throughout our report that we share some case studies on positive work they have been doing on behalf of the Scheme in this area.

Reporting on climate change is in its relative infancy within the investment industry. Although we continue to work hard to improve the data which we have at our disposal, there are some limitations around some of the information reported. We expect data quality to improve overtime as the industry collectively works together towards that common goal. We don't believe that imperfect data is a stopping point and that is reflected in a number of actions that we've already taken to help manage climate change risks and solutions.

As an overarching commitment, we've set ourselves a target to reduce the carbon footprint of the Scheme's non-government bond assets to net-zero by 2050 or sooner, with an interim 50% reduction by 2030 (more on this later). This is a consistent goal that is shared by the Scheme's FM. We recognise the limitations of focusing on a single climate metric and so monitor a range of climate change metrics as part of our ongoing management. The Scheme is in a very fortunate position of being well funded, having a low-risk investment portfolio and a collaborative Sponsor. While this means we have a great starting point, we are committed to taking actions consistent with this overall goal.

Although we have made great progress, we will continue to look to improve our education, monitoring and reporting in this area. We look forward to sharing our progress again with you next year.

Peter Routledge

Chair of the Willis Pension Scheme

Introduction

The Trustee of the Willis Pension Scheme (hereinafter referred to as the “Trustee” and the “Scheme”, respectively) presents its annual report under the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 (the “Regulations”) for the year ended 31 December 2022. The principal employer of the Scheme is Willis Limited.

The Scheme is now subject to the requirement to produce disclosures in line with the recommendations of the Taskforce on Climate-Related Financial Disclosures (TCFD), as transposed into UK law in 2021. The aim is to improve and increase reporting of climate-related financial risks and solutions.

The TCFD framework requires disclosures in four broad categories:

- **Governance:** around climate-related risks and solutions
- **Strategy:** the actual and potential impact of climate-related risks and solutions on the strategy and financial plans of the scheme
- **Risk management:** how the scheme identifies, assesses, and manages climate-related risks
- **Metrics and targets:** the metrics and targets used to assess and manage climate-related risks and solutions

This report sets out the Trustee’s approach to compliance in each of these four areas.

Section 1: Governance

The Trustee have identified climate change, alongside other Environmental, Social and Governance (ESG) factors, as an important risk and opportunity which requires sustained, long-term oversight and management. We, as a Trustee, have ultimate responsibility for setting the Scheme's strategy, policies, and actions in this area.

The key overarching investment policies are detailed in our Statement of Investment Principles (SIP) which can be found online at the following link: https://online.willistowerswatson.com/sites/WillisPensionScheme/SitePages/UK%20Final%20Salary%20Scheme.aspx

Alongside this, given the importance placed on such issues, the Trustee maintains a separate SI policy which sets out a more in-depth overview of our beliefs and goals in this area. This document clearly sets out the Trustee's policy on SI, aiming to assess the implementation of the Trustee's investment strategy whilst also providing a basis on which to monitor the sustainability characteristics of the Scheme. This document is largely meant to support and expand on the policies set out in the publicly available SIP. A review of this policy is carried out on an annual basis to ensure it remains fit for purpose. The Trustee intends to make this policy publicly available in due course.

Although the Trustee delegates to third parties to implement this overarching strategy, the Trustee ensures that such third parties are closely monitored and held accountable for the work they do on behalf of the Scheme. The main parties to which the Trustee delegates some form of responsibility for implementing its policies in relation to climate change and SI more widely are:

- **Fiduciary Manager (FM) –** Responsible for ensuring climate change is considered as part of ongoing portfolio construction, the selection of the underlying investment managers and the conduct of its stewardship activities. WTW have currently been selected as FM. WTW's approach to climate change and SI was a key determinant factor in their selection and a focus point of the Trustee's ongoing monitoring (which noted key points such as its membership of important industry bodies such as the Net-Zero Asset Managers Initiative as well as being a signatory to the UK Stewardship Code). The Trustee has set the FM an objective against which they are assessed annually which includes reference to assisting the Trustee to assess, manage and measure climate change risks and solutions.

- **Oversight Provider –** The Trustee also employs an Oversight Provider, Barnett Waddingham, who assist the Trustee with monitoring and holding the FM accountable for their actions around climate change.

- **Investment Managers –** Responsible for managing climate change risks and solutions within their mandates as per their guidelines. This includes the selection of assets as well as the managers' stewardship activities. The Trustee receives reporting on an annual basis to assess the underlying managers' competencies. This provides an assessment of the managers' approach to ESG integration and stewardship activities as well as consideration of a balanced scorecard of climate metrics which provide insight into the managers' underlying exposures to climate change risks and solutions.

- **Other advisors –** The Trustee also takes advice from the Scheme Actuary, Legal Advisor and Covenant Advisor regarding the extent to which climate change may affect the funding strategy of the Scheme and the ability of the sponsor to support the Scheme. Alongside this, to further satisfy itself, the Trustee also receives annual updates from the Sponsor on evolutions to their strategy to manage climate change risks and solutions.

The Trustee board meets at least four times a year and climate change is typically discussed at least twice a year. The Trustee recognises that climate change is a fast-evolving and complex area which therefore requires ongoing discussion and education. Over the last 12 months, the Trustee has received training on the Department for Work and Pensions (DWP) climate regulations, climate metrics, climate scenario analysis and an annual deep dive into SI from the FM. All Trustee Board members are required to partake in these sessions as a recognition of the responsibility of the whole group in evolving the Scheme's approach in this area.

Annually, the Trustee also receives a deeper dive into both the FM's and underlying investment managers' approach to SI. This cover the FM's approach to reviewing managers and how this is evolving, identifying key actions the underlying managers took over the past year and sight of the annual manager SI reviews. The FM publishes their annual SI policy outlining their beliefs. This is presented to the Trustee on an annual basis to ensure the beliefs of the FM remain consistent with that of the Trustee.

The Trustee has a strong belief that stewardship (voting and engaging with the underlying companies the Scheme invests in) is a key way in which the Trustee can meaningfully influence outcomes. The Trustee has identified climate change as the current stewardship priority. The Trustee delegates part of the implementation of this policy to the FM and underlying investment managers but retains overall responsibility and accountability for the policy. An important focus point of the annual review is assessing whether these activities have been exercised effectively.

Case Study – EOS at Federated Hermes

The Trustee is reassured that the FM utilises EOS at Federated Hermes, a stewardship service provider, to support the efforts of the appointed investment managers in the industry to engage with many companies on a wider range of topics. EOS also carries out public policy engagement and advocacy on behalf of the Trustee. As at 31 December 2022 EOS represented $1.34trn of assets under advice. The FM has been working closely with EOS for many years, and a senior member of the WTW FM team chairs its Client Advisory Board. The FM engage with EOS on behalf of the Trustee to help shape its engagement approach and voting policies. For example, over 2022, this included:

- Engagements with 1,138 companies on a total of 4,250 issues and objectives.
- 33 responses to consultations or proactive equivalents and 75 discussions with relevant regulators and stakeholders.
- Voting recommendations on 134,188 resolutions, with 24,461 against management.
- Active participation in a range of global stewardship initiatives.

Another example is Climate Action 100+ (CA100+), an investor initiative aiming to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. It targets 167 companies globally. EOS is among over 615 investors, totalling $65tn under management, who have signed up to CA100+. EOS led or co-led the engagement on over 25 focus companies and is collaborating with other investors on over 30 companies as part of this initiative.

EOS has undertaken climate engagements with major oil and gas companies through CA100+. As part of this strong momentum, CA100+ issued its net-zero benchmark for the world's largest carbon emitters in March 2021. EOS helped to design the benchmark, which set clear engagement priorities.

Section 2: Strategy

Appropriately managing climate change risks and solutions from a strategic perspective is a key part of the Trustee's role. The Trustee recognises that climate change could have a material impact on the potential success of the overarching funding strategy and therefore ensures this is given appropriate consideration. To support this, the Trustee undertakes climate change scenario analysis on at least a triennial basis to test the resilience of the Scheme's funding strategy under a range of plausible climate scenarios. Importantly, the Trustee recognises that climate change could have a material impact on the investments of the Scheme, the life expectancy of the Scheme's members and the support provided by the Sponsor's Covenant. All three aspects are therefore considered as part of this analysis.

To appropriately assess the impact of the climate change scenario analysis, the Trustee has agreed the suitable time horizons over which climate risks and solutions should be considered. These are as follows:

- **Short Term** – to 2023: this is the defined as the next Actuarial Valuation cycle at which the funding strategy will be revisited in detail.
- **Medium Term** – to 2030: this is the timeframe over which significant climate action is expected, climate transition risks are expected to emerge and is aligned with the Trustee's agreed net-zero objective.
- **Long Term** – to 2040: this is the timeframe consistent with the duration of the Scheme's liabilities and the point at which a significant proportion of member benefits will have been paid out.

The Trustee has identified the following climate-related risks and solutions:

Regulatory risk	Reputational risk	Transition risk	Physical risk
• Regulators are increasing pressure on pension schemes to explicitly consider climate change • **Example:** • Implementation Statement • DWP Pensions bill • Mandatory TCFD reporting	• The increasing spotlight on pension schemes and climate change increases the risk of being "named and shamed" • **Example:** • 2018 EAC report on 25 biggest UK schemes	• The indirect impact arising as a result of changes in society and economies to combat or adapt to climate change • **Example:** • **Assets:** Some industries become obsolete (e.g. coal), reinvent themselves or others emerge (electric vehicles) • **Liabilities:** Improvements in mortality from healthier lifestyles	• The direct impact arising as a result of chronic and/or acute changes in climate and extreme weather events • **Example:** • **Assets:** Damage to physical assets underpinning securities (e.g. real estate and infrastructure) • **Liabilities:** Excess deaths arising from extreme weather

The Trustee has assessed how the categories identified are relevant to the agreed short-, medium- and long-term time horizons.

	Short Term	Medium Term	Long Term
Timeframe	To next Triennial Actuarial Valuation (2023)	Significant climate action expected (2030)	Consistent with duration of Scheme's liabilities (2040)
Primary types of risk	• Regulatory • Reputational • Transition	• Regulatory • Reputational • Transition	• Transition • Physical
Key risk exposure	The Trustee is exposed to regulatory risks, including fines, if it does not comply with evolving regulatory requirements. The Trustee (and sponsor) are exposed to reputational risks if the Trustee's policies are misaligned with peers and/or sponsor. The Trustee is predominately exposed to transition risks through the corporate bonds and secure income assets held (such as infrastructure, real estate and renewable energy assets).	The Trustee is exposed to regulatory risks, including fines, if it does not comply with evolving regulatory requirements. The Trustee (and sponsor) are exposed to reputational risks if the Trustee's policies are misaligned with peers and/or sponsor. The Trustee is predominately exposed to transition risks through the corporate bonds and secure income assets held (such as infrastructure, real estate and renewable energy assets).	The Trustee is predominately exposed to transition risks through the corporate bonds and secure income assets held (such as infrastructure, real estate and renewable energy assets). The Trustee is also exposed to the physical risk within these assets through weather damage and other extreme events. Given the long-term nature of these risks, there is a high level of uncertainty in terms of the likely effect and the potential magnitude of their impact.
Potential solutions	Encouraging existing funds to consider and where possible reduce exposure to transition risks and engage with companies to develop a strong transition plan. Invest in low-carbon infrastructure solutions as part of the broader transition.	Invest in companies and assets that are a key part of the low-carbon infrastructure but also contribute to climate adaptation efforts.	Invest in companies and assets that are a key part of the low-carbon infrastructure but also contribute to climate adaptation efforts.

These time horizons, risks and opportunities are key inputs into the Trustee's climate scenario analysis. The Trustee, in conjunction with the FM, Scheme Actuary and Covenant Advisor, has conducted this scenario stress testing and presented the results within this section. The key climate scenarios that the Trustee considered are:

	Lowest Common Denominator	Inevitable Policy Response	Global Coordinated Action	Climate Emergency
Description	A 'business as usual' scenario where current policies continue with no further attempt to incentivise further emission reductions.	A delay in meaningful action but a rapid shift in policy in the mid/late 2020s. Policies are implemented but not in a completely co-ordinated manner.	Policy makers agree on and immediately implement policies to reduce emissions in a globally co-ordinated manner.	An immediate, ambitious and coordinated response in which aggressive policy is pursued and more extensive technology shifts are achieved.
Temperature rise vs pre-industrial levels	3.5ºC	2.0ºC	2.0ºC	1.5ºC
% of Renewable energy by 2050	30-40%	80-85%	65-70%	80-85%
Transition risk level (shorter term)	Low	High	Low – Medium	Medium – High
Physical risk level (Medium-longer term)	High	Low – Medium	Low	Low

The scenarios were created to reflect the differing paths that could be taken to meet, or fail to meet, the Paris Agreement target and are based on global scientific consensus. The Paris target is to limit global temperature rises to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The scenarios differ in the size of the physical risks, based on the resulting temperature impacts, but also in the size of the transition risks. In the view of the Trustee, the four scenarios selected reflect an appropriate range of plausible decarbonisation pathways and are relevant in the context of the Scheme's journey and funding plans. The Trustee recognises that there is the potential for more extreme outcomes than reflected in the chosen scenarios.

A potential limitation of the scenarios considered in this analysis is that they are derived on the basis of all other factors being equal during the efforts to transition to a low carbon economy. This is unlikely to occur in practice. Second order effects, such as higher levels of investment, employment, and productivity-enhancing innovation, are hard to estimate, and represent the reason why the climate scenarios cannot be the sole driver of the Scheme's investment strategy and risk management decisions

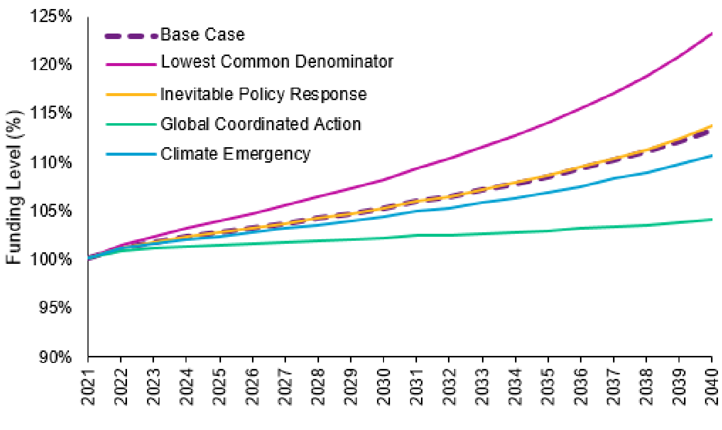
Below the Trustee has illustrated the impact of the four climate change scenarios on the Scheme's funding level both in forms of drags over an extended period, and as one-off shocks on day one.

The key results from the climate scenario analysis have been outlined below. The Trustee has considered these over a timeframe that is consistent with the Scheme's longer term time horizon (c.20 years). The Trustee also recognises that assuming such climate scenarios are priced in gradually, year by year, is an unrealistic expectation and in practice this is likely to be far less linear. The Trustee has therefore also included an instant shock within the analysis. This assumes that markets immediately price in the transition and physical risks over the next 20 years and that the market initially overreacts to this news in struggling to price in the actual impact. Again, although unrealistic, the Trustee thinks this helpfully stress tests the assumptions made in the analysis and helps consider how robust the funding strategy might be. The Trustee also recognises the uncertainty in the underlying assumptions and that, in reality, the shocks experienced could be larger.

In some climate scenarios, the Trustee's modelling process implies reduced life expectancies (relative to other scenarios and/or schemes' central mortality assumptions) and therefore a relative reduction in the Scheme's liabilities. This is a plausible potential outcome arising from the negative impacts of increasing climate change. This can suggest a relative improvement in the expected funding position for the Scheme even when combined with associated reductions in the value of the Scheme's assets (given their low-risk nature). However, it is important to recognise that an assessment of what is in the best interests of the Scheme and its members is a much broader question than the impact on funding level alone. In particular, key considerations may be a reduction in the quality (and length) of members' lives, and the quality of the environment that they will retire into. Consequently, the results of any such modelling should not be assumed to reflect any complacency or acceptance (either implicit or explicit) that the Trustee considers global inaction or business-as-usual with respect to climate change to be in the best interests of the Scheme or its members. As mentioned, climate change is widely recognised to be a systematic risk of unprecedented scale and severity. Actions to address it are a collective priority, given the risks it presents to individual pension schemes, the ongoing resilience of the savings universe, and the planet as a whole.

Impact of Climate Drags on the Scheme's Funding Level

Climate scenario	Asset Return Drag pa.*	Liab Return Impact pa.	Projected Funding Level in 2040
Base case	0	0	113%
Lowest Common Denominator	-0.16%	-0.38%	124%
Inevitable Policy Response	-0.18%	-0.18%	113%
Global Coordinated Action	0.01%	0.25%	104%
Climate Emergency	-0.12%	-0.04%	111%



Impact of Climate Shocks on the Scheme's Funding Level

Climate shocks analysis	Asset Shock (£m)	Liability Shock (£m)	Immediate change in Funding (£m)	Immediate change in funding level
Least Common Denominator	-78	-188	109	4.2%
Inevitable Policy Response	-88	-91	3	0.1%
Global Coordinated Action	4	129	-125	-4.3%
Climate Emergency	-59	-26	-33	-1.2%

As part of the above analysis, the Trustee has also engaged with the Sponsor and considered how the Sponsor could be impacted under the above climate scenarios considered. As part of these discussions, the Trustee has been reassured by the size and diversified nature of the Sponsor's business. This includes both the various lines of business and their direct exposure to climate change risks and solutions as well as the underlying client base which the Sponsor works with on an ongoing basis. Given the very strong funding position of the Scheme, the Trustee also has a relatively low likelihood of reliance on the Sponsor in the future as well.

As a result of the combined analysis, the Trustee has been reassured that the Scheme is expected to be relatively well protected against the impact of climate change both as a gradual impact and a sudden shock. This was driven by four key factors:

- **The Scheme's very strong funding position** – This was 100% (on a prudent gilt+0.25% basis) at the date of the analysis conducted

- **The Scheme's very low-risk asset portfolio** – The Scheme no longer holds any 'return-seeking' assets and instead largely invests in very high-quality debt securities (both Government and Corporate), targeting a small investment return of Gilts+0.75% per annum.

- **The allocation to climate positive investments** – The Scheme has a sizeable allocation to investments which are expected to benefit from the transition to a low-carbon economy. These include investments in wind, solar and opportunistic renewable energy investments.

- **The Scheme has a longevity swap** – The Trustee has already mitigated some of the life expectancy risk within the Scheme, with a large longevity swap.

Although the analysis provided the Trustee with some reassurance on the robust nature of the Scheme's funding strategy, it did clearly highlight that climate change could have a material impact on the Scheme's outcomes. This reiterated to the Trustee that it warrants continued focus as part of the Trustee's broader SI strategy and would remain a priority area for portfolio monitoring, stewardship activities and manager engagement. In terms of next steps, the Trustee is focussing on the following:

1. **Further longevity risk hedging** – The Trustee noted the Scheme could consider undertaking additional longevity hedging to further insulate the Scheme from the impact of changes in life expectancy. This is something that is expected to be considered as part of the upcoming Actuarial Valuation.

2. **Additional asset analysis** – Although the asset classes that the Scheme invests in are expected to be relatively robust under the scenarios considered, largely due to their high-quality well diversified nature, the Trustee is also conducting further analysis to interrogate this

conclusion. This includes bottom-up security level analysis of the specific investments and companies the Scheme invests in. The Trustee considers a balanced scorecard of climate metrics to assess the specific risks and opportunities the Scheme is expected to be exposed to. This provides further support alongside the top-down scenario analysis conclusions.

3. **Engagement with Sponsor** – The Trustee has held sessions with representatives from the Sponsor to provide further detail on how the Sponsor is working to appropriately manage and monitor climate change risks and opportunities. This is expected to be a key annual agenda item for updates provided by the Sponsor.

The Trustee intends to update this analysis at least every three years and will be testing annually whether this needs to be done more frequently, including if there have been material changes to the scenarios used or the Scheme's funding strategy.

Section 3: Risk Management

Climate change is a key risk and opportunity and therefore receives particular attention as part of the Trustee's ongoing risk management processes. The Trustee thinks about how it integrates climate into this in three ways using a variety of risk management tools:

Governance

Climate change is included within the Trustee's risk register which is monitored quarterly and reviewed in-depth annually. This clearly details the size and likelihood of the risk, the controls in place and the actions the Trustee takes to manage, mitigate, and exploit both the risk and opportunity. Although the Trustee retains ultimate ownership, the risk register clearly sets out the parties that assist the Trustee in its responsibilities.

Top-down

The climate change scenario analysis presented, mentioned in the previous section, provides the Trustee with a holistic overview of the potential impacts of climate change and how they may affect the Scheme's funding strategy (across assets, liabilities, and covenant). This is an important risk management tool for a top-down risk and opportunity assessment.

The Trustee has also agreed an overarching 'carbon journey plan' which represents a long-term commitment to manage climate change risks and solutions. As set out in the next section, this is a target to reduce the Scheme's carbon footprint (scope 1 and 2 emissions) of the non-government bond assets by 50% to 2030 and to reach net-zero by 2050. The Trustee expects this will be a very useful tool to help monitor and manage the Scheme's exposure to climate change over time. Although this ultimate goal is based upon the Scheme's carbon footprint, the Trustee recognises that this is a simple and backward looking metric and therefore the Trustee also monitors a dashboard of climate metrics alongside this.

Bottom up

As mentioned, the Trustee also conducts more granular analysis to manage the risks and opportunities associated with climate change. These include:

Security analysis – The Trustee calculates various climate change related metrics for the underlying securities within the portfolio. This includes metrics such as carbon footprint, climate solutions, Climate Transition Value at Risk (CTVaR) and Paris Agreement alignment. These provide the Trustee with a more detailed understanding of the Scheme's exposures. As a result of engaging with this analysis, the Trustee engaged with the Scheme's underlying credit manager to ensure they were aware of the exposures within the portfolio and to obtain an understanding of the manager's engagement plans with some of the particular companies where they had a potential excessive risk to climate-related factors.

Manager analysis – The Trustee also conduct an annual review of the Fiduciary Manager and underlying investment manager policies, processes, and actions in SI, which includes a focus on climate change. The Trustee have been reassured in the results presented and the actions taken to date. The Trustee does however have a strict policy of engagement if any concerns are identified as part of this monitoring.

Stewardship

One of the other risk and opportunity assessment tools the Trustee uses is stewardship. This is a key way in which the Trustee can influence the actions of companies and broader industry and therefore mitigate the climate risk the Scheme is exposed to and enhance the potential opportunities available as part of the transition. As mentioned in other parts of the statement, the Trustee has undertaken:

- Significant engagement via EOS at Federated Hermes with companies and industry (see governance section)

- Detailed review of the stewardship practices of the underlying investment managers with a focus on assessing this relative to the Trustee's climate stewardship priority

- Direct engagement with some of the investment managers on their practices in this area

- Contribution, via the FM, to a number of key industry initiatives, working groups and consultations

The Trustee currently does not hold any equity investments and therefore has no voting rights in respect of the underlying assets held.

Summary

Through the use of the variety of risk tools referenced above, the Trustee has identified a number of key areas to continue further work to help exploit and manage the opportunities and risks associated with climate change. The key priorities are currently focussing on enhancing stewardship activities, managing longevity and mortality risk and ensuring the Scheme retains a suitable exposure to climate solutions within the portfolio.

Section 4: Metrics and Targets

Introduction and overview

A key facet of the Trustee's ongoing monitoring and management of climate change is having good data on the Scheme's exposure in this area. Although there are limitations with some of the metrics presented and the completeness of data, the Trustee still has a strong belief that these can helpfully inform the ongoing monitoring and management of the Scheme. The Trustee considers metrics across the SI spectrum, but the focus within this statement is those in the area of climate change. The metrics disclosed have been selected from the following categories:

- An absolute carbon emissions metric
- A carbon emissions intensity metric
- A Paris Agreement alignment metric
- One additional climate change metric

Throughout this section of the report, where carbon emissions are referenced, this covers the following: carbon dioxide, nitrous oxide, methane, sulphur hexafluoride, nitrogen trifluoride, hydrofluorocarbons and perfluorocarbons, which are the greenhouse gases within scope of the Paris Agreement. The emissions are reported in tonnes of CO2 equivalent ("tCO2e"). It is also important to be clear which emissions are captured within the below metrics and therefore the Trustee have referred to the categories of carbon emissions as follows:

- Scope 1 emissions: all direct emissions from the activities of an entity or the activities under its control
- Scope 2 emissions: indirect emissions from electricity purchased and used by an entity which are created during the production of energy which the entity uses
- Scope 3 emissions: all indirect emissions from the activities of the entity, other than scope 2 emissions, which occur from sources that the entity does not directly control.

Due to the nature of the emissions, scope 3 emissions are significantly more difficult to calculate than scope 1 or scope 2 emissions for any given entity (due to low company disclosure rates). It is also the case that, for some assets, even scope 1 and scope 2 emissions are difficult to calculate. The Trustee have included Scope 1 and 2 emissions within the metrics displayed below but will be including the Scope 3 emissions as part of next year's report.

Overview of analysis

The table details the statistics for the 4 metrics the Trustee has selected.

1. **Total Carbon Emissions** – This is an 'absolute carbon emissions' metric which gives the total carbon emissions attributable to the Scheme's assets. This is represented in a single metric which converts all other greenhouse gases (GHG) into carbon dioxide equivalent quantities. This is calculated in line with the GHG protocol methodology and currently includes only Scope 1 and 2 Emissions. A denominator of Enterprise Value Including Cash is used to attribute emissions for corporates.

2. **Carbon Footprint** – This is a 'carbon emissions intensity' metric which gives the total carbon emissions attributable to the Scheme's assets per £ invested.

3. **Percentage of assets with approved Science based targets (SBTi)** – This is a 'Paris Agreement alignment' metric used to measure of the number of companies with a climate target validated by the Science-Based Targets Initiative – a partnership between CDP, the United Nations Global Compact, World Resources Institute and the Worldwide Fund for Nature.

4. **Exposure to climate-related solutions** – This aims to assess exposure to the investments which are the most likely to benefit from transition to a low carbon economy and is calculated as a percentage of the Scheme's assets that may be considered EU Taxonomy eligible based on the criteria set out in the taxonomy. This additional metric of 'exposure to climate-related solutions' has been selected as this reflects our beliefs that the global response to climate change can reward those who respond and adapt quickly as well as punishing the laggards.

The below table outlines the values of the key statistics for the year ending 2022 which the Scheme monitors annually.

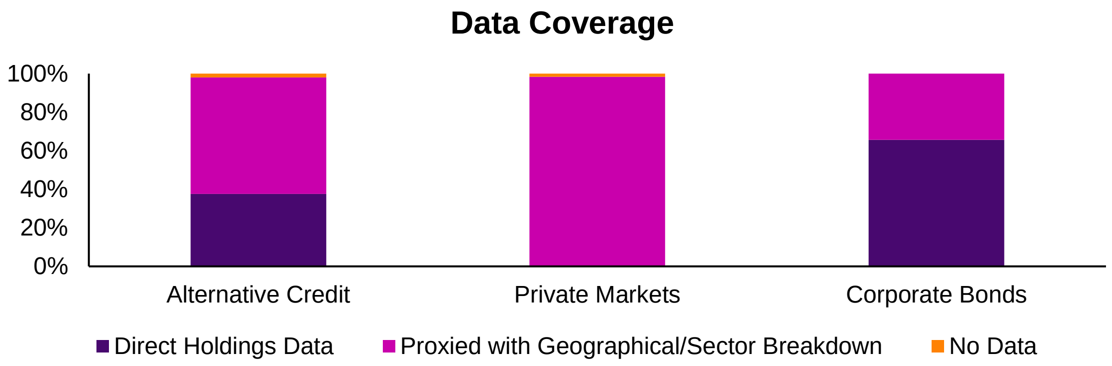
As at 31 Dec 2022	Asset Allocation	Carbon Emissions Data		Exposure to Climate Solutions (%)	% of assets with approved Science based targets
		Absolute Emissions (tCO_2e) – Scope 1 & 2	Carbon Footprint (tCO_2e / £m) – Scope 1 & 2		
Alternative Credit	5.5%	1,986	16	0.1%	23.3%
Private Markets	23.2%	26,239	51	11.4%	
Corporate Bonds	31.6%	34,838	50	2.9%	
UK Govt Bonds & Cash	39.6%	-	-	-	-

<u>Data quality</u>

Whilst the Trustee has aimed to carry out the analysis as far they are able, the availability of data is dependent on external factors which are largely outside the Trustee's control such as certain companies not disclosing their carbon emissions. The charts below show how the portfolio has been modelled, be it through the analysis of direct company holdings data, where it was available, or otherwise, using proxies. The charts only show this breakdown in respect of the Scheme's assets excluding government bonds. The Trustee was able to obtain data on 39% of the portfolio, excluding Government Bond assets. For the private assets the Trustee has proxied the exposure by using appropriate geographic and sector weights for the underlying holdings. This represents 60% of the total portfolio excluding Government Bonds.

Whilst the Trustee, aims for 100% data quality for its underlying investments, it understands that there are limitations with data availability, particularly for private assets. The Scheme's FM uses MSCI, a market leader in sustainability-related data, to provide ESG and Carbon metrics for the underlying companies. Whilst MSCI has a broad, constantly expanding and improving set of data, this primarily covers public companies due to the nature of the legislative requirements these companies. Private companies, on the other hand, are not always subject to the same level of transparency and thus require proxying using characteristics that map to similar public companies. Our expectation is that data coverage will continue improve as pressure from the investment industry leads, as well as the Scheme's investment managers, to further transparency for private market assets and the Trustee will continue to monitor and encourage this over time.

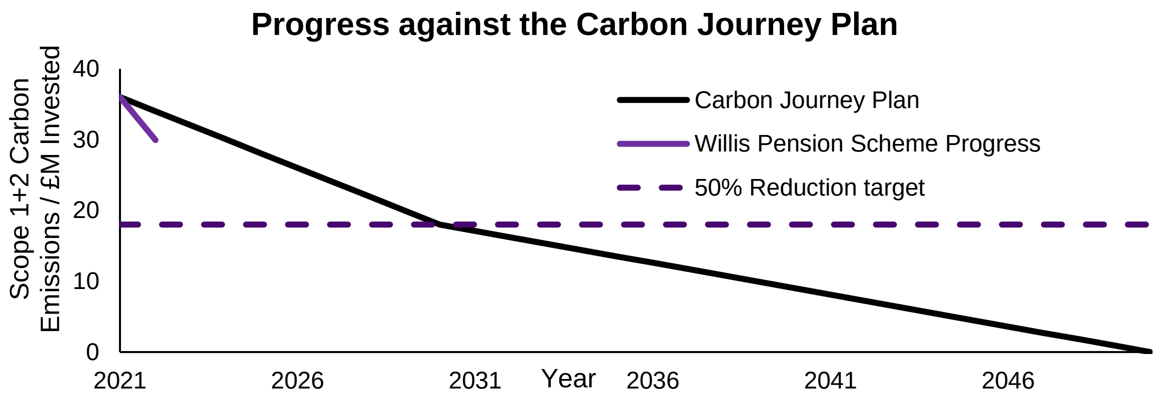
Where data was not available on the underlying holdings, the Trustee has followed the 'pro-rata approach' which involves scaling up the portfolio data that exists rather than assuming such positions have zero emissions. The Trustee believes this is a more accurate and prudent approach to take.



The targets set, and metrics disclosed, by the Trustee currently exclude emissions attributable to the Scheme's Government Bond assets. These assets are largely made up of UK Government Bonds and derivatives positions. Further detail is provided on this later in the section.

On the Trustee's behalf, the FM is working actively with its investment managers to improve the quality of the data supplied for these purposes over time. The Trustee will monitor how these metrics evolve over time on an annual basis and understand the drivers for change.

Target



The above is the Scheme's Carbon Journey Plan which graphically illustrates the objective for the Scheme's carbon footprint of the non-Government Bond assets over the long-term and the progress against the target. As seen above, the Scheme aims to reduce the carbon footprint of the non-Government Bond assets by 50% by 31st December 2030 and target net zero by 31st December 2050. The graph above uses the calculated carbon footprint output of the Scheme as at 31st December 2021 as the base year and shows the progress over 2022. The Scheme is currently ahead of its target as at year end 2022 and on track for a 50% reduction in carbon emissions by 2030. The Trustee does however recognise that year on year changes are driven by other factors such as data improvements and does not expect to take immediate action if the Scheme is ahead of behind of the target over the short term.

In the long term, the Trustee intends to use 2019 as the base year for its carbon emissions progress measurement in the future (given this reflects the period over which this has been actively monitored), however the Trustee acknowledges that the change in methodology of the industry in assessing these statistics poses slight some difficulties. As such, the Trustee intends to provide figures for 2019 and 2020 in next year's TCFD report when the numbers have been finalised and to recalibrate the Carbon Journey Plan accordingly.

To compare the carbon footprint metric across years, the impact of changes in market value needs to be considered on the value of the metric (otherwise an increase in the price of a company's shares will result in a lower carbon footprint without necessarily reflecting a fall in emissions). To counteract these impacts, the carbon footprint metric has been rebased using the market value of the Scheme's portfolio as at the baseline date (2021) to remove the effect of change in market value on the emissions per £M invested.

In addition, the Trustee has changed the methodology for attributing emissions between equity and debt holders to use Enterprise Value Including Cash (EVIC), instead of market capitalisation. To make the results more comparable between years the Trustee has recalculated the metric as at 31 December 2021 to also use EVIC to attribute emissions. However due to data availability it has not been possible to restate the 31 December 2020 metrics at the current time.

Steps being taken to achieve target

The Trustee intends that the target set will be achieved through engagement (with the Scheme's underlying managers and companies invested in), impact investing (in assets such as green energy), strategic changes (investing in assets with lower climate risk) and as a result of the 'free-rider' effect. This recognises that although the Trustee has and will take positive actions, the Trustee won't be able to achieve this goal alone and will require the continued collaboration of the global community to combat climate change. The Trustee also recognises that there may be volatility in the metrics monitored in the shorter term but has a focus on the longer-term trends in line with the target. The Trustee has taken the following steps to help achieve the target outlined:

- Appointed an FM that has made a commitment that is consistent with the Trustee's target. The Trustee assessed the FM against this target over the year considered
- The FM has appointed EOS at Federated Hermes to engage and with companies, industry and regulators to encourage decarbonisation over time
- The Trustee reviewed the engagement activities of the underlying investment managers over the year and was comfortable with the work being undertaken
- The underlying managers continue to have very strong policies, processes in these areas
- The Scheme continues to invest a significant proportion of assets in UK infrastructure and renewable energy assets which facilitate this gradual de-carbonisation of the economy
- Over the last few years, the Trustee has undertaken significant de-risking of the investment portfolio which has seen a reduction in the allocation to higher climate risk investments and a greater proportion of investments made in climate opportunities.

Approach to Government Bonds

As identified earlier, the Trustee has agreed to exclude Government Bonds from the Scheme's targets and to report these climate metrics separately. The reason for the separate disclosure is because the underlying methodology is materially different. For UK Government Bonds, for example, the carbon emissions are calculated as the territorial emissions in the whole of the UK i.e. those that take place within a country's territorial boundaries and include exports but omits imports. The denomination used to attribute emissions is the total amount of UK Government Debt outstanding.

The rationale then for the current exclusion from the Scheme's target is as follows:

- The Trustee primarily holds UK gilts as assets to hedge the Scheme's liabilities and as such, even if reducing exposure to these assets would lead to an overall improvement in climate metrics, it would open the Scheme up to excessive funding and investment risk
- The Trustee recognises that it has limited capacity and capability to engage with the UK Government on climate related metrics.
- The level of financial risk arising from these assets is perceived to be much smaller i.e. the influence of climate change on the price of UK Government Bonds in comparison to the other assets held is likely to be lower

Whilst the above provide the rationale as to why the Scheme excludes liability hedging assets from the Scheme's target, the Trustee still believes it is useful to monitor these figures over time. As such, the table below shows the climate metrics provided by the Scheme's LDI manager, BlackRock. The Trustee does also continue monitor that the manager of these Government bonds appropriately considers climate change in their actions, whether that be selecting bank counterparties for derivatives or engaging with industry discussions and consultations on climate related matters.

Metric Description (As at 31 December 2022)	Metric Value
Absolute Emissions (tCO_2e)	161,000
Carbon footprint (tCO_2e / £M invested)	160

Going forward

The Trustee is continuing to monitor the evolving climate measurement landscape with the expectation that the robustness of the metrics will improve over time. The Trustee looks forward to sharing updates on our progress in monitoring and managing climate risks and opportunities over time.

Appendix I – Climate Change glossary

Absolute Carbon Emissions	The total Carbon emissions attributable to the Scheme's assets. Note that this includes all greenhouse gases emissions as defined by the Kyoto Protocol and converts these to a carbon equivalent number.
Carbon Footprint	The total Carbon emissions per $ million invested (tCO_2e/$m invested).
Carbon Journey Plan	The strategic plan to reduce the Scheme's carbon footprint over time
Climate Transition Value at Risk (CTVaR)	A quantification of the value impact on a Company or portfolio of the expected transition required to meet the goals of the Paris Agreement.
Climate scenario analysis	Use of varied plausible climate trajectories and evaluating their potential impact on the Scheme's funding strategy (assets, liabilities and covenant)
Climate solutions / related solutions	An investment that is expected to benefit as part of the decarbonisation of the world economy. How this is specifically calculated can vary significantly.
CO_2e	Carbon dioxide emissions or equivalent.
EVIC Methodology	This weights emissions across a company's Enterprise Value (assets and liabilities) including Cash
Kyoto Protocol	The original international climate change agreement made between 'developed nations' aiming to combat rising global average temperatures.
Net Zero	The position of removing as many greenhouse gases as are emitted
Net-Zero Asset Managers Initiative	The Net Zero Asset Managers initiative is an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with the goals of the Paris Agreement.
Paris Agreement	This is an international agreement aiming to limit global temperature rises to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius
Physical Risk	The direct impacts from climate change such as more volatile weather conditions and frequent natural disasters
Portfolio Alignment	The percentage of the portfolio aligned with a particular initiative
Sustainable Investing	Sustainable investment (SI) describes long-term, finance-driven strategies that integrate environmental, social and governance (ESG) factors, effective stewardship and real-world impact in investment arrangements
Science-Based Target Initiative	Defines and promotes best practices in emissions reductions and net-zero targets in line with climate science. Currently a voluntary standard.
Scope 1 Emissions	All direct emissions from the activities of an entity or the activities under its control
Scope 2 Emissions	indirect emissions from electricity purchased and used by an entity which are created during the production of energy which the entity uses e.g. heating
Scope 3 Emissions	All other indirect emission across the whole value chain. These may include emissions related to the production of materials used by the Company or the transportation, distribution and disposal of goods produced.
Stewardship	Stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. This typically includes voting and engaging with the underlying companies the Scheme invests in.
TCFD	The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information
Transition Risk	Indirect impacts arising as a result of changes in society to combat or adapt to climate change, such as costs for businesses from meeting regulations (asset side) or improvements in mortality from healthier lifestyles
UK Stewardship Code	A voluntary code in the UK which sets out a number of principles defining how stewardship should be positively governed.