



# TCFD report for year ending 31 March 2022

The University of Oxford Staff Pension Scheme (“the Scheme”)

Produced by: Trustee of The University of Oxford Staff Pension Scheme

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# Introduction

Climate change is affecting the planet, causing extreme weather events, impacting crop production, and threatening 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 University of Oxford Staff Pension Scheme (the "Scheme"). It has been prepared by the Trustee (the "Trustee") for the year ending 31 March 2022.

# Executive summary

This report sets out the approach of the Trustee with regards to assessing, monitoring and mitigating climate-related risks in the context of the Trustee's broader regulatory and fiduciary responsibilities to their members.

The Trustee has considered carefully the recommendations set out by the Taskforce on Climate-Related Financial Disclosures ("TCFD") and the Trustee will use them to continue to assess, monitor and mitigate climate-related risks on behalf of its members. This is the Trustee's first disclosure under the framework and this report is therefore expected to evolve over time.

This report 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.

The rest of this report summarises the Trustee's current position with regards to the TCFD recommendations in the Department for Work and Pensions' (DWP's) regulatory context.



# Governance

# Climate risk and the Scheme

## Climate Mission Statement

The Trustee believes that climate change is one of the highest concern risks facing the world over the next 10 to 50 years and the Trustee recognises the significant weight of the scientific evidence underpinning this.

The Trustee believes that the risks associated with climate change could have a materially detrimental impact on the Scheme's investment returns within the timeframe that the Trustee is concerned about. Because of this risk, the Trustee seeks to integrate assessments of climate change risk into its investment risk management and strategy.

Furthermore, the Trustee believes that climate-related factors are likely to create investment opportunities. Where possible, and where appropriately aligned with the Trustee's strategic objectives and fiduciary duty, the Trustee will seek to capture such opportunities through its investment portfolio.

In seeking to mitigate the impacts of climate change risks on the Scheme, the Trustee expects that its managers, advisers and other service providers have themselves assessed the impact of climate change risk on their organisations and are taking steps to identify, mitigate and manage these risks. The Trustee also expects its managers, advisers and other service providers to seek to capture potential climate-related opportunities where appropriate.

The Trustee also aims to support progress towards net zero emissions, drawing on Oxford University's leadership on the science, economics and finance of the transition, and informed by COP26<sup>1</sup> and research from leading global organisations such as the IPCC<sup>2</sup>.

The Trustee acknowledges that there are both long- and short-term risk associated with climate change, and so considers the following time horizons:

- short term: 1 to 3 years.
- medium term: 4 to 10 years.
- long term: 11 to 30 years.

Climate-related risks and opportunities are assessed over the above time horizons, with the medium and long-term being of most concern to the Trustee, given the long-dated nature of the Scheme's liabilities and the extent to which future scientific analysis of the global climate is expected to evolve over that timescale. Where appropriate, the Trustee seeks to consider transition and physical risks separately.

## Role of the Trustee Board

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”) for the DB and DC Sections, which are reviewed and (re)approved annually (or sooner in the event of a significant change in investment policy) by the Board.

The Trustee Board receives regular training on climate-related issues as and when required, 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.

The Trustee Board regularly monitors and reviews progress against the Scheme’s climate change risk management approach.

The Trustee Board has delegated oversight of the Scheme’s climate change risk management framework to the Investment Committee (“IC”), which is a sub-committee of the Trustee Board. Implementation and day-to-day oversight has been delegated to the TCFD Working Group.

## **Role of the TCFD Working Group**

The Trustee Board set up a temporary TCFD Working Group in early 2021, which is comprised of three Trustee Directors, to recommend an appropriate climate risk framework to the Trustee Board, after which responsibility for monitoring of the Scheme’s climate risk approach was taken up as described above.

## **Role of the Investment Committee**

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

The key activities undertaken by the IC, with the support of the Trustee’s advisers, are:

- Seeking to ensure (supported by the TCFD Working Group) that any investment decisions appropriately consider climate-related risks and opportunities within the context of the Scheme’s wider risk and return requirements, and are consistent with the climate change policy as set out in the SIP.
- Regularly monitoring and reviewing progress against the Scheme’s climate change risk management approach.
- Keeping the Trustee Board apprised of any material climate-related developments through regular updates as and when required.

## **Role of external advisors**

The Trustee has agreed the following roles for its relevant external advisors:

**Investment consultant:** the Trustee’s investment consultant, Aon, provides strategic and practical support to the Trustee, the IC and the TCFD Working Group in respect of the management of climate-related risks and opportunities and ensuring compliance with the recommendations set out by the TCFD.

This includes provision of regular training and updates on climate-related issues and climate change scenario modelling to enable the IC and Trustee to assess the Scheme’s exposure to climate-related risks.

**Scheme Actuary:** the Scheme Actuary, Jay Harvey, will help the Trustee assess the potential impact of climate change risk on the Scheme’s funding assumptions.

**Covenant advisor:** the Scheme's covenant advisor, Ernst & Young, will help the Trustee understand the potential impact of climate change risk on the sponsor covenant of the participating and principal employers of the Scheme.

**Legal advisor:** the Scheme's legal advisor, Burges Salmon, will help the Trustee understand their regulatory requirements in relation to climate change risk.

## **Role of the Oxford University**

As set out in its Responsible Investment and ESG policy, the Trustee acknowledges the evolving nature of University and College policies and practices in relation to climate change. Recognising that investment decisions in connection with the Scheme are primarily matters for the Trustee, the Trustee will have regard to Council's policy including when consulting the University on behalf of the sponsoring employers on investment strategy.



# 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, infrastructure and property.

Given the number of strategies that the Scheme invests in, the Trustee has completed a best endeavours exercise to analyse the climate-related risks of each strategy.



## 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: 11-30 years

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

## Climate-related risk assessment

The TCFD Working Group has asked their managers to provide their own assessments of climate-related risks and opportunities associated with the mandates they manage on behalf of the Scheme over the short, medium and long-term, together with their reasoning and rationale for each risk. The table below summarises the responses. This assessment included the Scheme's investments as 31 March 2021 and excluded those in which the Scheme invested (or agreed to invest in) after that date (i.e. Ares, Copenhagen, LGIM and Dodge & Cox). The assessment excluded any investments in gilts, or cash due to the limited materiality of climate risk to those asset classes.

Asset class	Baillie Gifford		Generation		Sands Capital		BlackRock		M&G		DIF		Threadneedle		Liabilities		Covenant	
	Global equities	Global equities / Asia equities	EM equities	UK corporate bonds	Illiquid credit	Inflation opportunities	Infrastructure	Property										
% target asset allocation	12.5%	12.4%	4.7%	4.5%	8.4%	8.9%	3.9%	6.8%										
Physical risks	Short term	Low	Medium	Not applicable	Low / Medium	Not applicable	Low / N/A	Low	Low / Medium	Low	Low / Medium	Low	Low	Low / Medium				
	Medium term	Medium	High	Medium	Low / Medium	Not applicable	Low	Medium	Medium	Low/Medium	Medium	Medium	Low/Medium	Medium				
	Long term	High	High	Medium	Low / Medium	Not applicable	Low / Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium				
Transition risks	Short term	Low / Medium	Medium / High	Not applicable	Medium / High	Medium / Low	Low / N/A	Low	Low	Low / Medium	Low	Low / Medium	Low	Low/Medium				
	Medium term	Low / Medium	Medium / High	Low	Medium / High	Medium / Low	Low / Medium	Medium	Low	Low / Medium	Low / Medium	Medium	Low / Medium	Medium				
	Long term	Medium	High	Low	Medium / High	Not applicable	Medium	Medium / High	Low	Medium / High	Medium / High	Medium	Medium	Medium				
<b>Impact</b>	Medium	High	Low	Medium	Medium	Medium	Low	Medium	Medium	Low / Medium	Low / Medium	Low / Medium	Low / Medium	Low/Medium				

Source: Managers / Aon / EY. Asset valuations as at 30 June 2021.

## Conclusions

Based on the analysis completed, the Trustee identified that:

- The managers who did engage provided insightful commentary on and assessment of climate risks.
- There were no mandates where significant concerns were raised needing immediate action.
- There were significant differences in the way manager assessed climate risk, which may represent methodological rather than real differences in risk exposure.

## Climate related opportunities

The Trustee has identified a range of potential investment opportunities across the assets that the Scheme invests in. This includes investing in companies and industries that are set to profit from the transition to a low carbon economy. These are as follows:

### Equities

Arguably, climate-related investment opportunities are most readily accessible to equity investors and an equity index-based implementation is a good first step for investors who are seeking to take into account the risks associated with climate change whilst supporting the transition to a low carbon economy. Historically, climate-aware indices have been focused on exclusions (e.g. oil and gas, thermal coal, tar sands) but the market has evolved and there is a proliferation towards more sophisticated index products – a trend that is likely to continue over the coming years.

### Property

In most developed economies, only a small proportion of buildings are built new each year, with over 95% constituting existing stock. This creates substantial investment opportunity for investors –through their fund managers –to actively engage with tenants (be that commercial or residential) to improve building performance.

The Scheme can engage to promote more efficient building management by working with property managers and related parties to reduce overall energy use across a portfolio and gather information to target the most cost-efficient mechanism for achieving this goal. Such engagement can help mitigate the transition risk associated with property investments, wherein more stringent energy efficiency standards by governments are likely to be a key policy lever to aid the transition. Engagements can aim to encourage integration of energy efficient technologies into building operating systems or even to press for adoption of low-cost operations strategies (e.g. encouraging tenants to off the lights when empty).

### Infrastructure

Climate-related investment opportunities in infrastructure are well-known, and can include:

- Green power generation assets (solar, wind, other clean power).
- Clean technologies (e.g. carbon capture and storage).
- Natural assets (e.g. forestry and farmland).

On the debt side, green bonds for which the proceeds are earmarked for infrastructure projects (e.g. Anglian Water's £250M green bond issuance in 2017, which helped finance water recycling and drought resiliency schemes).

### Illiquid credit

Private debt includes a wide range of assets that offer sustainable outcomes, and many more 'pure play' impact opportunities than public bond markets. This is because finance is often dedicated to discrete projects rather than broad corporate loans. Private debt also involves lending to smaller companies that are more likely to be focused in a narrower range of business activities than public markets, which also contributes to the great number of pure-play impact investment opportunities in private markets. M&G believes this means the fund is well placed to take advantage of private climate-related investment opportunities that benefit from the transition to a greener economy.

In particular the fund has exposure to assets in renewable energy. Given changing investor preferences as well as regulation, these assets are well placed to provide climate opportunities in the future. This is further

underpinned by the decreasing costs associated with renewable energy and the transition to a low carbon economy. M&G therefore believes that assets in these sectors provide climate opportunities.

### **Liquid credit**

Looking at fixed income more broadly, much of the task of addressing climate change issues requires investments that are best funded through the fixed income market. In particular, long-term, large capital investments by business and governments require upfront capital. For example, while the initial development of innovative alternative energy technologies that can compete on price with fossil fuels can be harnessed within a private equity portfolio, when it comes to bringing these technologies to scale, massive investments in capital will be necessary – the kind of investments that such companies have traditionally turned to the fixed income markets for. Such investments can be accessed through, for example, an impact fixed income mandate.

Green bonds, which are debt instruments issued to finance environmentally-friendly projects, are also gaining traction with investors. With the UK Government set to issue its own green gilts and an increased focus on standards for green bond issues, the green bond market looks set to continue to grow in size over the coming years.

# 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 five 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. In particular, the Trustee acknowledges that the scenarios reflect projections of future climate patterns based on what is known today and that these projections will evolve in line with new scientific evidence as it emerges over time. The Trustee will therefore regularly review these scenarios (and the potential impact on the Scheme's assets and liabilities in those scenarios) going forward, aiming to reflect the latest climate related research as it becomes available in future.

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

Scenario	Degree warming	Scenario description
<b>Base case</b>	~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. Current pricing suggests that the market does not expect a bad climate change outcome – that is, the effects are not as damaging as first thought, and some progress is made to limit greenhouse gas emissions and global warming.
<b>No Transition</b>	>4°C	The world economy remains oriented towards improving near-term economic prospects, with companies and governments taking a "business as usual" approach. While some climate change policies are implemented, global efforts are insufficient to halt significant global warming. Critical temperature thresholds are exceeded, rising above 3C relative to pre-industrial levels by 2050 and over 4C by 2100.
<b>Disorderly Transition</b>	<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.
<b>Orderly Transition</b>	<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.
<b>Abrupt Transition</b>	<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.

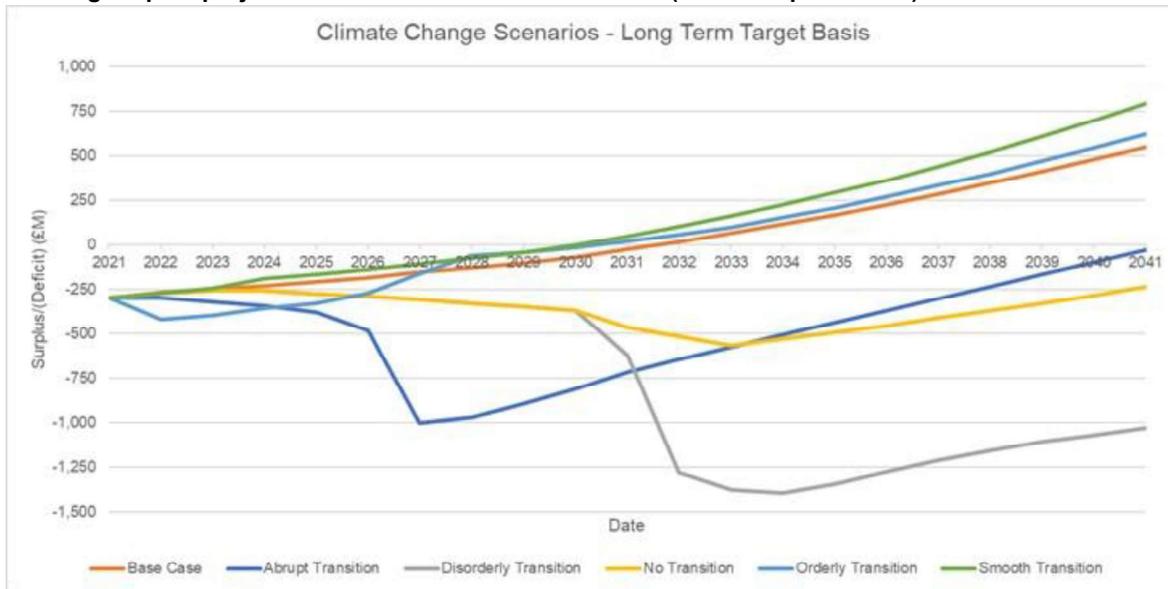
## Impact Assessment – DB Section

Based on the analysis, the Trustee considers that the investment strategy is relatively resilient to climate change risk, acknowledging that there are scenarios that could lead to a material deterioration in the funding level. The high level of diversification across the Scheme’s assets, alongside the current covenant strength, help mitigate the risk.

Of the scenarios, the Trustee believes a Disorderly Transition scenario to be of most concern, given the potential for this scenario to impact on the Scheme’s funding level within the timeframe of the existing long-term funding plans. Under that scenario, the Scheme is projected to experience a significant deficit shock within the next decade.

The Trustee, supported by the IC, should consider further opportunities to mitigate these potential shocks, such as more climate transition focused approaches, to provide further downside protection.

### Funding surplus projections under each climate scenario (technical provisions)



### Asset return projections under the climate change scenarios

Projected asset returns (% p.a.)	Base case	No transition	Disorderly transition	Orderly transition	Abrupt transition	Smooth transition
1 to 3 years	2.8%	2.1%	2.1%	-1.9%	0.1%	4.1%
4 to 10 years	2.5%	-0.9%	-1.9%	5.0%	-2.5%	2.6%
11 to 20 years	3.8%	1.5%	-3.4%	3.8%	4.4%	4.2%
20-year	3.2%	0.8%	-2.1%	3.3%	1.3%	3.6%

Source: Aon, relative to liabilities.

## **Impact Assessment – DC Section**

### **Young and mid-career members**

A Disorderly Transition scenario is likely to be of most concern for this group of members, particularly to younger members. This reflects the long-time horizon for younger members and that climate-related risks associated with investing in equities to be greatest over the long term.

Sitting alongside this, it is important to invest the majority of members' assets in growth assets during the early years, in order to help members achieve good retirement outcomes. In particular, allocating to assets such as government bonds, that offer lower exposure to climate-related risks, to be in members' best interests over the long term.

Accordingly, the Trustee and its investment manager, Legal and General, should focus attention on managing climate-related risks within the equity portfolio.

### **Members approaching retirement and at-retirement**

For older members, the default strategies are expected to be relatively resilient to climate change risk, acknowledging that there are scenarios that could lead to a material deterioration in fund values. This reflects these members' short to medium time horizons, whereas scenario climate-related risks are expected to have greatest financial impact over the longer term. The level of diversification as members approach to retirement help mitigate this risk.



# 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.

These are as follows:

- **Training** – The Trustee receives training on responsible investment to understand how ESG factors, including climate change, could impact the Scheme's assets and liabilities.
- **Advisers** – The Trustee reviews its adviser objectives to ensure advisers have appropriate climate capability, and bring important, relevant and timely climate-related issues to the Trustee's attention.
- **Investment strategy** – The Trustee ensures investment proposals explicitly consider the impact of climate risks and opportunities, and seek investment opportunities.
- **Actuarial and covenant** – The Trustee ensures that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material.
- **Managers** – The Trustee engages with the investment managers to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately
- **IRM framework** – Climate-related risks are included in the Scheme's wider risk management framework, which is overseen by the IC on a regular basis.
- **Scheme documentation** – The Trustee includes consideration of climate-related risks in the Scheme's other risk processes and documents, such as the RI policy, risk register and the SIP, and regularly reviews these.
- **Covenant** – The Trustee seeks to understand the climate-related risks to the employer over the short, medium and long term.



# Metrics and Targets

# Our climate-related metrics

The Trustee uses some 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 key to enabling 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. The metrics for the Scheme’s DB and DC sections are shown below.

## DB Section

<b>Total Greenhouse Gas emissions</b>	<b>62,409</b> tons CO <sub>2</sub> e	The total greenhouse gas (“GHG”) emissions associated with the portfolio. It is an absolute measure of carbon output from the Scheme’s investments
<b>Carbon footprint</b>	<b>62.9</b> tons CO <sub>2</sub> e/£m	Carbon footprint is an intensity measure of emissions that takes the total GHG emissions and normalises it to take account of the size of the investment made.
<b>Data quality</b>	<b>68%</b>	A measure of the proportion of the portfolio that the Trustee has high quality (verified and estimated) data for.

Source: Aon. Managers. Note that some estimates carried out by Aon where required in order to aggregate the data across the managers in a consistent manner. Cash holdings held with SSGA are not included.

## Data quality

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. In particular, Aon requested emissions data from managers that cover 95% of the Scheme's asset portfolio (i.e. this represents all the assets except for cash). We have received data (in some form) from managers covering 68% of the portfolio. Data was not available for around 32% of the assets. Emissions data that came from reported sources (rather than estimated) covered 44% of the assets.

Therefore, the metrics shown underestimate the Scheme's actual GHG emissions across the Plan's total invested assets overall. 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.

## DC Section

The Trustee's investment adviser, Aon, requested data from Legal and General which is the Scheme's sole fund manager/provider.

<b>Total Greenhouse Gas emissions</b>	<b>1,923</b> tons CO <sub>2</sub> e	The total greenhouse gas ("GHG") emissions associated with the portfolio. It is an absolute measure of carbon output from the Scheme's investments
<b>Carbon footprint*</b>	<b>84.2</b> tons CO <sub>2</sub> e/£m	Carbon footprint is an intensity measure of emissions that takes the total GHG emissions and normalises it to take account of the size of the investment made.
<b>Data quality</b>	<b>88%</b>	A measure of the proportion of the portfolio that the Trustee has high quality (verified and estimated) data for.

Source: Aon, Legal & General. Note that some estimates carried out by Aon where required in order to aggregate the data across the managers in a consistent manner. At this stage Legal and General reported on scope 1 and 2 emissions only.

\*The emissions provided by Legal and General were in USD amounts and have been converted to GBP using the exchange rate as at 31 March 2022

## Data quality

Legal and General was able to provide the requested data for all of the funds used by the Scheme, and while the data was of good quality overall (covering 88% of the total fund), the reported emissions metrics do not include all of the Scheme's GHG emissions. As a result, the metrics underestimate the Scheme's GHG emissions slightly. The Trustee expects the data quality to improve in future through continued engagement (via Aon) with Legal and General, encouraging them to increase the data coverage across asset classes over time.

# 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. 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



Based on the observations of data quality summarised in the previous section, the Trustee has agreed to set the following data quality target for its Scheme's assets:

**In 5 years' time, achieve above 80% coverage of carbon emission data across all asset classes split across scopes 1, 2 and 3 in the DB section, and above 95% coverage across classes in the DC section.**

The Scheme's performance against the target will be measured and reported on every year. Over time, this will show the Scheme's progress against the target.

# Glossary

**Governance** refers to the system by which an organisation is directed and controlled in the interests of shareholders and other stakeholders.<sup>1</sup> Governance involves a set of relationships between an organisation's management, its board, its shareholders, and other stakeholders. Governance provides the structure and processes through which the objectives of the organisation are set, progress against performance is monitored, and results are evaluated.<sup>2</sup>

**Strategy** refers to an organisation's desired future state. An organisation's strategy establishes a foundation against which it can monitor and measure its progress in reaching that desired state. Strategy formulation generally involves establishing the purpose and scope of the organisation's activities and the nature of its businesses, taking into account the risks and opportunities it faces and the environment in which it operates.<sup>3</sup>

**Risk management** refers to a set of processes that are carried out by an organisation's board and management to support the achievement of the organisation's objectives by addressing its risks and managing the combined potential impact of those risks.<sup>4</sup>

**Climate-related risk** refers to the potential negative impacts of climate change on an organisation. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations.<sup>5</sup>

**Climate-related opportunity** refers to the potential positive impacts related to climate change on an organisation. Efforts to mitigate and adapt to climate change can produce opportunities for organisations, such as through resource efficiency and cost savings, the adoption and utilization of low-emission energy sources, the development of new products and services, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market, and industry in which an organisation operates.<sup>6</sup>

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<sup>1</sup> A. Cadbury, [Report of the Committee on the Financial Aspects of Corporate Governance](#), London, 1992.

<sup>2</sup> OECD, [G20/OECD Principles of Corporate Governance](#), OECD Publishing, Paris, 2015.

<sup>3</sup> TCFD, [Recommendations of the Task Force on Climate-related Financial Disclosures](#), 2017

<sup>4</sup> Ibid

<sup>5</sup> Ibid

<sup>6</sup> Ibid

**Greenhouse gas emissions (“GHG”) scope levels<sup>7</sup>** 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 refers to all direct GHG emissions.

Scope 2 refers to indirect GHG emissions from consumption of purchased electricity, heat, or steam.

Scope 3 refers to other indirect emissions not covered in Scope 2 that occur in the value chain of the reporting company, including both upstream and downstream emissions. Scope 3 emissions could include: the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g., transmission and distribution losses), outsourced activities, and waste disposal.<sup>8</sup>

**Value chain** refers to the upstream and downstream life cycle of a product, process, or service, including material sourcing, production, consumption, and disposal/recycling. Upstream activities include operations that relate to the initial stages of producing a good or service (e.g., material sourcing, material processing, supplier activities). Downstream activities include operations that relate to processing the materials into a finished product and delivering it to the end user (e.g., transportation, distribution, and consumption).<sup>9</sup>

**Climate scenario analysis** is a process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty. In the case of climate change, for example, scenarios allow an organisation to explore and develop an understanding of how the physical and transition risks of climate change may impact its businesses, strategies, and financial performance over time.<sup>10</sup>

**Net zero** means achieving a balance between the greenhouse gases emitted into the atmosphere, and those removed from it. This balance – or net zero – will happen when the amount of greenhouse gases add to the atmosphere is no more than the amount removed.<sup>11</sup>

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<sup>7</sup> World Resources Institute and World Business Council for Sustainable Development, [The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard \(Revised Edition\)](#), March 2004.

<sup>8</sup> PCC, [Climate Change 2014 Mitigation of Climate Change](#), Cambridge University Press, 2014.

<sup>9</sup> TCFD, [Recommendations of the Task Force on Climate-related Financial Disclosures](#), 2017

<sup>10</sup> Ibid

<sup>11</sup> Energy Saving Trust, [What is net zero and how can we get there? - Energy Saving Trust](#), October 2021

# Appendix – climate scenario modelling assumptions

The purpose of the climate scenario modelling is to consider the impact of climate-related risks on the Schemes assets and liabilities over the long-term.

The scenario modelling assumes a deterministic projection of assets and liabilities on the technical provisions basis, using standard actuarial techniques to discount and project the Scheme's expected future cashflows.

- i. It models the full yield curve as this allows for a more accurate treatment of the liabilities and more realistic modelling of the future distribution of interest rates and inflation.
- ii. The modelling parameters vary deterministically for each scenario.

The liability projections are approximate, but they are appropriate for this analysis. However, a full actuarial valuation carried out at the same date may produce a materially different result.

The scenario modelling focusses on the impact of climate change on the Scheme's assets and liabilities. It does not consider the impact climate change could have on the covenant risk or mortality risk.

The scenario modelling reflects market conditions and market views at the time of the analysis. The model may produce different results for the same strategy under different market conditions.

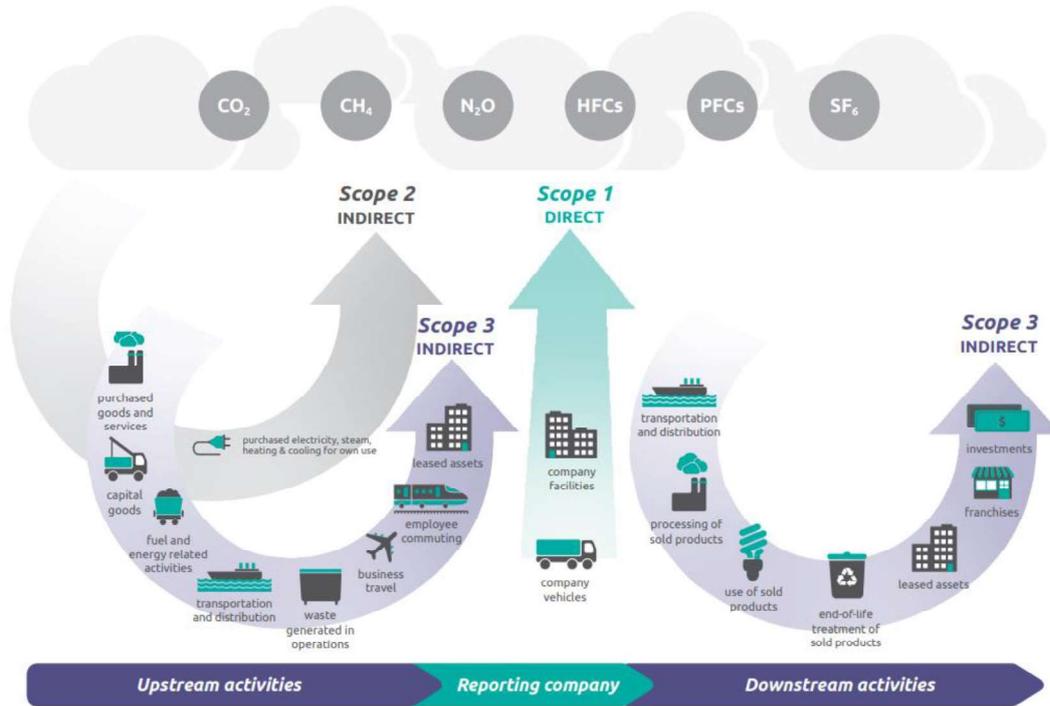
This report, and the work relating to it, complies with 'Technical Actuarial Standard 100: Principles for Technical Actuarial Work' ('TAS 100'). The model complies with TAS 100.

## Key Assumptions

	<b>Temperature risk by 2100</b>	<b>Reach net zero by</b>	<b>Carbon price (2030/2050)</b>	<b>Introduction of environmental regulation</b>
No transition	>4C	After 2050	\$40/\$50	None
Disorderly transition	<3C	After 2050	\$65/\$340	Late and aggressive
Abrupt transition	1.5C – 2C	2050	\$135/\$280	Aggressive
Orderly transition	1.3C – 2C	2050	£100/\$215	Coordinated
Smooth transition	<1.5C	2045	\$80/\$165	High coordination

# Appendix – Greenhouse gas emissions in more detail

Overview of GHG Protocol scopes and emissions across the value chain



Source: Greenhouse Gas Protocol, [Corporate value chain \(scope 3\) Accounting and Reporting Standard](#), 2011