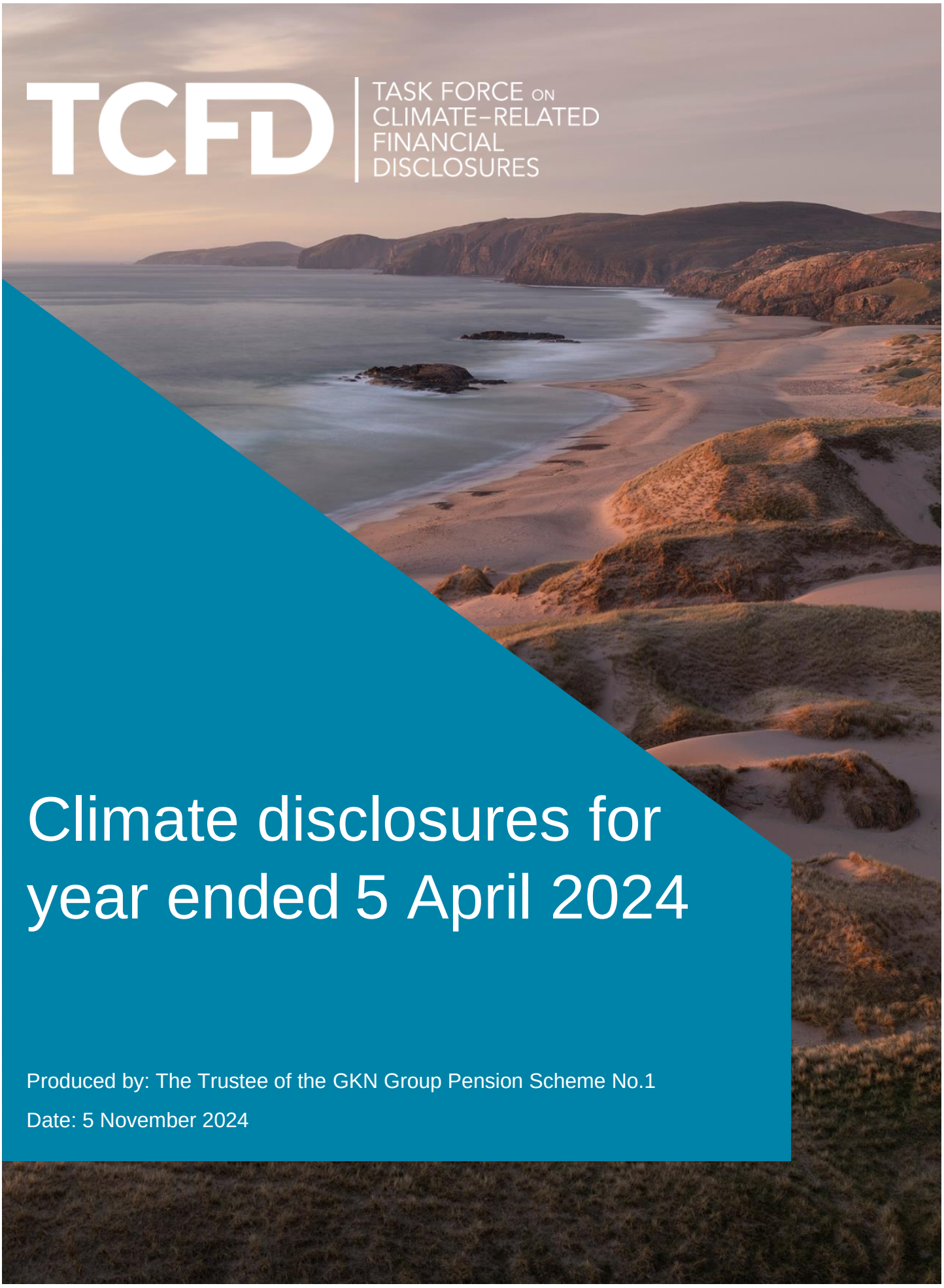


Climate disclosures for year ended 5 April 2024

Produced by: The Trustee of the GKN Group Pension Scheme No.1

Date: 5 November 2024

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 vulnerability of GKN Group Pension Scheme (No.1) (the "Scheme") to climate-related risks will help us to mitigate the risks and take advantage of any opportunities.

U.K. regulations require trustees of pension schemes with more than £1bn in assets, on or after 1 March 2021, to meet certain climate governance requirements and publish an annual report on their scheme's climate-related risks. As at the Scheme year ended 5 April 2024, the Scheme's assets are now less than £1bn, however, the Trustee will continue to be subject to these climate change governance requirements until such a time as the Scheme's relevant assets fall below £500M.

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 increase accountability and provide decision-useful information to investors and beneficiaries.

This report is the annual climate disclosures for the Scheme for the year ended 5 April 2024. This report has been prepared by the Trustee of GKN Group Pension Scheme (No.1) (the "Trustee") in accordance with the regulations set out under The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 (the "Regulations") and is aligned to the Taskforce for Climate-related Financial Disclosures ("TCFD") framework.

The four elements covered in the report are:

Governance:	The Scheme's governance around climate-related risks and opportunities.
Strategy:	The 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.

Table of contents

Executive summary

This report sets out the actions that we, the Trustee, have taken to understand the potential impact climate change could have on the Scheme.

We have worked closely with our DB investment consultant, Aon, to identify the climate-related risks and opportunities faced by the Scheme, and to understand ways we can manage and mitigate those risks.

Overview of the Scheme

The Scheme is set up as a hybrid Scheme, which has two sections, a Defined Benefit ("DB") Section of c.£626.4M and a Defined Contribution ("DC") Section of c.£203.5M, as at 31 December 2023.

The DB Section invests across a range of assets including Credit, Property, Public and Private Equity, and within this report we consider the impact of climate related risks on those asset classes, the investment strategy and potential impact on the funding of the Scheme.

For the DC Section, we have focused our attention on the default investment strategy. The default investment strategy is a lifestyle strategy which automatically switches from a diversified portfolio to a growth portfolio, as members approach retirement age.

The Trustee has been supported by its DB investment consultant, Aon Investments Limited ("Aon") with the production of its TCFD report.

Governance

The Trustee is ultimately responsible for the oversight of all strategic matters relating to the Scheme, this includes climate-related risks and opportunities.

The Trustee delegates the day-to-day oversight of the Scheme's climate change risk management to the fiduciary manager, Cardano, for the DB Section and the DC investment manager, Legal & General Investment Management ("LGIM"), for the DC Section.

Strategy

DB Section
Diversification of assets is key to a portfolio that can manage the risks associated with climate change and the transition to a low carbon economy. The DB Section is exposed to low levels of risk in the short-term, and this is driven by the significant allocation to a Liability Driven Investments ("LDI") portfolio. This is less exposed to climate risks over the aforementioned time horizon, given the principle underlying assets are Sovereign Bonds. In the medium- to long-term, the Scheme is exposed to greater climate-related risks, as regulatory and technological changes increase alongside increased prevalence of extreme weather; this will particularly impact the Global Equity, Private Equity and Corporate Credit asset classes in the DB portfolio.

DC Section
The DC Section is diversified across a range of Equity, Property, Corporate Credit, and Multi-Asset funds. The DC Section is exposed to low levels of risk in the short-term and medium-term. However, in the long-term the Scheme is more exposed to climate-related risks, specifically Market and Regulatory transition risks. This is mainly driven by potentially significant drops in the demand for oil and gas, causing large financial repercussions if companies and countries do not have mitigation actions in place. Furthermore, social unrests may occur if climate policy does not sufficiently address climate change.

Risk Management

This section contains the Scheme's risk management framework, which assists with the ongoing management of climate-related risks and opportunities. Both the fiduciary manager for the DB Section and the investment manager for the DC Section demonstrate a good understanding of climate-related risk management, having undertaken climate-related activities during the year. The process of identifying and assessing climate-related risks has been reviewed by the Trustee, as part of the process of producing this TCFD report.

Metrics and Targets

The Trustee gathered the carbon metrics data primarily from its fiduciary manager for the DB Section and the DC investment manager for the DC Section. The Trustee has disclosed information on four climate-related metrics for each of the DB and DC Sections of the Scheme:

- Total Greenhouse Gas ("GHG") Emissions.
- Carbon Footprint.
- Data Quality.
- Portfolio Alignment.

The Trustee has set the following targets for each Section of the Scheme:

DB Section target:

The Trustee has set a target to improve the data coverage metric for Scopes 1, 2 and 3 across the non-liability driven investment ("LDI") portfolio to 80% by 2026.

DC Section target:

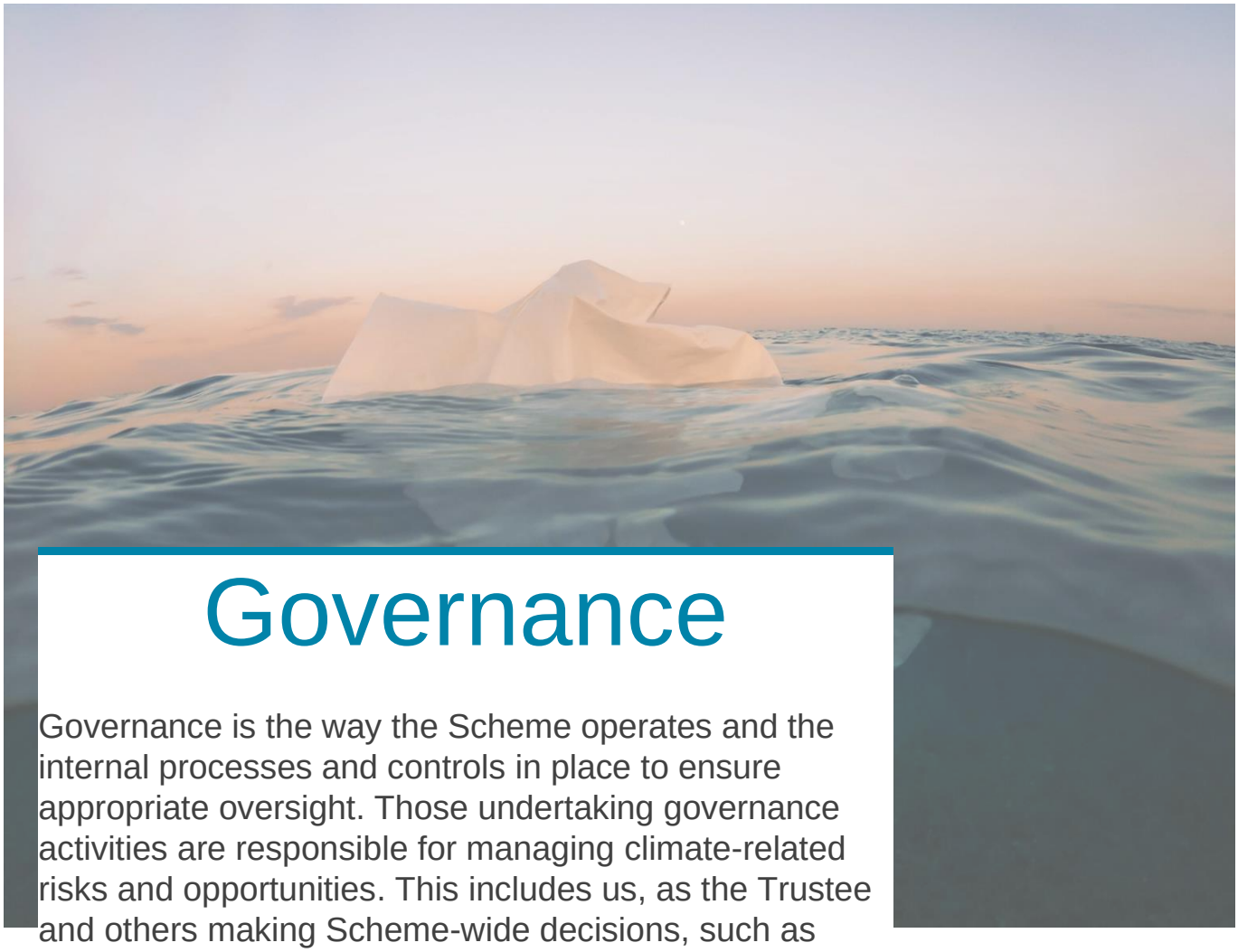
The Trustee has set a target to improve the data coverage for Scope 1 and 2 emissions only to 100% by 2026.

The Trustee has reviewed the metrics and the targets, and believes they remain appropriate.

We hope you find it informative reading this report and understanding more about how we are managing climate-related risks and opportunities within the Scheme.

Andrew McKinnon Chair of Trustees

on behalf of the Trustee of GKN Group Pension Scheme No.1



Governance

Governance is the way the Scheme operates and the internal processes and controls in place to ensure appropriate oversight. Those undertaking governance activities are responsible for managing climate-related risks and opportunities. This includes us, as the Trustee and others making Scheme-wide decisions, such as those relating to the investment strategy or how it is implemented, funding, the ability of the sponsoring employer to support the Scheme and liabilities.

Our Scheme's governance

As the Trustee of the Scheme, we are responsible for overseeing all strategic matters related to the Scheme. This includes the governance and management frameworks relating to environmental, social and governance ("ESG") considerations and climate-related risks and opportunities.

We agreed our climate-related beliefs and our approach to managing climate change risk. These are set out in the Governance section of this report below and are reviewed annually.

Role of the Trustee

The Trustee 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 has collective responsibility for managing the Scheme's climate change risk framework.

The Trustee's Climate Beliefs

The Trustee has discussed and agreed its climate-related beliefs and overarching approach to managing climate change risk. These beliefs and objectives are as follows:

▪ **Climate Change:** The Trustee recognises climate change is an urgent and critical global challenge. It poses systemic risks to financial markets due to both physical and transitional risks; physical risks referring to disruptive climate events/trends and transitional referring to the risks and associated adaptation costs arising from a move to a low-carbon economy. These risks are likely to impact the Scheme's investments and members' benefits.

▪ **Fiduciary Duty**: The Trustee's focus is on its fiduciary duty to act in the best financial interest of the Scheme and its beneficiaries, seeking the best return that is consistent with a prudent and appropriate level of risk. Among other things, this includes the risk that environmental factors, including climate change, may negatively impact the value of the investments held if not understood and evaluated properly. The Trustee recognises that ESG factors are financially material and that taking them into account with a long-term vision is consistent with its fiduciary duty to members of the Scheme.

▪ **Responsible Investment**: The Trustee recognises that whilst risk and return considerations are important, there is a view that financial factors should not be the only consideration when making investment decisions. The Trustee believes that whilst climate change is a key risk factor to the Scheme, social and governance factors are also important, both from a financial and non-financial point of view.

▪ **Opportunities:** The Trustee wants the Scheme's investment portfolio to be resilient to the risks posed by the transition to a low carbon economy. As such, when assessing the impact of climate change on the Scheme's investment strategy, the Trustee (via its fiduciary manager) will seek to identify investment opportunities that have the potential to be resilient to climate change risks. This may include investments in low-carbon or ESG-

tilted investments if these investment opportunities fit within the wider strategic objectives of the Scheme. The Trustee believes that taking ESG considerations into account may lead to better risk-adjusted returns.

▪ **Engagement**: The Trustee believes that it should practically prepare for the risks associated with climate change. The Trustee expects that its fiduciary manager will itself engage with the underlying managers it appoints to the Scheme's portfolios and measure the impact this engagement has on outcomes associated with the investment decisions taken on the Trustee's behalf.

▪ **Framework:** As a first step, the Trustee has formalised its climate change risk management framework (see the *Risk Management* section of this report), which sets out the Trustee's processes for identifying, understanding, and managing climate-related risks. The Trustee will review its climate change risk framework annually and will monitor progress against its objectives at least annually, and more frequently if required.

Trustee Training and Delegation

The Trustee receives training on climate-related issues at least once a year, but more frequently if required. This training ensures 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. This forms a routine part of Trustee meetings, and part of the ongoing programme of training for the Trustee.

The Trustee delegates the day-to-day responsibility for all investment decisions, including those in relation to climate-related risks and opportunities of the DB Section, to the fiduciary manager and to the DC investment manager for the DC Section. The Trustee considers the fiduciary manager and DC investment manager to be best placed to invest the assets on their behalf within the remit of their agreements.

Climate-related risks and opportunities are integrated into the Trustee's risk management framework to maintain oversight of the climate-related risks and opportunities that are relevant to the Scheme.

Trustee update

During the year, in its meetings with its DB investment consultant, the Trustee received insight on some of the Pension's Regulator's key lessons learnt from the initial waves of TCFD reporting.

The Trustee also received training on the climate-related metrics to be reported on, such as the inclusion of Scope 3 emissions.

Roles of other advisers

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

The Trustee annually reviews the quality of its advisers' provision of advice and support on climate-related issues.

Investment consultants – The Trustee has two investment consultants, one for the DB Section, and one for the DC Section of the Scheme. The DB investment consultant provides strategic advice and practical support to the Trustee in respect of the management of climate-related risks and opportunities and ensuring compliance with the recommendations set out by the TCFD, with support of the DC investment consultant, who provides information in relation to the DC Section. This includes provision of regular training and updates on climate-related issues and climate change scenario

Trustee update

During the year, the Trustee reviewed the quality of its advisers' provision of advice and support on climate-related issues.

For its investment consultant, this is part of the annual review of investment consultant objectives.

modelling to enable the Trustee to assess the Scheme's exposure to climate-related risks.

The Trustee will monitor the quality of climate-related support and advice from its investment advisers as part of an annual review against the investment consultant's objectives.

Scheme Actuary - The Scheme Actuary will help the Trustee assess the potential impact of climate change risk on the Scheme's funding.

As part of its assessment of its advisers' climate-related competence, the Trustee will seek to understand how climate-related factors affect the funding assumptions used for the Scheme, and which sources of expertise the Scheme Actuary has used in determining the appropriate assumptions to use.

Fiduciary/Investment Managers (the "managers") - The Scheme's managers will help the Trustee understand how they, and the underlying managers where relevant, consider climate change risk in their investment approach. The Scheme's managers are also responsible for the implementation of climate-related opportunities, where appropriate.

The Trustee will monitor the performance of the managers on an ongoing basis through the regular reports and meetings held to discuss the management of the Scheme's portfolios. As part of this, the Trustee will seek updates regarding the climate-related capability and expertise present, including how this influences the Scheme's portfolios.

Covenant adviser - the Trustee's covenant adviser will help the Trustee understand the potential impact of climate change risk on the sponsor covenant on a triennial basis, in line with the Scheme's full actuarial valuation starting from 2025. As part of covenant advice sought, the Trustee will seek to understand how climate-related factors could affect the sponsoring employer's strategy over time and consider this in light of the Scheme's de-risking journey. In doing so, the Trustee will seek information from the covenant adviser regarding their credentials in assessing climate-related factors.

2025 will be the first year during which the Trustee will conduct an actuarial valuation and an updated covenant assessment, whilst producing its TCFD-aligned disclosures. The Trustee expects the Scheme Actuary and covenant adviser will incorporate climate-related risks and opportunities into these assessments (more detail is provided later in this report). The Trustee intends to include more detail once these take place, in its future reporting.

Strategy

It is crucial to think strategically about the climate-related risks and opportunities that will impact the Scheme if we are to stand a chance of mitigating the effects of climate change.

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.

What climate-related risks are most likely to impact the Scheme?

We carry out a qualitative risk assessment of the asset classes the Scheme is invested in. From this we identify which climate-related risks could have a material impact on the Scheme. We also identify suitable climate-related opportunities.

Given the number of asset classes within the Scheme, we have completed this exercise to the best of our ability. To help us with our assessment, we surveyed our managers, asking them to rate the climate-related risks and opportunities they believe the funds are exposed to.

Our investments

DB Section:

The DB Section's investment portfolio is diversified across a range of different asset classes including Global Equity, Corporate Credit, Sovereign Bonds and Private Equity.

Asset Class	Private Equity	Multi-asset	LDI
Strategic Allocation	4%	30%	66%

Source: Cardano. Asset allocations as at 31 December 2023.

DC Section:

The assets of the DC Section are diversified across a range of assets classes. The Trustee has focused its analysis on the default investment strategy, which is invested in multi-asset arrangements split between a diversified and growth section. The self-select funds have been excluded from this analysis as only a small number of members, and a small amount of assets, are invested in the select funds.

Asset Class	Diversified	Growth
Strategic Allocation	35%	65%

Source: LGIM. Asset allocations as at 31 December 2023.

How the risk assessment works

Risk categories

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

Transition risks are associated with the transition towards a low-carbon economy.

Physical risks are associated with the physical impacts of climate change on companies' operations.

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

We assessed the climate-related risks and opportunities over multiple time horizons considering the liabilities of the Scheme and its obligations to pay benefits. We decided the most appropriate time horizons for the Scheme are:

DB Section:
- Short-term: 1-3 years
- Medium-term: 4-10 years
- Long-term: 11+ years

DC Section:
- Short-term: 1-5 years
- Medium-term: 6-10 years
- Long-term: 11-30+ years

The time horizons of the DC Section are longer than the DB Section, to reflect the younger population of members.

More details about transition and physical risks can be found in the Appendix.

Qualitative assessment

Climate-related risks

Key conclusions

DB Section

Overall, the Scheme's DB investments display a variety of low, medium and high levels of financial exposure to the physical and transition risks within the time horizons considered. From this we identified which climate-related risks and opportunities could have a material impact on the Scheme and we are comfortable that the Scheme's managers have a good understanding of climate-related risks and possess the appropriate knowledge when assessing the climate-related risks for the Scheme.

Global Equity, Private Equity and Corporate Credit have the highest risk exposures, rated mostly medium or high across all time horizons. Our fiduciary manager believes that in the short-term, the increased regulatory

burden and further societal pressures will raise reputational concerns. In the medium- to long-term our fiduciary manager believes a policy shift will impact market outcomes and further attention on companies' greenhouse gas ("GHG") emissions will heighten reputational risks. Physical risks ratings were a result of increasing prevalence of weather events, where acute impacts are already felt in insurance alongside environmental tipping points (e.g., wildfires) leading to financial tipping points, such as insurable markets.

For sovereign bonds, our fiduciary manager believes that inflation and geopolitics will be the highest contributor to risk. Cardano does not expect the investments to be significantly affected by climate change.

DC Section

Overall, the Scheme's DC investments display low, medium and high levels of financial exposure to the physical and transitional risks, within the time horizons considered. We are comfortable that the Scheme's DC investment manager has a good understanding of climate-related risks.

Market and regulatory transitional risks have the highest risk exposures, rated red in the long-term. For market risks, due to a large decline in demand for fossil fuels there is expected to be large financial repercussions at a global multi-asset portfolio level that is dependent on companies' and countries' mitigative actions up until that point. For regulatory risks, if climate-policy fails to sufficiently address climate change, social unrest could become a material risk to both companies' and countries' political stability.

Overall, there have been no significant changes in the climate risk profile of the Scheme's investments since we last undertook this assessment last year.

The tables show our qualitative assessment of the transition and physical risk exposures for each asset class the Scheme is invested in.

DB Section - Global Equity

	Physical Risks		Transitional Risks			
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short term	Amber	Green	Green	Green	Amber	Amber
Medium term	Amber	Amber	Amber	Amber	Red	Red
Long term	Red	Red	Red	Red	Red	Red

Source: Cardano. Data as at 31 March 2024

Physical Risks:

- In the short-term, Cardano is seeing increasing prevalence of extreme weather events (e.g., floods, wildfires). Whilst Cardano believes we are not yet seeing frequent tipping points, acute impacts are already felt in certain sectors, e.g. insurance.

- Over the medium- to long-term Cardano expects the severity and frequency of weather events to increase in the 2030s. Environmental tipping points include, shrinking ice caps (and so, less 'white ice' reflecting the sun's rays), thawing of permafrost (which releases methane), wildfires (due to hotter, dryer temperatures), weakening jet stream (leading to hotter polar regions). According to the World Meteorological Organisation, the El Niño-Southern Oscillation ("ENSO") – a recurring natural phenomenon characterised by fluctuating ocean temperatures in the equatorial Pacific, coupled with changes in the atmosphere – has a major influence on climate patterns in various parts of the world, by raising average temperatures. These environmental tipping points lead to financial tipping points, such as insurable markets and stranded assets, with the issue becoming more chronic (systemic).

Transitional Risks:

- Whilst, in the short-term, climate change is increasingly understood and socialised within financial markets, Cardano believes other macro-factors, such as inflation, interest rates, energy security and geopolitics, are likely a bigger contributor to risk/returns than climate change.
- Over the medium- to long-term, Cardano believes policy shifts are increasingly likely to impact market outcomes on these time horizons. Cardano expects this to impact growth and inflation in different scenarios, leading to increased uncertainty on the outcome for markets. In addition, policy will impact the costs of transitioning for companies.
- Overall, this may lead to increased risk premiums, though the impacts on specific sectors and geographies vary substantially from scenario to scenario. Cardano believes that the 2020s are the swing decade for policy change, with ambitious 2030 decarbonisation targets set by UK and Europe. Cardano expects the regulatory implementation and technology change to follow in the 2030s, hence the high-level risk assessment.

DB Section - Corporate Credit

	Physical Risks			Transitional Risks		
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short term	Green	Green	Green	Green	Amber	Amber
Medium term	Amber	Amber	Amber	Amber	Red	Red
Long term	Red	Red	Red	Red	Red	Red

Source: Cardano. Data as at 31 March 2024

- The fiduciary manager believes that similar impacts will prevail for both Global Equities and Corporate Credit over the short- to long-term time horizons. As such, the commentary is the same as for Global Equity. However, Global Equities are likely to be more sensitive to the physical effects of climate change than that of Corporate Credit, this is

because of in the event of insolvency of the underlying companies on which the securities are written, debt is paid before equity, thus the reduced risk ratings on this RAG table.

DB Section - Sovereign Bonds

	Physical Risks		Transitional Risks			
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short term	Green	Green	Green	Green	Green	Green
Medium term	Green	Green	Amber	Amber	Amber	Amber
Long term	Amber	Amber	Amber	Amber	Amber	Amber

Source: Cardano. Data as at 31 March 2024

Physical Risks:

- Whilst Cardano is seeing an increasing prevalence of weather events, it does not expect environmental tipping points to pass in the short term. The Scheme invests in high quality sovereign debt whose governments, over the medium term, will be less impacted by physical risks than developing countries. Whilst there may be a financial impact of the physical risks, this should be put in the context of the other risks impacting the financial outcome of sovereign bonds.

Transitional Risks:

- The manager believes that for short-term transitional risks, macro-factors such as inflation and geopolitics will be a greater contributor to risk/return than climate change. During the medium- to long-term time horizons, due to increases in climate transitions and changes in policy frameworks, the manager expects there to be a medium level of financial risk, as assigned by the 'amber' rating.

DB Section - Private Equity

	Physical Risks		Transitional Risks			
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short term	Amber	Green	Green	Green	Green	Amber
Medium term	Amber	Amber	Amber	Amber	Red	Red
Long term	Red	Red	Red	Red	Red	Red

Source: Cardano. Data as at 31 March 2024

Physical Risks:

- Over the long-term time horizon, the rationale behind the high level of financial risk rating for physical risks, is explained by Cardano's expectation that there will be an increasing prevalence in extreme weather event, where acute impacts are already felt. These risks are

not expected to be a significant concern, given the expected duration of the holdings.

Transitional Risks:

- Medium levels of financial risk are considered in the short term, due to increased climate change disclosures, as well as the expectation of further societal protests raising reputational concerns. Over the medium- to long-term time horizons, Cardano believes policy shifts will impact market outcomes, and further attention to companies' GHG emissions will heighten reputational risks, providing rationale for higher levels of financial risk. Similar to the physical risks, the long-term transitional risks are not expected to be a significant concern, given the expected duration of the holdings.

DC Section

	Physical Risks			Transitional Risks		
	Acute	Chronic	Regulatory	Technology	Market	Reputation
Short term	Green	Green	Green	Green	Green	Green
Medium term	Amber	Green	Amber	Amber	Amber	Green
Long term	Amber	Amber	Red	Amber	Red	Amber

Source: LGIM. Data as at 31 March 2024.

Physical Risks:

- Over the short term, due to risks being relatively geographically concentrated, Cardano does not expect physical risks to have a material impact on the multi-asset fund. Over the medium term, this is expected to increase, specifically acute risks, even if limiting global warming is in place. Over the long term, physical risks increase due to the frequency and severity of extreme weather having increasingly significant financial impacts.

Transitional Risks:

- In the short term, transitional risks are not expected to have a material financial impact on the fund. During the medium- to long-term time horizons, policy shifts are expected to impact market outcomes, with companies and countries adopting low-carbon technologies. Furthermore, the impact on carbon pricing is expected to rise, causing a significant financial implication on global equity indices, providing rationale for a high financial risk rating in the long term.

Climate-related opportunities

Similar to last year, we have identified some climate-related opportunities which may be suitable for the Scheme. These opportunities are valid over the short-, medium- and long-term time horizons.

Equity, corporate credit and private equity

Public and private companies actively involved in the transition to a low carbon economy are likely to suffer from less financial risk and achieve more positive investment outcomes; particularly in a 1.5°C world. Even in warmer scenarios, Cardano believes that the realisation of the need to change will create opportunities for those well positioned.

For example, companies that invest in climate resilient ways, and those who manage their supply chains, are less likely to suffer from financial risks and more able to take advantage of positive investment outcomes and opportunities.

Opportunities for the Scheme include investing in enhanced index equity or bond funds, designed to mitigate the risks and support the transition to a low carbon economy. The Scheme is currently invested in a sustainable equity allocation within its growth portfolio. The Scheme also invests in private equity investments related to renewable energy.

Government bonds

Governments issuing green bonds can take advantage of cheaper financing opportunities, given that green bonds will generally be issued a lower yield ("Greenium") to an equivalent non-green issue.

Holding green bonds within the LDI portfolio is permissible but is dependent on factors such as fit to the liabilities and valuation compared with standard government bonds.

DC Section

Opportunities for multi-asset funds are presented in various ways. For example, the declining costs of renewables, electric vehicles, and alternative fuels companies can benefit from this growth. Alongside this, technologies such as solar and wind energy are already cheaper than traditional alternatives and are likely to grow as the economy transitions.

Furthermore, through innovative infrastructure such as carbon capture and storage, as well as innovation of direct air capture, low-or-zero carbon hydrogen and nature-based solutions, other opportunities present themselves for the Scheme.

Source: Managers

How resilient is the Scheme to climate change?

Last year we carried out climate change scenario analysis to better understand the impact climate change could have on the Scheme's assets and liabilities, where relevant.

The analysis looked at a variety of climate change scenarios for the DB and DC Sections. We chose these scenarios because we believe that they provide a reasonable range of possible climate change outcomes. The climate scenarios are compared to a "base case" scenario, which considers what is currently priced into the market.

Each climate scenario considers what may happen to the Scheme when transitioning to a low carbon economy under different temperature-related environmental conditions. These scenarios were developed by the Trustee's DB investment consultant, Aon, and are based on detailed assumptions. They are only illustrative and are subject to considerable uncertainty.

The climate scenarios intend to illustrate the climate-related risks the Scheme is currently exposed to, highlighting areas where risk mitigation could be achieved through changing the investment portfolio.

Other relevant issues such as governance, costs and implementation (including manager selection and due diligence) must be considered when making changes to the investment strategy.

Investment risk is captured in the deviance from the base case scenario, but this is not the only risk that the Scheme faces. Other risks include covenant risk, longevity risk, timing of member options, basis risks and operational risks.

Trustee update

Under the Regulations, climate scenario analysis must be carried out at least every three years, with an annual review in each intervening year to confirm the most recent analysis is still appropriate.

We reviewed the scenario analysis completed as at 31 March 2022 and we are comfortable that the analysis remains appropriate for this year's report.

DB Section - impact on the funding level

Key conclusions

The DB investment portfolio exhibits reasonable resilience under all of the climate change scenarios except “No transition”. This is due to the diversification of assets.

The worst-case scenario (of the three scenarios considered with a sole focus on financial impacts) for the DB Section is the “No Transition” scenario. Although initially the deficit improves in line with the base case (based on the assumptions used), after 10 years there is a steady decline in the funding level, which results in a deficit of c.£30m at the end of the modelling period although the Trustee recognizes the actual outcome could be materially different.

Another key risk is volatility of the deficit. Under the abrupt and orderly transitions, the DB Section experiences an increase in the deficit of around £20m before recovering. Deterioration of the funding level will place a strain on the sponsor covenant as the sponsor may have to make up a bigger shortfall through deficit contributions. It may also require the DB Section to re-risk in order to stay on track to achieve its funding target or extend the timeframe for achieving this.

The Trustee is aware, however, that climate change will impact the DB Section’s liabilities and the “sponsor covenant” as well as its assets. Additionally, liability side impacts could include demographic change, e.g. the mortality impacts of different climate changes scenarios, as well as financial impacts. The Trustee is also aware that the impact of climate change on the DB Section’s funding strategy could be materially worse than typically illustrated due to tipping point and other impacts.

In downside scenarios that take into account these broader funding strategy impacts the Trustee will need to know how the sponsoring employer will be impacted and what the impacts are on member benefit security rather than solely focusing on the nominal value of any future deficit. As a result, the Trustee will work with its Scheme Actuary and Covenant Adviser as part of the triennial valuation exercise in 2025 to further understand these risks and consider what mitigants may be available and appropriate.

Climate scenarios in detail

The table below describes each climate scenario and the impact on the DB funding level over the short-, medium- and long-term time horizons.

Last year, the Trustee included a chart illustrating the impact on the Scheme’s funding level. Following the initial release of UK pension schemes’ TCFD disclosures, the Pension’s Regulator reviewed a sample of these reports and noted that climate scenarios were generally too complicated for a typical

member, who may be reading this document. The Trustee has therefore decided to remove this chart from the report and include narrative to describe the summary of the impact to the Scheme more qualitatively.

No Transition Scenario Temperature rise: +4ºC Reach net-zero: After 2050 Environmental regulation: Late and aggressive	Summary of the Scenario **In the short term:** No action is taken to combat climate change. **In the medium term:** No action is taken to combat climate change. **In the long term:** Climate change headwinds grow and act as a drag on economic growth and risk asset returns. Impacts from physical risks become more severe and irreversible by 2100.	Summary of the impact to the Scheme **In the short term:** The funding level improves in a similar way to the base case. **In the medium term:** The funding level continues to improve and then improvement begins to taper off. This is due to the heightened impact of physical transition risks. **In the long term:** A smooth decline in funding level results in a deficit of c.£30m at the end of the modelling period.
Disorderly Scenario Temperature rise: <4°C Reach net-zero: After 2050 Environmental regulation: Late and Aggressive	Summary of the Scenario **In the short term:** Insufficient consideration given to long-term policies and there is no action taken to combat climate change **In the medium term:** Late but coordinated action is taken to tackle climate change. The late timing means it is less effective and more costly to implement. Adverse impacts from climate change leads to a drag on risk assets **In the long term:** After the costly implementation to tackle climate change and the resulting drag on risky assets, the transition to clean technologies and green regulation begins to boost economic growth when considering the very long term. However, the late and disorderly climate transition means that physical climate risks remain prominent over the very long term.	Summary of the impact to the Scheme **In the short term:** The funding level improves in a similar way to the base case. **In the medium term:** There is a sudden, sharp decline in the funding level at around 9 years. **In the long term:** The funding level continues to fall resulting in a deficit of c.£50m at around 12 years. After this, the funding level begins to recover and by the end of the modelling period the funding level has recovered to a surplus of £20m.
Orderly Scenario Temperature rise: <2°C	Summary of the Scenario **In the short term:** Immediate coordinated global action is taken to tackle climate change. Risky assets perform poorly. **In the medium term:**	Summary of the impact to the Scheme **In the short term:** Initially there is an increase in the deficit to c.£100m. Then the funding level starts to recover. **In the medium term:**

Reach net-zero: 2050 Environmental regulation: Coordinated	The rapid transition to clean technologies and green regulation begins to boost economic growth. **In the long term:** The rapid transition to clean technologies and green regulation begins to boost economic growth. This represents the fastest transition to a green economy, combined with limited physical impacts from climate change despite the large initial transition cost.	The deficit improves rapidly in the medium-term and after 10 years is in a similar funding position to the base case. **In the long term:** There is a steady improvement in the funding level under this scenario, resulting in a surplus of c.£30m at the end of the modelling period.

Source: Aon. Effective date of the impact assessment is 31 Dec 2022. **Please note:** The result of the scenario modelling is illustrative and relies on many assumptions. These are subject to considerable uncertainty.

DC Section - Impact on the members' pension fund values

For the DC Section, we carried out qualitative climate scenario analysis on the default arrangement. The default arrangement is a lifestyle arrangement invested in a range of asset classes including equity, property, corporate bond, and multi-asset funds.

We considered the different impacts each scenario would have on two example members, one at younger member and one older member. The example younger member has a higher allocation to growth assets. The example older member has a higher allocation to lower risk assets and is assumed to be accessing income drawdown.

Default arrangement

The default arrangement a life styling investment strategy which automatically switches from higher risk assets, such as climate transition equities, into assets that are better matched to how members expect to take their benefits, like core diversified assets, passive corporate bonds and government bonds and cash, as members approach

Key conclusions

Young and mid-career members
The financial impact for these members is likely to be driven by the long-term time horizon. Specifically, the climate-related risks associated with investing in equities is expected to be greatest over the long term. Nevertheless, it is important for these members for the assets to be invested in growth assets (primarily equities) to help members achieve good retirement outcomes. Allocating to assets such as government bonds, which offer lower exposure to climate-related risks, is unlikely to be in members' best interests over the long-term.
Accordingly, the Trustee believes it is important to focus on managing the climate-related risks of the equity within the portfolio.

Older members (approaching and through retirement)

The financial impact for these members is expected to be driven by the short- to medium-term time horizons. Specifically, the climate-related risks associated with investing in equities is expected to have an impact on these members during this time period. An increased level of diversification will help mitigate this risk, as members' allocation to equities is reduced as they approach and are at-retirement.

Should members continue to invest after retirement, the impact they experience will be more like the long-term effects, albeit mitigated compared to younger members by their lower allocation to equities.

The timing of the impact of climate risks on assets may mean there is limited time (in terms of remaining working life) to make up any shortfall in expected retirement benefits.

Climate scenarios in detail

The table below describes each climate scenario and the impact on the DC Section fund values over the short-, medium- and long-term time horizons.

	Summary of the Scenario	Summary of the impact to the Scheme
No Transition Scenario Temperature rise: +4ºC Reach net-zero: After 2050 Environmental regulation: Late and aggressive	**In the short term:** No action is taken to combat climate change. **In the medium term:** No action is taken to combat climate change. **In the long term:** Climate change headwinds grow and act as a drag on economic growth and risk asset returns. Impacts from physical risks become more severe and irreversible by 2100.	**In the short term:** There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case. **In the medium term:** Impacts from physical risks gradually become more severe over time leading to slow economic growth and poor investment returns. Asset portfolios begins to lag the base case. **In the long term:** Impacts from physical risks gradually become more severe over time leading to a drag on economic growth and risk asset returns. Asset portfolios lag the base case and continue a downward trend.
Disorderly Scenario Temperature rise: <4°C Reach net-zero: After 2050 Environmental regulation: Late and Aggressive	**In the short term:** Insufficient consideration given to long-term policies and there is no action taken to combat climate change **In the medium term:** Late but coordinated action is taken to tackle climate change. The late timing means it is less effective and more costly to implement. Adverse impacts from climate change leads to a drag on risk assets **In the long term:** After the costly implementation to tackle climate change and the resulting drag on risky assets, the transition to clean technologies and green regulation begins to boost economic growth when considering the very long term. However, the late and disorderly climate transition means that physical climate risks remain prominent over the very long term.	**In the short term:** There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case. **In the medium term:** Asset portfolios deteriorate sharply as a result of delayed action required to tackle climate change. **In the long term:** Asset portfolios start to recover from the medium-term shock.
Orderly Scenario Temperature rise: <2°C	**In the short term:** Immediate coordinated global action is taken to tackle climate change. Risky assets perform poorly. **In the medium term:**	**In the short term:** Asset portfolios are expected to suffer an initial fall in value as a result of the costs of immediate coordinated action to tackle climate change **In the medium term:**

Reach net-zero: 2050 Environmental regulation: Coordinated	The rapid transition to clean technologies and green regulation begins to boost economic growth. **In the long term:** The rapid transition to clean technologies and green regulation begins to boost economic growth. This represents the fastest transition to a green economy, combined with limited physical impacts from climate change despite the large initial transition cost.	Asset portfolios are expected to recover from the initial shock of transition costs. Relative to the other scenarios, the lower impact from physical risks (given action to tackle climate change) is beneficial for portfolios. **In the long term:** Members' asset portfolios are likely to perform strongest relative to the base case. This represents the fastest transition to a green economy, combined with limited physical risks.

Source: Aon, based on data provided by the DC investment manager. Effective date of the impact assessment is 31 Dec 2022. **Please note:** The result of the scenario modelling is illustrative and relies on many assumptions. These are subject to considerable uncertainty.

Modelling limitations

Scenario modelling relies on many assumptions. They are only illustrative and subject to considerable uncertainty. Please see the *Appendix* for more detailed information on the assumptions underpinning the scenarios.

The climate scenarios modelling illustrates the potential impact climate change could have on the asset portfolios. It does not consider the impact climate change could have on other risks for our clients, such as timing of member options, operational risks, and for DB Section covenant risk and longevity risk.

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

Covenant Assessment

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.

A key risk identified from the scenario analysis is the volatility of the funding level for the DB Section. Under the orderly transition and disorderly transition scenarios, the Scheme experiences sudden falls in the funding level before recovering. Deterioration of the funding level will place a strain on the financial strength ("covenant") of the Sponsoring Employer, 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 or other long-term goals.

The Trustee therefore recognises that climate change may have on impact on the Employer covenant. The DB Section is well funded on a low risk basis (including the Walnut SPV) and therefore the risk that climate poses to the employer covenant in the short to medium term, at a high level, appears limited. The Trustee continues to monitor employer covenant every six months

using a number of key performance indicators, however, these are financial rather than climate in nature. To the extent that climate related issues impact the financial strength of the employer covenant, these factors will be discussed by the Trustee board.

As part of the DB Section's 2025 actuarial valuation, the Trustee intends to extend the scope of the employer covenant review to consider climate related risks in more detail. The Trustee's covenant advisors, Mercer, will consider the physical and transitional risks that may impact the covenant over the short, medium and longer term and grade their severity as either low, moderate or high. To the extent any of the risks identified are moderate or high, and could impact the DB Section's journey to securing member benefits in full, the Trustee will then consider how to monitor these risks on an ongoing basis and what mitigating actions (if any) are appropriate.

Risk management

We must have processes to identify, assess and manage the climate-related risks that are relevant to the Scheme, and these must be integrated into the overall risk management of the Scheme.

Reporting on our risk management processes provides context for how we think about and address the most significant risks to our efforts to achieve appropriate outcomes for members.

Our process for identifying and assessing climate-related risks

We have 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 we monitor the most significant risks to the Scheme in our efforts to achieve appropriate outcomes for members.

Qualitative assessment

A qualitative assessment of climate-related risks and opportunities which is prepared by our DB investment consultant with support from our DC investment consultant and reviewed by us.

Quantitative analysis

Climate scenario analysis, which is provided by our DB investment consultant with support from our DC investment consultant and reviewed by us.

Trustee update

This process of identifying and assessing climate related risks has been reviewed in the process of producing this TCFD report.

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

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

Our climate risk management framework

We recognise the long-term risks posed by climate change and have taken steps to integrate climate-related risks into the Scheme's risk management processes.

We have a climate risk management framework to manage climate-related risk and opportunities. The climate risk management framework set out in the tables below clearly describes who is involved, what is done and how often. We delegate a number of key tasks to different committees but retain overall responsibility.

Governance

Activity	Owner	Adviser / supplier support	Frequency of review
Publish TCFD report	Trustee	DB and DC Investment Consultants, DB Fiduciary Manager, DC Investment Manager	Annual
Receive training on climate-related issues	Trustee	DB Investment Consultant	Annual
Review adviser objectives to ensure advisers have appropriate climate capability, and bring important, relevant and timely climate-related issues to the Trustee's attention	Trustee	DB and DC Investment Consultants, Scheme Actuary, Covenant Adviser	Annual
Ensure investment proposals explicitly consider the impact of climate risks and opportunities and seek investment opportunities	Trustee	DB and DC Investment Consultants, DB Fiduciary Manager, DC Investment Manager	Ongoing
Ensure that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material	Trustee	Scheme Actuary, Covenant Adviser	Triennial
Engage with the fiduciary manager/investment manager to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately	Trustee	DB and DC Investment Consultants, DB Fiduciary Manager, DC Investment Manager	Annual

Trustee update

We monitored the above activities as part of our climate-related risks and opportunities management. During the year we published our TCFD report and implementation statement. As part of the TCFD process, we received training on the approach to the strategy, risk management and metrics pillars.

Strategy

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Undertake quantitative scenario analysis to understand the impact of climate related risks	Trustee	DB and DC Investment Consultants	At least triennial, with an annual review
Identify the climate-related risks and opportunities for investment & funding strategy and assess their likelihood and impact	Trustee	Advisers	Annual

Trustee update

We have spent time during the year analysing climate-related risks and opportunities for the Scheme's DB and DC Sections. As this is our second climate disclosures report, we reviewed the climate scenario analysis for both the DB and DC Sections and believe that the analysis still stays applicable to the climate-related risks the Scheme is exposed to. In presenting the scenario analysis, we took an updated approach to present three scenarios for the DB Section this year, for consistency and to align with the three scenarios modelled for the DC Section.

Risk management

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Consider the prioritisation of those climate-related risks, and the management of the most significant in terms of potential loss and likelihood	Trustee	DB and DC Investment Consultants	Annual
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	Trustee	DB and DC Investment Consultants	Ongoing
Seek to understand the climate-related risks to the employer over the short-, medium-, and long-term time horizons	Trustee	Covenant Adviser	Triennial

Trustee update

We reviewed processes for identifying and assessing climate-related risks as part of the annual TCFD process to evaluate its continued suitability. This is integrated into the ongoing activities of the Scheme. Based on our analysis this year we see no reason for investment strategy changes and believe that the manager has the appropriate analysis in place to understand climate-related risk.

Metrics and Targets

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Report on selected climate metrics	Trustee	DB and DC Investment Consultants, DB Fiduciary Manager, DC Investment Manager	Annual
Review continued appropriateness of metrics and targets	Trustee	DB Investment Consultant	Annual

Trustee update

For the second year of reporting, we collected metrics data on to understand the greenhouse gas emissions associated with the Scheme's investments, data quality and portfolio alignment for both the DB and DC Sections. We also reviewed the suitability of the metrics and targets and believe these still remain applicable.

This data has been evaluated against our climate-related target, set in the first year of reporting, of improving the data coverage for the Scheme. This is described in more detail later in the report, within the Metrics and Targets pillar.

Assessing our managers – DB and DC

To assess our DB fiduciary manager and DC investment manager, we asked them 10 questions designed by the Pensions Climate Risk Industry Group [1] to assess their capabilities to manage climate-related risks. The questions cover a range of issues including the manager's approach to climate management, whether they produce their own TCFD reporting, their ability to conduct climate scenario analysis, their engagement policies and their ability to provide GHG emissions data.

Key conclusions

DB Section

Our manager gave a comprehensive response regarding the questionnaire. Some of the highlights include:

- The manager recently released its 2023 TCFD report.
- The manager undertakes analysis for three climate scenarios. These are 1.5°C, 2°C and 3°C.
- The manager participates in climate-related public policy and initiatives including the Principles of Responsible Investment ("PRI") policy group and the UK's Sustainability Disclosure Requirements.
- There are no direct investments in fossil fuels in the Scheme's portfolio. For direct portfolios they exclude thermal coal and engage

[1] Aligning your pension scheme with the Taskforce on Climate-Related Financial Disclosures recommendations - GOV.UK (www.gov.uk)

with companies to understanding their management and commitments to climate-risks.

- Their internal managed portfolios are committed to net zero by 2050 with a 50% reduction by 2030.

We will continue to engage and work with the fiduciary manager to understand the future changes to the management of the Scheme's assets.

DC Section

LGIM is aware and acknowledges the impact of climate change and understands the importance of assessing climate-related risks. As such, it has been able to demonstrate that it has a strong resilience to climate related risks, via the tools it has in place via its climate-related risk management plan. This includes:

- LGIM releases a public report that is in line with TCFD recommendations.
- LGIM plays a leading role in progressive public initiatives on climate change such as being active members of the Transition Plan Taskforce and COP28 leaders group.
- It is able to disclose a fund's exposure to fossil fuels. It considers three scenarios for the purposes of this assessment; below 2°C, delayed below 2°C, and inaction with a 3-4°C temperature increase.
- LGIM is able to provide all climate metric data. This includes carbon footprint, data coverage, portfolio alignment and total GHG emissions.
- LGIM has set an interim 2030 net-zero target applying to 70% of assets under management.

Similar to last year, overall, we remain comfortable that the Scheme's investment managers are taking sufficient steps to identify, assess and manage climate-related risks and opportunities on our behalf.

Source: Managers

Metrics & Targets

Metrics help to inform our understanding and monitoring of the Scheme's climate-related risks. Quantitative measures of the Scheme's climate-related risks, in the form of both greenhouse gas emissions and non-emissions-based metrics, help us to identify, manage and track the Scheme's exposure to the financial risks and opportunities climate change will bring.

Our climate-related metrics

We use some quantitative measures to help us understand and monitor the Scheme's exposure to climate-related risks.

Measuring the greenhouse gas emissions related to our assets is a key way for us to assess our 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, 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

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

Scope 2

These are the indirect emissions from the generation of electricity purchased and used by an organisation

Scope 3

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

Last year, we reported on Scopes 1, 2 and 3 emissions, alongside the additional binary target measurement of the portion of the portfolio with net zero or Paris aligned targets. 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.

For more explanation about GHG emissions, please see the Appendix.

Our climate-related metrics – in detail

In our first year of TCFD reporting, we decided what metrics to report on annually; these are described below. This year we reviewed the metrics, and we believe they continue to be suitable for us to report against.

Total Greenhouse Gas emissions

The total greenhouse gas ("GHG") emissions associated with the portfolio. It is an absolute measure of carbon output from the Scheme's investments and is measured in tonnes of carbon dioxide equivalent ("tCO2e").

Carbon footprint

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. It is measured in tonnes of carbon dioxide equivalent per million pounds invested ("tCO2e/£m").

Data coverage

A measure of the proportion of the portfolio that there is high quality data for (i.e. data which is based on verified, reported, or reasonably estimated emissions, versus that which is unavailable).

Binary target measurement[2]

A metric which shows how much of the Scheme's assets are aligned with a climate change goal of limiting the increase in the global average temperature to 1.5˚C above pre-industrial levels.

It is measured as the percentage of underlying portfolio investments with a declared net-zero or Paris-aligned target or are already Science Based Targets initiative ("SBTi") validated.

[2] Our binary target measurement considers both net-zero aligned and SBTi validated targets. Net-zero commitments represent the proportion of underlying securities within a portfolio with a formal commitment to reduce net CO_2e emissions to zero by defined point in the future, e.g. the UK Government has a net-zero goal of 2030. SBTi is an industry body that verifies net-zero goals for corporate entities through a rigorous validation process.

In the tables below are the climate-related metrics for the Scheme's assets. You will note that we have not aggregated metrics between the growth and matching LDI portfolio, because the methodologies used are significantly different and therefore, we believe it is not appropriate to combine them.

DB Section

Asset class	%	Year	Data coverage (%)		Total GHG emissions (tCO_2e)		Carbon footprint (tCO_2e/£m)	
			Scopes 1&2	Scope 3	Scopes 1&2	Scope 3	Scopes 1&2	Scope 3
Multi-asset	84%	2023	84%	0%	8,696	N/R	80	N/R
	84%	2022	26%	26%	3,517	22,859	81	525
Private Equity	16%	2023	100%	0%	110	N/R	5	N/R
	16%	2022	100%	100%	2,485	19,028	81	618
Total Ex. LDI	**100%**	**2023**	**87%**	**0%**	**8,806**	**N/R**	**66**	**N/R**
	100%	**2022**	**38%**	**38%**	**6,002**	**41,887**	**81**	**563**
LDI		2023	100%	N/A	**Physical** 61,619 **Synthetic** 35,525	N/A	170	N/A
		2022	100%	N/A	**Physical** 43,138 **Synthetic** 54,583	N/A	132	N/A

Source: Cardano, Aon. 'N/R' denotes where metrics were not reported by the manager. 'N/A' denotes metrics that are not applicable. Please see notes on the metrics data on page 34 for all data methodology and limitations.

- 2023 emissions data as at 31/12/2023 and 2022 emissions data as at 31/03/2023 (except for cashflow credit within the 2022 multi-asset portfolio, which is as at 31 December 2022).
- Cash and synthetic instruments in the growth portfolio are assumed to have zero emissions associated with them; synthetic LDI remains unaffected.
- Emissions associated with LDI includes both physical emissions (emissions associated with physical assets that are held within the portfolio) and synthetic emissions (emissions associated with the notional exposure to sovereign bonds gained through derivatives). Scope 3 emissions are not available for LDI, as the UK government does not collect Scope 3 emissions.

Commentary

- This year Aon requested Cardano to provide the emissions data in the same form as the last year's report, however the manager stated it was unable to provide this granularity and instead submitted emissions data aggregated into multi-asset funds and private equity. Therefore, the presentation of data is adjusted, and may lead to some minor differences, when compared to last year's report.
- This year Cardano was unable to provide Scope 3 data coverage, stating a change methodology as the rationale. Last year, Cardano used MSCI to source the climate-related metrics, whilst this year, the metrics were sourced directly from the Scheme's underlying managers, who were unable to provide Scope 3 data coverage. The Trustee's DB investment consultant has engaged with Cardano on why the underlying managers were unable to provide this, what is being done to improve the reporting in future and understand the methodology for last year's reporting in more detail.

- There has been an increase in data coverage for Scopes 1&2 within the multi-asset portfolio. This year Cardano adjusted its data collection methodology, requesting information direct from managers, and supplementing missing data with proxied MSCI Indices with similar exposures to the underlying funds. This year, Cardano had better access to the MSCI Indices, which enabled them to better match managers who have not provided data. This increase in Scopes 1&2 data coverage has increased the total reported GHG emissions associated with the Scheme.
- For private equity there has been a reduction in carbon footprint and reported GHG emissions. Last year, Cardano proxied the Scheme's private equity against the MSCI EU Index. This year, the fiduciary manager used the MSCI Tech to proxy the emissions, a more appropriate index given that the Scheme's underlying private equity manager specialises in investing in software companies. The Trustee's DB investment consultant has engaged with Cardano to understand the reason for the fall in carbon footprint in more detail.

DC Section

			Data coverage		Total GHG emissions (tCO_2e)		Carbon footprint (tCO_2e/£m)	
Asset class	**%**	**Year**	**Scopes 1&2**	**Scope 3**	**Scopes 1&2**	**Scope 3**	**Scopes 1&2**	**Scope 3**
Diversified	35%	2023	56%	56%	1,987	17,290	61	531
	36%	2022	56%	N/R	1,976	N/R	64	N/R
Growth	65%	2023	97%	97%	4,932	45,508	47	462
	64%	2022	98%	N/R	4,649	N/R	48	N/R
Total	**100%**	**2023**	**83%**	**83%**	**6,919**	**65,798**	**50**	**478**
	100%	**2022**	**83%**	**N/R**	**6,625**	**N/R**	**52**	**N/R**

Source: LGIM, Aon. 'N/R' denotes where metrics were not reported by the manager. 2023 emissions data as at 31/12/2023 and 2022 emissions data as at 31/03/2023. Select funds, and cash excluded on grounds of materiality. Please see notes on the metrics data on page 34 for all data methodology and limitations.

Commentary

- For the 2022 report, LGIM was not able to provide Scope 3 data coverage, and therefore we were unable to report Scope 3 emissions data. This was not a concern at the time, as we were not required to obtain Scope 3 emissions in the first scheme year during which the Scheme was subject to the TCFD requirements in the Regulations. This year, we have been able to report on Scope 3 emissions, as the data coverage was provided.
- Emissions data for Scopes 1&2 has minorly changed, however not to any material degree.

Binary Target Measurement – DB and DC Sections

Asset class	%	Year	% of portfolio that is net-zero aligned	% SBTi validated
DB Section				
Multi-asset	84%	2023	19%[1]	19%[1]
		2022	6%[2]	4%[2]
Private Equity	16%	2023	65%[1]	65%[1]
		2022	6%[2]	4%[2]
DC Section				
Diversified	35%	2023	28%	7%
		2022	28%	20%
Growth	65%	2023	57%	14%
		2022	59%	40%

Source: Cardano, LGIM, Aon. Data as at 31/12/2023 and as at 31/03/2023.

Commentary

- *(1)* For 2023, Cardano provided an SBTi validated metric only, and did not provide the wider % of the portfolio that is net-zero aligned. Any assets that are SBTi validated are implicitly net-zero aligned, therefore, we have reported the same values in each column for the DB Section.
- *(2)* For 2022 Cardano provided an aggregated net zero alignment and SBTi validated metric for the multi-asset and private equity portfolios; therefore, these metrics are the same between the asset classes. This makes direct comparison between 2022 and 2023, for the DB Section's net zero alignment and SBTi validation, difficult.
- The Trustee has noted a large increase in the % of the portfolio which is SBTi validated within the Private Equity assets of the DB Section. The Trustee's DB investment consultant has engaged with Cardano to understand the rationale for this increase.

Notes on the data

In general, we relied on information provided by the Scheme's DB fiduciary manager and DC investment consultant. The DB investment consultant has collated this information to produce the climate-related metrics for the Scheme's DB and DC Sections' portfolios of assets. The exception to this is the metrics for the LDI assets held within the DB Section; see overleaf for more information.

Unavailable data:

- Cardano provided data coverage for Scopes 1&2 only. This meant that we were unable to report GHG emissions data for Scope 3 within the DB Section. Cardano stated that the Scheme's managers failed to supply this information.

Aon does not make estimates for missing data.

Due to not having all of the Scope 3 data available, we expect the reported emissions metrics to be lower than the actual total GHG emissions for the Scheme. As data methodologies improve in accuracy over time, we expect more data to be available to accurately reflect the Scheme's total GHG emissions position.

We expect that in the future better information will be available from managers and this improvement will be reflected in the coming years' reporting. We plan to engage with our fiduciary manager regarding the gaps in the emissions data provided and communicate our expectations for future reporting.

Notes on the metrics calculations

The DB investment consultant aggregated the carbon metrics where applicable. The methodology used for this aggregation does not make any assumptions about the carbon emissions for assets for which data was unavailable. The aggregation methodology is as set out below:

$$G = A \times C \times F$$

G = Total GHG expressed as ($tCO2e$).
A = Assets expressed in £ Millions.
C = Data Coverage expressed as a decimal between 0 and 1.
F = Carbon Footprint expressed as ($tCO2e/£M$ invested).

The methodology used follows the industry-standard best-practice established within the Carbon Emissions Template.

How are emissions calculated for LDI assets?

The emissions for the LDI assets are a material portion of the DB Section's total GHG emissions. This is mainly due to the method used to calculate the emissions, which is different to other asset classes.

The LDI portfolio contains mainly UK government bonds, also known as "gilts" or "index-linked gilts". Carbon metrics for UK government bonds are based on the total GHG emissions for the whole of the UK, which are high. By contrast, carbon emissions for equities, for example, are based on the emissions associated with the underlying companies invested in, which are relatively lower. Hence, the carbon metrics for matching assets are higher than many other asset classes.

The carbon emissions for the UK government bonds are driven by the total UK greenhouse gas emissions and the total amount of UK public debt. This uses publicly available information, published by the UK Government:

- The Annual UK greenhouse gas emissions data (Scopes 1&2) for 2023, published as a provisional figure by the UK government, of 426.5m tCO_2e, divided by total UK government debt at 31 December 2023 of £2,506.1Bn.=170.2tCO_2/£M

Given this difference in methodology to the other emissions figures reported, the matching assets have been split out from the other emissions figures.

The Carbon Emissions Template

Our DB investment adviser, Aon, collected the carbon emissions data from our managers on our behalf using the industry standard Carbon Emissions Template ("CET"). The CET was developed by a joint industry initiative of the Pension and Life Savings Association, the Association of British Insurers and Investment Association Working Group. The CET seeks to provides a standardised set of data to help pension schemes meet their climate reporting obligations.

Looking to the future
Our climate-related target

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

In our first year of reporting, we set a target to improve data quality to 80% by 2026 for the DB Section and 100% by 2026 for the DC Section. Without meaningful data from the investment managers, it is very hard for us to measure our climate-risk exposure. So, it is important to set a target to improve the data quality of the GHG emissions data from the managers.

Our progress towards the target

This year data coverage for Scopes 1&2 GHG Emissions has surpassed the target for our DB multi-asset and private equity portfolio, whilst remaining on target for the DC Section more broadly.

Section	Asset class	Target	2023 Coverage	2022 Coverage
DB Section	**Multi-asset**	80%	84%	26%
	Private Equity	80%	100%	100%
DC Section	**Diversified**	100%	56%	56%
	Growth	100%	97%	98%

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

During a meeting with its investment consultant, the Trustee discussed the progress made against its climate-related target and recognised that in 2023, the DB Section achieved its data coverage target for Scopes 1&2 GHG emissions, whilst the DC Section remained relatively stable. The Trustee has agreed to maintain its original target and will review the continued appropriateness next year, particularly if the DB Section exceeds the data coverage target again.

In preparation for next year's disclosures, the Trustee intends to build on discussions with its advisers and managers, as required, to establish whether a more stretching target should be set.

Steps we are taking to reach the target

To improve data coverage, we will engage with the Scheme's DB fiduciary manager and DC investment manager to improve the availability and reporting of emissions data. Through ongoing pressure from asset owners collectively and new regulatory requirements for asset managers, we expect data coverage to improve over time.

We summarise our objectives below:

Trustee update

Each year we review the suitability of the target we have set. Based on the data collected and the metrics calculated this year, we believe the target continues to be suitable.

- Continue engaging with the DB fiduciary manager, Cardano, to improve the availability and quality of carbon data;
- Continue engaging with the DC investment manager, LGIM, to improve the availability and quality of carbon data; and
- Consider setting a more aspirational target for the Scheme in the future, given the improvements in the data coverage reported this year.

Appendices

Additional supplementary information regarding our climate disclosures report.

Appendix 1 - Glossary

Governance	refers to the system by which an organisation is directed and controlled in the interests of shareholders and other stakeholders.[3] 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.[4]
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.[5]
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.[6]
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.[7]

[3] A. Cadbury, Report of the Committee on the Financial Aspects of Corporate Governance, London, 1992.

[4] OECD, G20/OECD Principles of Corporate Governance, OECD Publishing, Paris, 2015.

[5] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[6] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[7] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

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.[8]
Greenhouse gas emissions scope levels[9]	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.[10]
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).[11]
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.[12]

[8] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[9] World Resources Institute and World Business Council for Sustainable Development, The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), March 2004.

[10] PCC, Climate Change 2014 Mitigation of Climate Change, Cambridge University Press, 2014.

[11] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[12] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

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.[13]

[13] Energy Saving Trust, What is net zero and how can we get there? - Energy Saving Trust, October 2021

Appendix 2 – An explanation of climate risk categories

Climate-related risks are categorised into physical and transition risks. Below are examples of transition and physical risks.

Transition risks

Transition risks are those related to the ability of an organisation to adapt to the changes required to reduce greenhouse gas emissions and transition to renewable energy. Within transition risks, there are four key areas: policy and legal, technological innovation, market changes, and reputational risk.

Policy and legal

Examples
Increased pricing of GHG emissions
Enhanced emissions-reporting obligations
Regulation of existing products and services

Potential financial impacts
Increased operating costs (e.g. higher compliance costs, increased insurance premiums)
Write-offs, asset impairment and early retirement of existing assets due to policy changes

Technology

Examples
Cost to transition to lower emissions technology
Unsuccessful investments in new technologies

Potential financial impacts
Write-offs and early retirement of existing assets
Capital investments in technology development
Costs to adopt new practices and processes

Market

Examples
Changing customer behaviour
Uncertainty in market signals
Increased cost of raw materials

Potential financial impacts
Reduced demand for goods and services due to shift in consumer preferences.
Abrupt and unexpected increases in energy costs.
Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations).

Reputational

Examples
Stigmatisation of sector
Increased stakeholder concern or negative stakeholder feedback

Potential financial impacts
Reduced revenue from decreased demand for goods and 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

Physical Risks

Physical risks refer to the physical impacts of climate change on a firm's operations. They directly impact a firm's ability to perform its function due to climate disruption. They fall into two subcategories: acute and chronic. Acute risks are extreme climate events such as flooding and wildfires, and chronic risks are trends over time such as an increase in temperature or ocean acidification.

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

Appendix 3 – Climate scenario modelling assumptions

The climate scenarios were developed by Aon and are based on detailed assumptions. They are only illustrative and are subject to considerable uncertainty. They consider the exposure of the Scheme to climate-related risks and the approximate impact on asset/liability values over the long-term.

The purpose of the model is to consider the long-term exposure of the Scheme to climate-related risks and the pattern of asset returns over the long term.

In particular, the model considers different climate change scenarios and the approximate impact on asset/liability values over the long-term.

Our model assumes a deterministic projection of assets and [basis] liabilities, using standard actuarial techniques to discount and project expected cashflows.

It models the full yield curve as this allows for an accurate treatment of the liabilities and realistic modelling of the future distribution of interest rates and inflation. It also allows us to truly assess the sensitivities of the assets and liabilities to changes in interest and inflation rates.

The parameters in the model vary deterministically with the different scenarios.

The liability update and projections are considered appropriate for the analysis. However, they are approximate, and a full actuarial valuation carried out at the same date may produce a materially different result. The liability update and projections are not formal actuarial advice and do not contain all the information you need to make a decision on the contributions payable or investment strategy.

The model intends to illustrate the climate-related risks the Scheme is currently exposed to, highlighting areas where risk mitigation could be achieved through changing the portfolio allocation.

Other relevant issues such as governance, costs and implementation (including manager selection and due diligence) must be considered when making changes to the investment strategy.

Investment risk is only captured in the deviance from the Base Case, but this is not the only risk that the Scheme faces; other risks include covenant risk, longevity risk, timing of member options, basis risks and operational risks.

The model has been set up to capture recent market conditions and views; the model may propose different solutions for the same strategy under different market conditions.

DB Section:

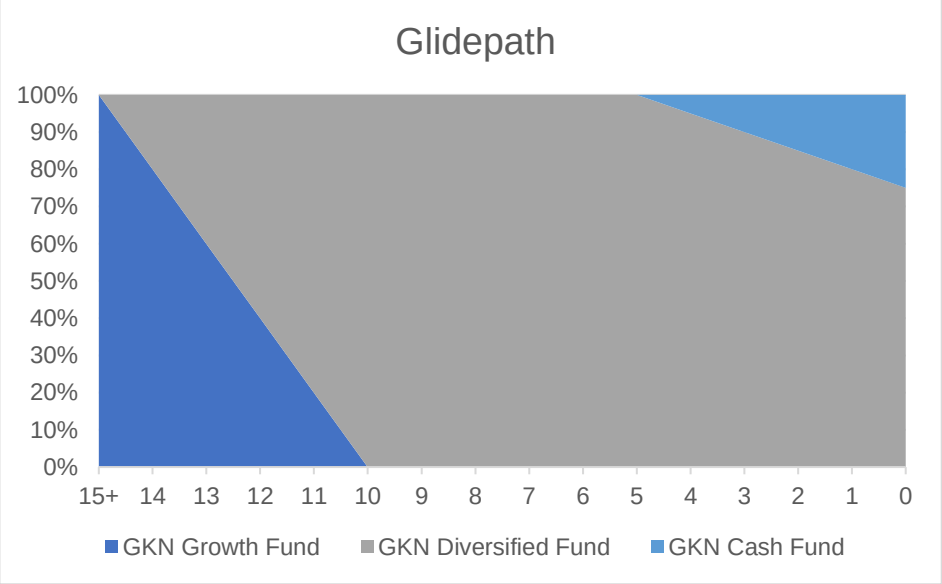
The model projects using the following inputs as at 31 December 2022.

- ▪ Market value of assets: £627.6M
- ▪ Present value of liabilities: £708.3M
- Deficit : £80.7m

Investment strategy

DC Section

The default arrangement is the GKN Scheme No.1 'Drawdown Lifestyle' fund. The investment strategy of the default investment arrangement is shown in the chart below:



Source: DC investment consultant

In the default arrangement the asset allocation is managed according to members' terms to retirement. This default has been selected as it allows for flexibility in how members may take their benefits.

For members who do not wish to take an active role in investment decisions, the Trustee offers three default investment funds which should broadly meet the needs and reflect the likely benefit choices of the typical member. The aims of the default investment options, and the ways in which the Trustee seeks to achieve these aims, are detailed below:

- To generate positive nominal long-term returns in excess of inflation during the growth phase of the lifestyle strategy.
    - The default strategies' growth phase structure invests in equities. These investments are expected to provide growth and some protection against erosion in both real and nominal terms.

- To generate positive nominal long-term returns in excess of inflation during the growth phase of the lifestyle strategy whilst maintaining downside risk.
    - The default strategies' consolidation phase structure invests in a diversified growth fund. These investments are expected to provide growth with some downside protection and some protection against erosion in both real and nominal terms. This is achieved via automated lifestyle switches by phasing in the diversified growth fund at 15 years prior to retirement, for a period of 5 years.
- To provide a strategy that reduces investment risk for members as they approach retirement.
    - The lifestyle options progressively and automatically switches members from high risk/higher expected return funds to lower risk/lower expected return as the member approaches their selected retirement date.

Appendix 4 – Greenhouse gas emissions in more detail

Greenhouse gases in the atmosphere, including water vapour, carbon dioxide, methane, and nitrous oxide, keep the Earth's surface and atmosphere warm because they absorb sunlight and re-emit it as heat in all directions including back down to Earth. Adding more greenhouse gases to the atmosphere makes it even more effective at preventing heat from leaving the Earth's atmosphere.

Greenhouse gases are vital because they act like a blanket around the Earth making it the climate habitable. The problem is that human activity is making the blanket "thicker". For example, when we burn coal, oil, and natural gas we send huge amounts of carbon dioxide into the air. When we destroy forests, the carbon stored in the trees escapes to the atmosphere. Other basic activities, such as raising cattle and planting rice, emit methane, nitrous oxide, and other greenhouse gases.

The amount of greenhouse gases in the atmosphere has significantly increased since the Industrial Revolution. The Kyoto Protocol[14] identifies six greenhouse gases which human activity is largely responsible for emitting. Of these six gases, human-made carbon dioxide is the biggest contributor to global warming.

Each greenhouse gas has a different global warming potential and persists for a different length of time in the atmosphere. Therefore, emissions are expressed as a carbon dioxide equivalent (CO_2e). This enables the different gases to be compared on a like-for-like bases, relative to one unit of carbon dioxide.

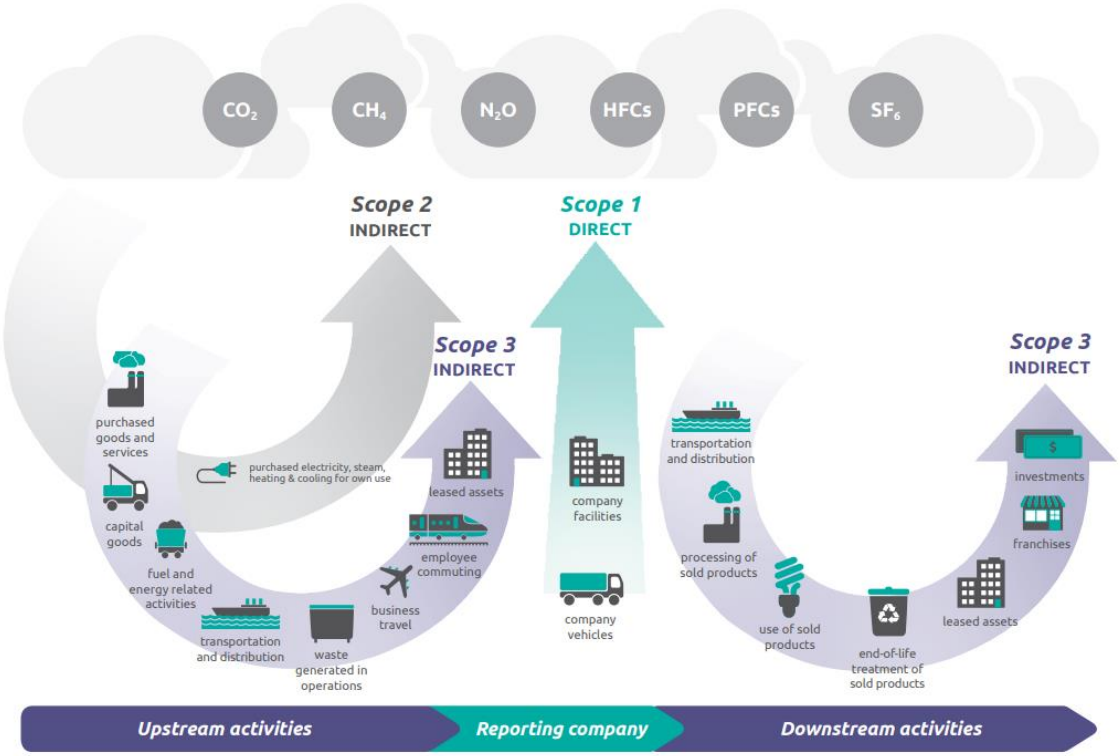
Six main greenhouse gases identified by the Kyoto Protocol

Carbon dioxide	Methane	Nitrous oxide	Hydro-fluorocarbons	Per-fluorocarbons	Sulphur hexafluoride
CO_2	CH_4	N_2O	HFCs	PFCs	SF_6

[14] https://unfccc.int/kyoto_protocol

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

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