

# Hewlett-Packard Limited Retirement Benefits Plan

Climate change governance  
and reporting in line with the  
recommendations of the  
Task Force on Climate-Related  
Financial Disclosures (“TCFD”)

Reporting period: 12 months to 31 October 2022

March 2023



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# Introduction

Dear Members,

Welcome to our first climate change report, which has been prepared in line with the recommendations of the Task Force on Climate-Related Financial Disclosures (“TCFD”) and the statutory requirements prescribed by the Department of Work and Pensions<sup>1</sup>.

The Trustee of the Hewlett-Packard Retirement Benefits Plan (“the Plan”)<sup>2</sup> recognises climate change as a risk that could impact the financial security of members’ benefits if this is not properly measured and managed. It also presents a potential opportunity, by investing in companies or assets that are expected to perform well in an economy that is positioned to address climate change.

Climate change is an incredibly complex issue, both from a scientific and an economic perspective. With this in mind, the Trustee’s assessment of climate-related risks and opportunities has been carried out based on information that is currently available, both in terms of data from the companies and assets in which the Plan invests and in consideration of the different global warming scenarios we have analysed.

The ultimate responsibility of the Trustee is to pay members their pension and other benefits, as they fall due. Climate change is one risk amongst many that the Trustee measures, monitors and manages. To this extent, climate change needs to be considered alongside these other risks in a balanced and proportionate way. The Trustee may therefore continue to invest in companies that are exposed to climate risk, where there is a sufficiently attractive investment case and the asset manager believes there is an opportunity to engage and influence change in the behaviour and actions of a company.

<sup>1</sup> The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2021.

<sup>2</sup> The Hewlett-Packard Retirement Benefits Plan (the “Plan”) is split into two sections: the Hewlett-Packard (“HP”) Section and the Digital Section with distinct assets and liabilities. The investment strategy for the sections is broadly the same and, unless otherwise stated, this report refers to the Sections together as “the Plan” throughout.



This report has been split into several sections to help members understand:



- Governance:** How the Trustee incorporates climate change into its decision making;
- Risk Management:** How the Trustee incorporates climate-related risk in its risk management processes;
- Strategy:** How potential future climate warming scenarios could impact the Plan; and
- Metrics and Targets:** How the Trustee measures and monitors progress against different climate-related indicators known as metrics.

The last section of this report covers the more technical aspects of the climate scenario modelling and climate metrics. This section sets out the methodology and assumptions used to produce the information contained in this report.

It should be noted that there were material changes to the Plan's investment strategy in 2022, the implications of which fall outside of the scope of this report. The strategy changes will be considered as part of the Plan's second annual TCFD report.

**Paul Early**

Chair of Hewlett-Packard Limited Retirement Benefits Plan Trustee Limited





# Governance

## Trustee governance approach

The Trustee has ultimate responsibility for ensuring effective governance of climate-related risks and opportunities. The Trustee maintains a Statement of Investment Principles (SIP), which details the key objectives, risks and approach to considering Environmental, Social and Governance (“ESG”) factors, such as climate change, as part of its investment decision making. The document is reviewed on at least an annual basis.

The Trustee’s key beliefs on ESG are:

- ESG factors may have a material impact on investment risk and return outcomes.
- Good stewardship can create and preserve value for companies and markets as a whole.
- Long-term sustainability issues, particularly, but not limited to, climate change, present risks and opportunities that increasingly may require explicit consideration.

The Trustee has sub-committees that have a specific focus and decision-making powers. The Trustee will consider the recommendations of the sub-committees and will review any decisions that require its approval. Of relevance to the oversight of climate-related risks and opportunities are:

- The TCFD Working Group (“TCFDWG”) has been established for the purpose of reviewing the Plan’s compliance with the statutory requirements prescribed by the Department of Work and Pensions and making recommendations to the Trustee, as well as producing the Plan’s TCFD report.
- The Trustee Investment Sub-Committee (“TISC”) has the oversight and decision-making responsibility for the implementation of the investment strategy for the Plan. This includes the appointment and ongoing review of investment managers and performance considerations.
- The Funding and Covenant Sub-Committee (“FCSC”) has responsibility for monitoring the Sponsor, Hewlett-Packard Enterprises (“HPE”), which includes ongoing management of climate-related risks and opportunities in relation to the Plan’s covenant.



During 2021 and the year to 31 October 2022, the Trustee and TCFDWG received various training sessions from its Investment Consultant, Mercer Limited (“Mercer”), covering climate-related investment risks and reporting requirements in line with the TCFD recommendations.

Climate change will form an explicit agenda item at least annually for the Trustee and its sub-committees when the Trustee’s annual TCFD report is updated. The Trustee is satisfied that the amount of governance time spent is reasonable and will allocate more time at future meetings if any analysis or wider industry research requires additional Trustee review and consideration.

## The Trustee's advisors

### Investment Consultant

The Trustee has appointed Mercer as Investment Consultant to the Plan. Mercer's role is to provide ongoing advice on investment strategy and manager appointments (where relevant). This includes advice on managing and monitoring investment-related risks, such as climate change and is considered at quarterly meetings. Mercer will assist the Trustee in producing the Plan's TCFD report on an annual basis.

On an annual basis, the Trustee formally reviews the performance of the Investment Consultant against the strategic objectives in line with the requirements of the Occupational Pension Schemes (Governance and Registration) (Amendment) Regulations 2019. At the time of writing this report, such a review does not cover the Investment Consultant's advice to the Trustee in relation to climate risk and opportunities. There are plans for this to be included when the statement is next reviewed in 2023.

### Secretarial Support

Zedra Inside Pensions Limited ("Zedra") provides secretarial support to the Plan. Zedra's role is to assist the Trustee in the general running of the Plan and to undertake Plan governance activities on behalf of the Trustee, such as coordinating required public disclosures.

### Covenant Advisor

The Trustee has appointed Cardano Limited ("Cardano") as Covenant Advisor to the Plan. Cardano, advises the Trustee in relation to the Plan sponsor's ability to support the Plan, now and in the future. Climate-related exposures could have a positive or negative impact on the strength of the Plan sponsor's covenant. Therefore, Cardano includes climate-related matters in the covenant advice provided to the Trustee. More specifically, during 2022, Cardano carried out a high-level assessment of the potential exposure of the Plan's employer covenant to climate-related risks and have assisted the Trustee in producing the Plan's TCFD report on an annual basis.

### Actuarial Advisor

The Trustee has appointed Aon Solutions UK Limited ("Aon") as actuarial consultant. Aon's role is to provide ongoing advice on funding strategy along with advice on members' benefits. This includes providing input to enable the Trustee to consider the impact of climate risks on funding strategy. David Eteen FIA of Aon is the Scheme Actuary.





# Risk Management

A key part of the Trustee's role is to understand and manage risks that could have a financially material impact on both the Plan's investments and the wider funding position. Climate change is one of the risks that the Trustee considers alongside other financially material risks that may impact outcomes for members.

This section summarises the primary climate-related risk management processes and activities of the Trustee. These help the Trustee understand the materiality of climate-related risks, both in absolute terms and relative to other risks that the Plan is exposed to. The Trustee prioritises the management of risks primarily based on its potential impact on the security of members' benefits.

## Governance

- The Trustee's Statement of Investment Principles is reviewed at least annually and sets out how investment climate-related risks are managed and monitored.
- The Trustee maintains a risk register which serves to identify climate risks and opportunities, and an Integrated Risk Management framework to monitor and mitigate financially material risks to the Plan.
- The Trustee receives training from time-to-time on climate-related issues. The training allows the Trustee to challenge whether the risks and opportunities are effectively allowed for in its governance processes and wider activities, and to be able to challenge its advisors to ensure the governance support and advice adequately covers the consideration of climate-related risks and opportunities.
- The Trustee receives six monthly updates from the Sponsoring Employer on the health of the Covenant which enables it to assess, as appropriate, changes in the Company's exposure to climate related risks and whether these are material to the Plan.



## Strategy

- Mercer will take climate-related risks and opportunities into account as part of the wider strategic investment advice provided to the Trustee.
- Climate scenario analysis for the investment and funding strategy of the Plan will be reviewed at least triennially, or more frequently if there has been a material change to the strategic asset allocation. The impact of climate-related risks and opportunities is an input in regular employer covenant updates.
- A summary of the Trustee's latest climate scenario analysis is included in the next section of this report and is the primary tool to help the Trustee understand the materiality of climate-related risks that could impact the Plan over time.

## Reporting & Stewardship

- The Trustee will receive an annual report of climate-related metrics and progress against any target set in respect of the assets held in the Plan. The Trustee expects to use the information to engage with the investment managers.
- The Trustee receives a voting and engagement activity summary on an annual basis as part of the preparation of the Engagement Policy Implementation Statement. The statement summarises how the investment managers vote and engage on climate-related issues (among other key engagement priorities). The statement is available on the Plan's website.
- The Trustee gives its investment managers full discretion in evaluating ESG factors, including climate change considerations. The Trustee also delegates to the investment managers responsibility for exercising voting rights and stewardship obligations attached to Plan investments, including engagement with issuers of debt and equity and other relevant persons about appropriate matters such as performance, strategy, capital structure, management of actual or potential conflicts of interest and risks, in accordance with their own corporate governance policies and current best practice, including the UK Corporate Governance Code and UK Stewardship Code.

## Manager Selection and Retention

- The Trustee, with advice from Mercer, will consider an investment manager's firm-wide and strategy-specific approach to managing climate-related risks and opportunities when either appointing a new manager, in the ongoing review of a manager's appointment, or as a factor when considering the termination of a manager's appointment. This will predominantly be carried out using Mercer's ESG ratings.
- The Trustee views climate risk as financially material and therefore expects investment managers to identify and include climate risk in their decisions around stock selection and retention.
- Mercer rates investment managers on the extent of integration of ESG factors (including climate change) into their processes. A manager's stewardship process forms part of the rating assessment. This is considered at the firm level and at the investment strategy/fund level. The ratings are presented in quarterly investment performance reports and are reviewed by the Trustee.
- Zedra supports the Trustee by keeping a log of presentations provided by the Plan's investment managers, ESG educational sessions and any additional training received as a point of reference when making decisions about investment manager selection and retention.



# Climate Risks and Opportunities

The effects of climate change will be felt over many decades. The Trustee has considered two types of climate-related risks and opportunities in its climate scenario analysis:

## 1. Transition risks and opportunities

This covers the potential financial and economic risks and opportunities from the transition to a low carbon economy (i.e. one that has a low or no reliance on fossil fuels), in areas such as:

- Policy and legislation
- Market
- Technology
- Reputation

Risks include the possibility of future restrictions, or increased costs, associated with high carbon activities and products. There are also opportunities, which may come from the development of low-carbon technologies. In order to make a meaningful impact on reducing the extent of global warming, most transition activities need to take place over the next decade and certainly in the first half of this century.

## 2. Physical risks and opportunities

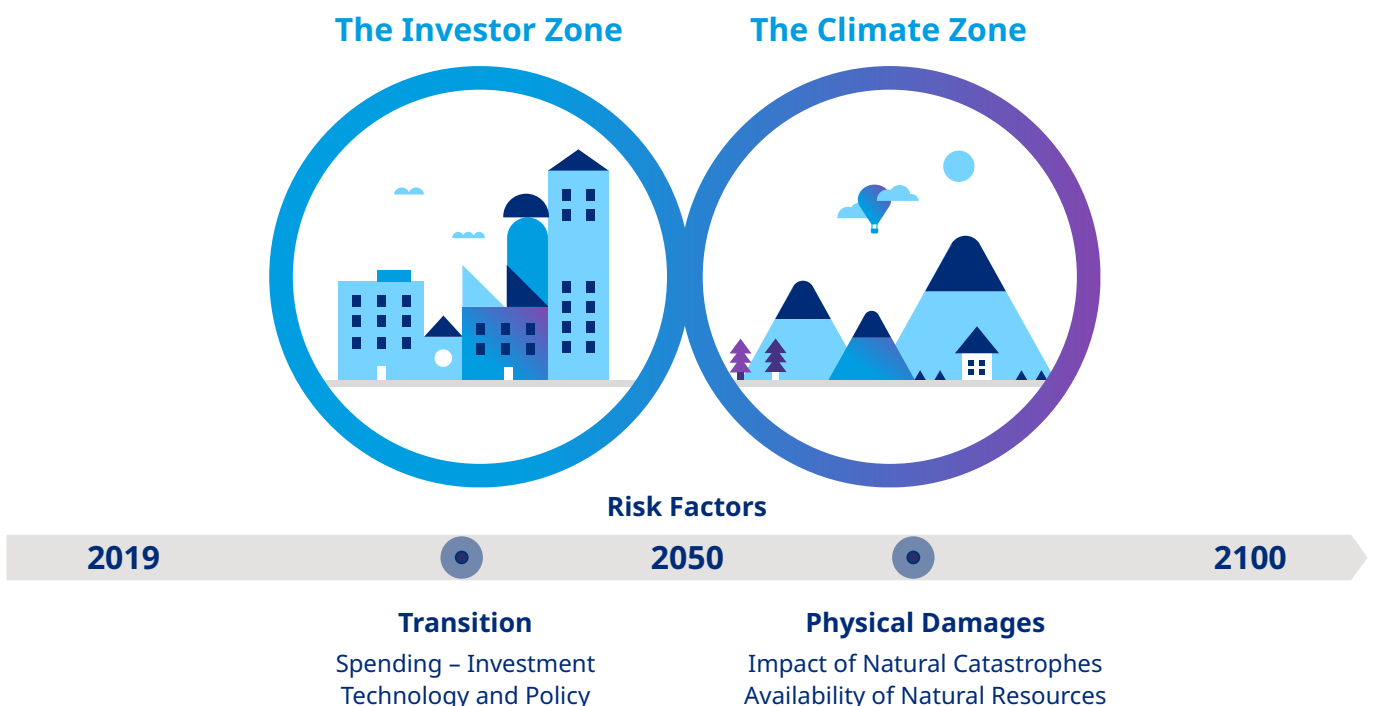
The higher the future level of global warming, the greater physical risks will be in frequency and magnitude. Physical risks cover:

- Physical damage (storms; wildfires; droughts; floods)
- Resource scarcity (water; food; materials; biodiversity loss)

Physical risks are expected to be felt more as the century progresses though the extent of the risks is highly dependent on whether global net zero greenhouse gas emissions are achieved by 2050.

There are investment opportunities, for example, in newly constructed infrastructure and real estate that are designed to be resilient to the physical impacts of climate change, as well as being constructed and operated in a way that have low or no net carbon emissions. There are also opportunities for investment in those companies or industries that focus on energy conservation and resource efficiency.

Figure 1: Climate risk factors over time



Source: Mercer



# Strategy

The effects of climate change will be felt at different times in the future and to different extents. The Trustee believes it is important to understand how the Plan's exposure to climate-related risks may change over time, when the risk exposure may be greatest and what actions can be taken now, or in the future, to avoid those risks becoming financially material to the Plan.

To help with this assessment, the Trustee has defined short-, medium- and long-term time horizons for the Plan. The climate-related risks and opportunities that are relevant to the Plan vary over these periods.

The Trustee recognises that, due to the funding position of the Plan and the expected trajectory of future progress (including the potential range of potential outcomes), the timeframe over which the Plan is expected to hold assets that are materially exposed to climate risks is relatively short. The below time frames have therefore been determined by the time frame over which the Trustee expects the Plan to have invested assets.

'Short term' is the time period in which the Trustee expects climate-related data to improve materially and climate-related impacts on the Plan's assets to be less material. 'Medium term' is defined by the timescale over which the Trustee expects the Plan to be fully funded on a prudent actuarial basis. By the 'Long term' the Trustee expects the Plan's investments to be substantially de-risked and therefore climate risk to be less material to the Plan.

## Short Term (Period to 2025)

Transition risks are greater than physical risks with moderate asset re-pricing risk driven by:

- Increases in private sector net zero commitments and clearer decarbonisation plans;
- Perceived or real increased pricing of greenhouse gas emissions/carbon;
- Exposure to developing economies which have longer time horizons for country level phase down of fossil fuel usage.



## Medium Term (2025 to 2030)

Transition risks continue to dominate with heightened asset re-pricing risk driven by:

- Future warming pathways become clearer;
- Market awareness grows and is better priced into asset valuations;
- Unexpected policy changes that surprise markets.

## Long Term (2030 to 2050)

Physical risks increase but transition risks still dominate:

- Development of technology and low carbon solutions;
- Policy, legislation and regulation are likely to also play a key role at the international, national and subnational level.



## Impacts and Opportunities

### Short Term (Period to 2025)

The Plan is exposed to climate-related risks through its allocation to bonds, as debt issuers are themselves exposed to both transition and physical risks in the short term. The Plan is also exposed to climate-related risks through its allocation to public equity, albeit assessed as being less material. The climate scenario analysis helps the Trustee understand which market sectors are most exposed to climate-related risks and which are well positioned to transition to a low carbon economy.

### Medium Term (2025 to 2030)

The climate-related focus over the medium term is similar to the focus over the short term as it will be centred around bond assets. Over this time period, bond investments where the issuer of the debt has made minimal effort to support the low carbon transition may lead to a potential default or downgrade.

Market surprises due to unexpected policy changes related to climate change could lead to asset price volatility and therefore funding level volatility. Exposure to this market volatility is expected to reduce over time as the Plan reduces its allocation to risk assets in line with its long term funding strategy. The resilience of the funding strategy to climate-related risks is therefore expected to improve.

### Long Term (2030 to 2050)

Investment opportunities remain in industries which are supportive of the transition to a low carbon economy. As the Plan matures the Trustee would expect its exposure to these industries to decrease as the Trustee aims to reduce investment risk with a view to providing the greatest security possible for members' benefits.

A typical investment strategy of this kind would invest in high quality corporate bonds, government bonds and cash, all of which the Trustee would see as suited to a transition to a low carbon economy due to climate-related risk being priced into their value over the long term.





## Climate scenarios

In order to assess the potential impact of climate-related transition and physical risks, the Trustee has considered two possible climate scenarios. Defined as 'warming pathways', these scenarios consider the expected degrees of warming of the atmosphere by the end of the century relative to pre-industrial levels.

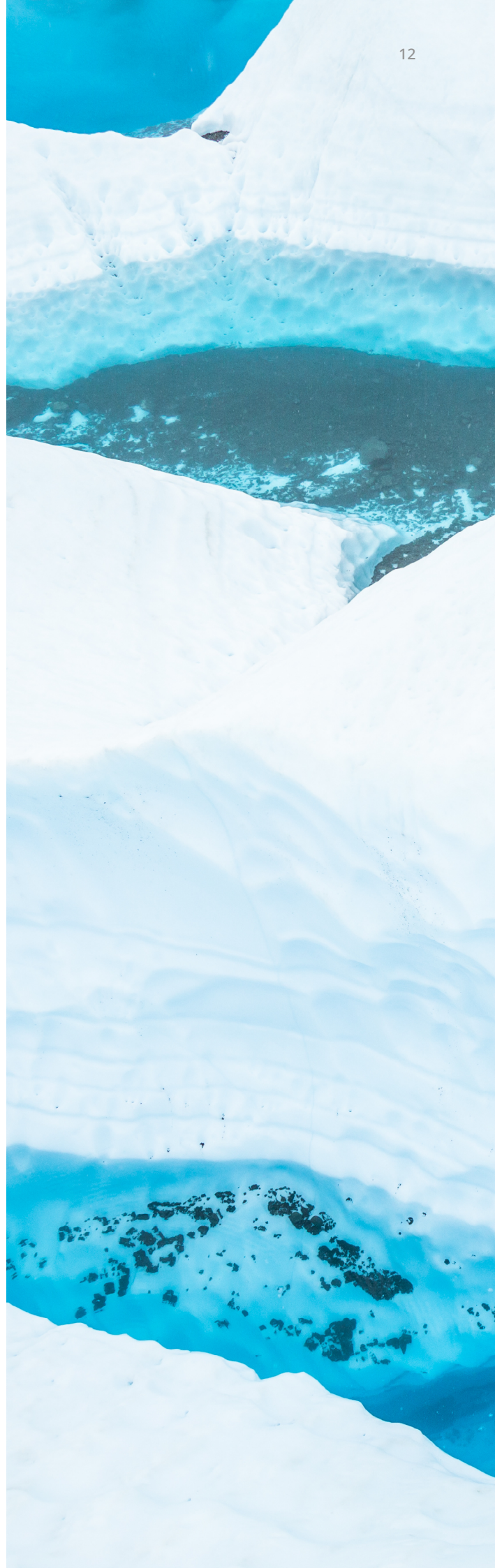
The scenarios considered by the Trustee are:

- **1.5°C Scenario ("Rapid Transition")** - Average temperature increase of 1.5°C by 2100. This scenario assumes sudden divestments across multiple securities in 2025 to align portfolios to the Paris Agreement goals. This type of realignment is expected to have disruptive effects on financial markets with sudden repricing followed by stranded assets and a market sentiment shock.
- **>4.0°C Scenario ("Failed Transition")** - Average temperature increase above 4°C by 2100. This scenario assumes the world fails to co-ordinate a transition to a low carbon economy and global warming exceeds 4°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasing impacts from extreme weather events.

The Trustee will review the scenarios modelled and reported in future assessment periods. It is important to note that the modelling may understate or overstate the true level of risk due to the uncertainty around the future economic impacts of climate change.

Further, there is not currently an agreed market practice for the modelling of each climate scenario. Modelling of the financial impact on the Plan under each climate scenario may therefore differ from advisor to advisor. The Trustee has endeavored to present results on a consistent basis where possible, and stated where there are differences in methodology. The Trustee expects that methods will converge in future as market practice around climate reporting improves.

The Technical Section of this report provides more detail on the modelling approach, along with the assumptions and limitations of the scenario analysis.



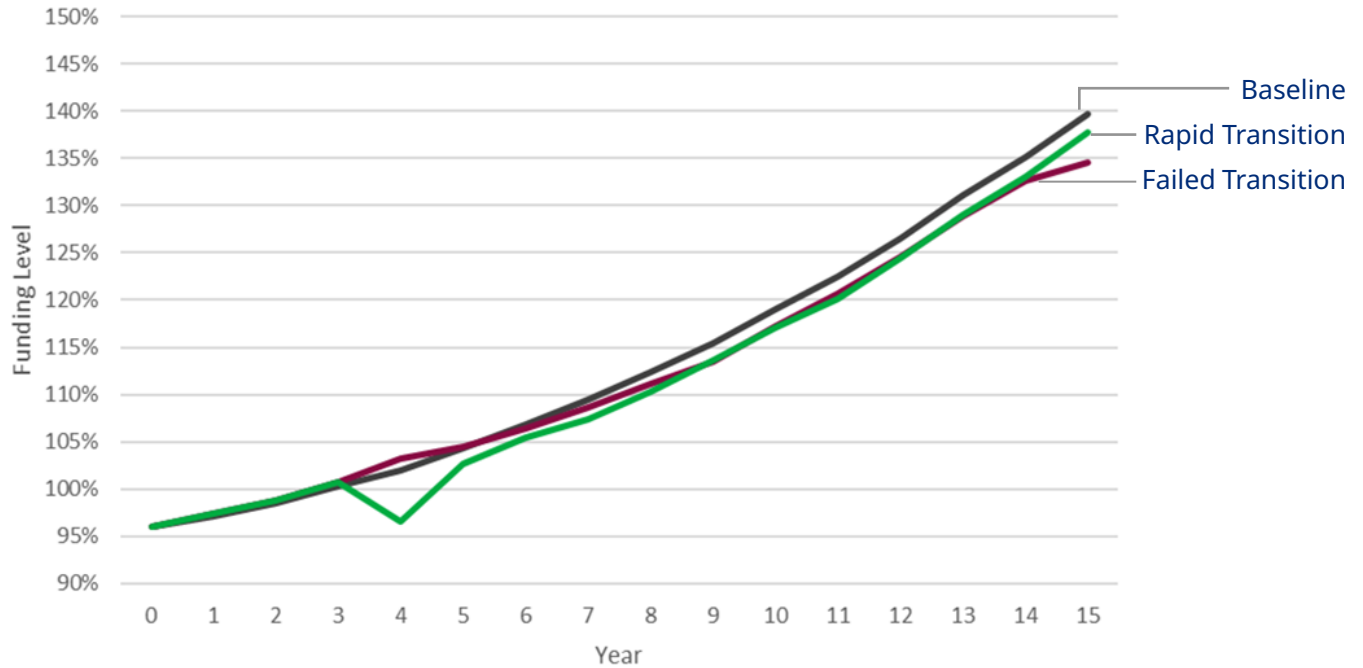
**Table 1: Scenario modelling**

	1.5°C Scenario	4.0°C Scenario
<b>Overview</b>	This scenario captures a sudden transformation to a low-carbon economy, in order to limit global warming to no more than 1.5°C by the end of the century.	This scenario captures no transformation to a low-carbon economy, as global warming is allowed to rise to 4°C by the end of the century.
<b>Risk factors</b>	Transition risks are very high, particularly in the first half of this century. Physical risks are anticipated in the latter half of the century though are less impactful relative to higher warming pathway scenarios.	Transition risks are very low. Physical risks are conversely high, are anticipated sooner in the century and are more impactful than with lower warming pathway scenarios.
<b>Narrative</b>	Global action starts immediately, driven by policy, regulation and consumer sentiment. Emissions peak in the early 2020s and coal is phased out by mid-century. By the middle of the century, the average global sea level is expected to rise and longer droughts will be experienced in regions across the globe.	Global economies fail to co-ordinate a transition to a low carbon economy. Emissions peak late in the century and coal is not phased out. The average global sea level continues to rise throughout the century and natural disasters become commonplace.
<b>Market impact</b>	Over the short term, the cost of transition plays through at the sector level with heavy carbon-based industries, such as the energy sector and utilities being most negatively impacted. The renewable energy sector is expected to perform strongly under this scenario, along with raw materials, telecoms and IT.	Heavy carbon-based industries, such as the energy sector and utilities, are not negatively affected as they would be in lower warming pathway scenarios. The renewable energy sector is expected to perform less strongly under this scenario, along with raw materials, telecoms and IT.
<b>Asset class impacts</b>	At the asset class level, equities, infrastructure and commodities are most sensitive to climate-related risks. Sustainable allocations to global equity and infrastructure capture the opportunities presented by the transition to a low-carbon economy and avoid exposure to carbon-intensive sectors and/or companies.	At the asset class level, equities, infrastructure and commodities are most sensitive to climate-related risks. Sustainable allocations to global equity and infrastructure underperform due to lack of transition to a low carbon economy and carbon intense industries continue to generate stable returns.

## Resilience of the investment and funding strategy

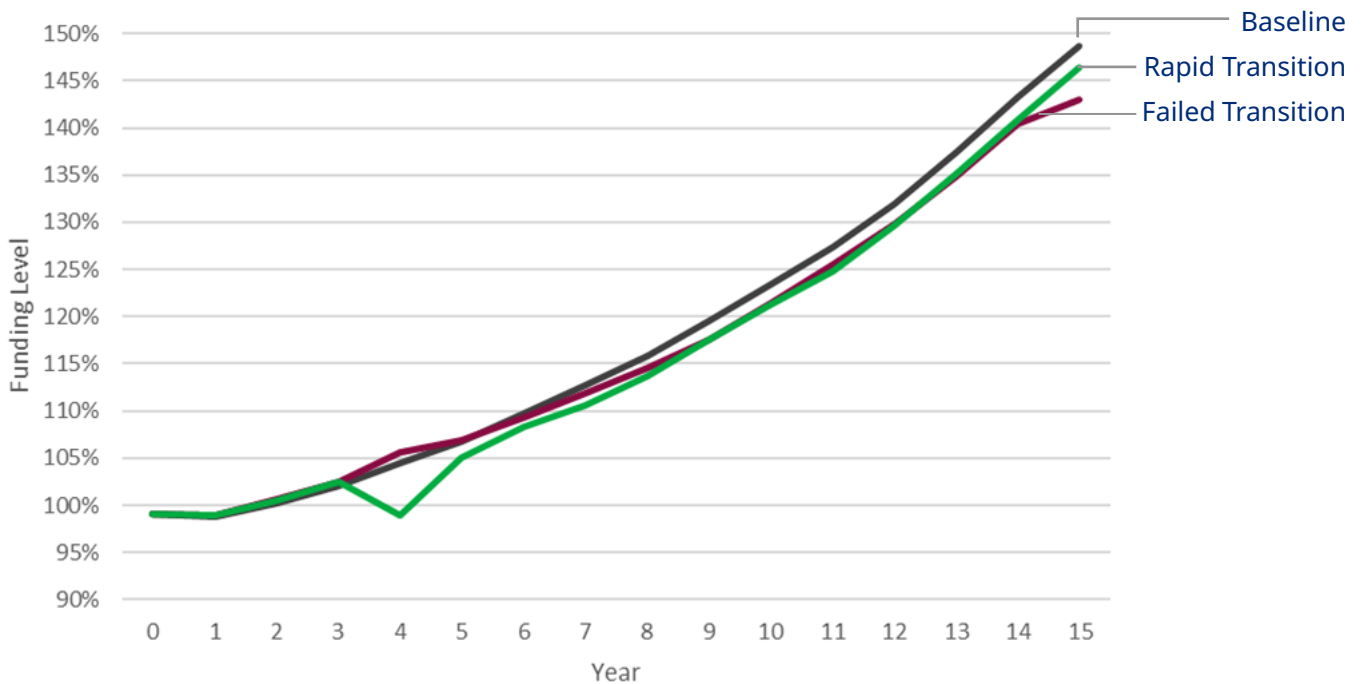
The analysis has been carried out for both scenarios for the Plan, with the key output summarised below. The analysis shows the impact on the funding level (as measured on a low risk, or “gilts flat” actuarial basis) for the HP and Digital Sections (together the “Sections”) of the Plan under the 1.5°C and 4.0°C scenarios compared with the expected baseline funding level progression.

**Figure 2: HP Section Funding Level Progression under 1.5°C and 4.0°C Scenarios**



Source: Mercer. Based on assets and gilts flat liabilities as at 31 December 2021. Does not allow for future de-risking and assumes a static investment strategy.

**Figure 3: Digital Section Funding Level Progression under 1.5°C and 4.0°C Scenarios**



Source: Mercer. Based on assets and gilts flat liabilities as at 31 December 2021. Does not allow for future de-risking and assumes a static investment strategy.

## Covenant scenario analysis

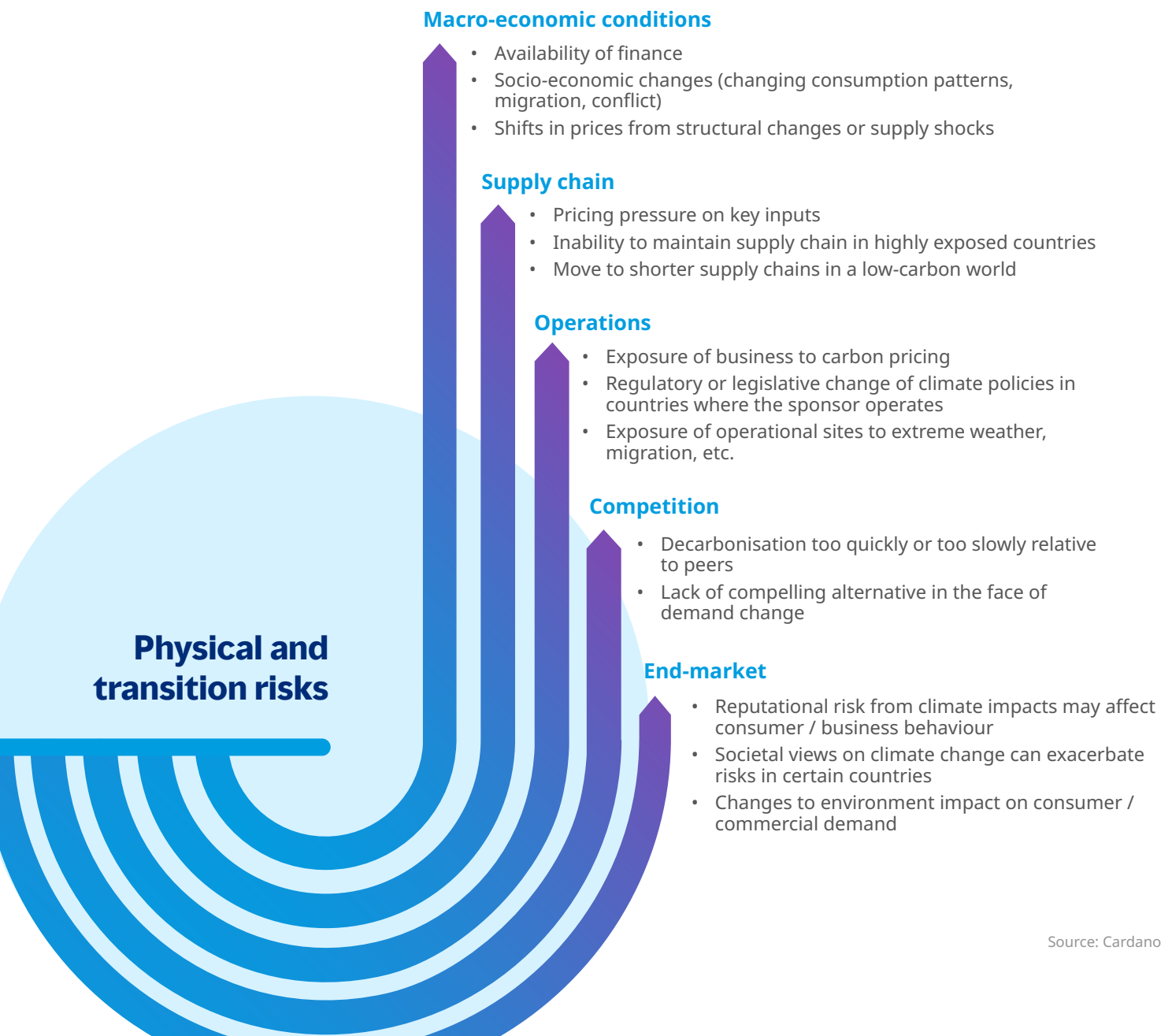
The Trustee recognises it is crucial to better understand the potential impact on the covenant of the effects of climate change, which may influence the near-term or longer-term funding strategy of the Plan.

The Trustee’s assessment, carried out by Cardano, has been focussed on Hewlett Packard Enterprise (“HPE” or the “Group”) rather than the Plan’s UK sponsor (Hewlett Packard Limited) given the integrated nature of the Group and covenant.

### Transmission channels

Climate change can impact a business or organisation throughout the entire value-chain and the key issues arising as a result of climate change are complex and multi-dimensional. Figure 1 provides an overview of the transmission channels and the potential risks or impacts from climate change that have been considered as part of the high-level assessment of HPE.

Figure 4: Transmission Channels





## Climate scenarios

The following two climate scenarios, consistent with the scenarios considered by the Trustee’s investment and actuarial advisors, were considered for the covenant scenario analysis.

**Table 2: Climate scenarios**

Overview	1.5°C Scenario	4.0°C Scenario
<b>Summary</b>	Global decarbonisation starts now so policies intensify gradually but immediately. Large transition changes will happen quickly	No new transition policies above existing commitments leads to continued increase in GHG emissions and rise in global temperature
<b>Physical risks</b>	Long-term physical risks are reduced but deviations from present climate still expected	More pronounced physical risks, particularly over the longer-term
<b>Transition risks</b>	Highest in the near-term as policies are implemented immediately	Limited transition risks over and above existing commitments and policies
<b>Macroeconomic impact</b>	Overall longer-term impact on GDP growth muted, with assumed long-term benefit from green tech investment	UK and global GDP growth permanently lower with that impact growing over time. Macroeconomic uncertainty increases
<b>Alignment</b>	IPCC’s RCP1.9	IPCC’s RCP7.0

IPCC = Intergovernmental Panel on Climate Change  
 RCP = Representative Climate Pathway



### Scenario analysis

Table 3 below provides an overview of the scenario risk analysis over time on the covenant of HPE. The key findings from the risk analysis are as follows.

- In the near term, risks associated with a Rapid Transition scenario appear higher due to the impact that rapid global de-carbonisation and new regulations could have on HPE and its relatively carbon intensive supply chain and operations. This could lead to:
  - a. reputational risk and financial liabilities (for example, if suppliers operating in countries with less stringent environmental regulations were not to comply with HPE's policies);
  - b. higher pass-through costs associated with a quicker transition to net zero; and,
  - c. higher costs if regulations were to make HPE responsible for some/all Scope 3 emissions or if access to renewable energy was to become more expensive.
- Over the longer term, a Failed Transition scenario appears to bring higher risks, driven by the increased physical risks (extreme temperature, acute weather events, and water scarcity) faced by suppliers and in key operating locations. This could disrupt client services, impact insurance premiums, and lead to additional costs to mitigate operational damages.

**Table 3: Assessed climate scenario risk analysis over time**

	Near-term < 3 years	Mid-term 3 – 13 years	Long-term 13 years +
Rapid Transition	Medium risk	Medium risk	Medium risk
Failed Transition	Lower risk	Medium risk	Higher risk

Source: Mercer.

In addition to the identified risks, the Trustee is aware that HPE may also benefit from opportunities to provide customers with services that better enable them to meet sustainability targets and limit environmental impact. This could partly offset risks identified in this climate focused assessment.





## Impact on Plan Funding

### Mortality Scenario Analysis

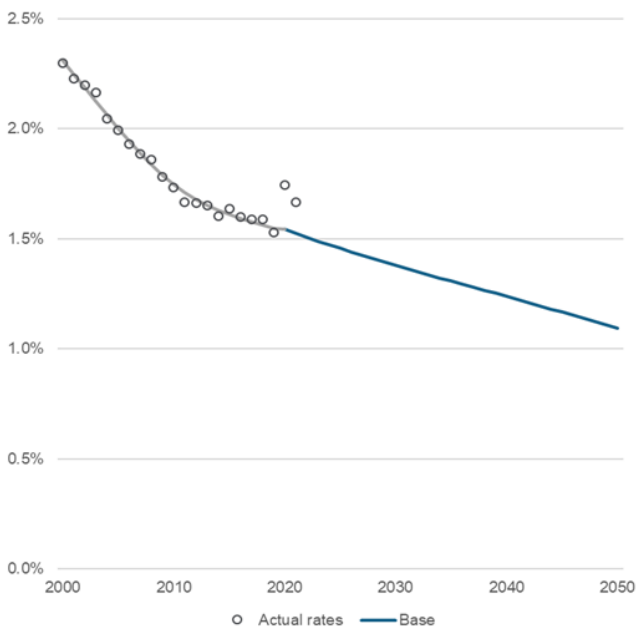
The Trustee considers the impact of climate change on mortality as a material risk and has therefore conducted scenario analysis to assess the expected long term impact on the Plan. This analysis has been run on an as consistent basis as possible with those run by the Plan’s investment and covenant advisors. Aon refers to the scenarios as ‘Abrupt’ and ‘No’ Transition. This is equivalent with Mercer’s Rapid and Failed Transition scenarios, respectively.

The charts below show how mortality improvements, plotted on the Y-axis, are expected to change over time, plotted on the X-axis, under each of the different warming scenarios.

#### Base Scenario

Both of the warming pathway scenarios considered will be compared against a base scenario in charts similar to the one to the left.

**Figure 5: Mortality progression under Base Scenario**



Source: Aon

The grey circles indicate the actual pattern of mortality seen in the England & Wales male population over 2000-2021 (note in particular the



extremely high mortality in 2021) with a grey line showing the smoothed mortality rates produced by the standard improvements model. The blue line shows how mortality is projected to continue to improve over time under the base scenario.

The level of mortality indicated is based on male pensioners aged 50-90 – we have standardised the population to allow for a fair comparison over time.

Where a scenario is positive for life expectancy, the scenario’s line will show lower mortality (below the blue line). All else being equal, lower mortality leads to higher life expectancy and higher liabilities.



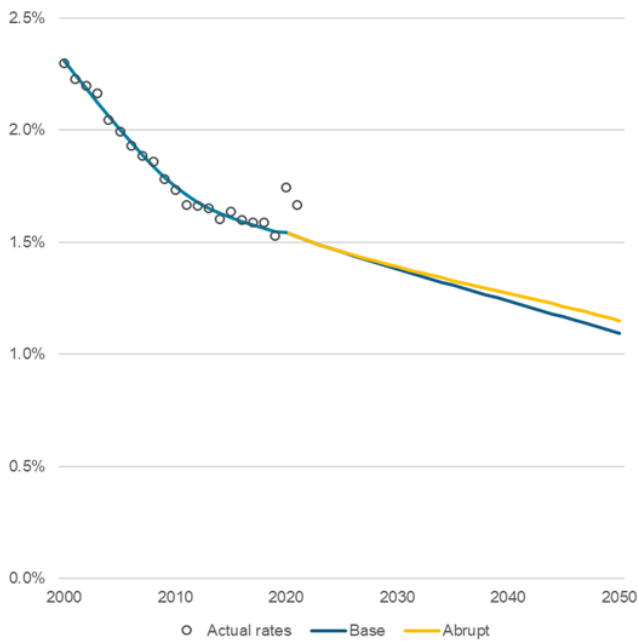
**Rapid Transition**

The green policy measures introduced by central governments under a rapid transition scenario create considerable economic disruption, hampering economic growth and hurting corporate profitability, initially leading to a global recession in 2027 followed by several years of weak growth as the transition to low carbon is made.

Significant falls in GDP only start occurring from around year 5 and start to recover from around year 12.

Short to medium term mortality improvements are in line with the base scenario but longer-term improvements are slightly lower.

**Figure 6: Mortality progression under Rapid Transition Scenario**



Source: Aon

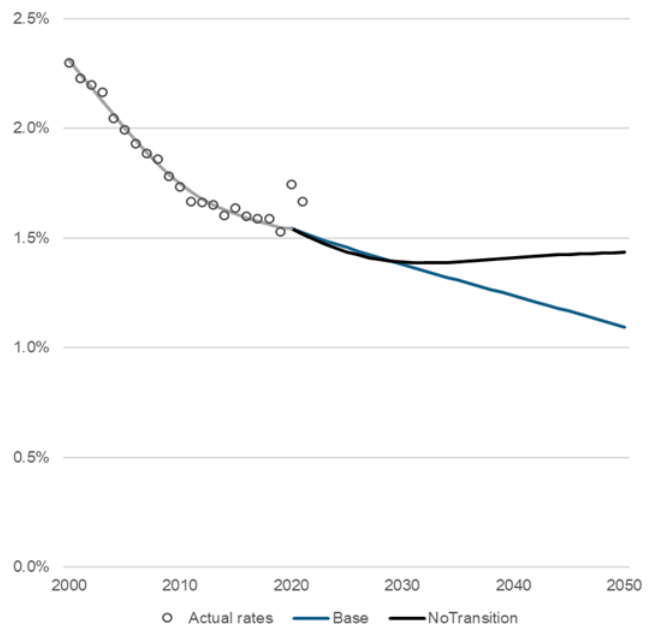
**Failed Transition**

Under this scenario, limited consideration is given to environmental challenges. In the short-term more money may be spent on health services, perhaps reducing mortality slightly.

Over the medium term there is growing awareness of a changing environment and the damaging effects a lack of action is having. There is a higher incidence of damaging storms, water shortages, higher pollution levels and reduced agricultural yields (leading to higher food prices). Markets become more volatile and climate change begins to have a growing drag on economic growth and asset returns. In such an environment, there may be no long-term future improvements in mortality (consistent with what we saw between 2014 and 2018).

In terms of the direct climate impacts, fewer deaths from warmer winters may more than offset any impact of heatwaves, but the impact is likely to be marginal.

**Figure 7: Mortality progression under Failed Transition Scenario**



Source: Aon

## Conclusions from Scenario Analysis

The Trustee recognises that, due to the funding position of the Plan and the expected trajectory of future progress (including the potential range of potential outcomes), the timeframe over which the Plan is expected to hold assets that are materially exposed to climate risks is relatively short. The Trustee has therefore focussed its attention with regard to the climate scenario analysis on the medium term timeframe (i.e. to 2030).

Over this time period, the 4°C “Failed Transition” scenario does not have a significant impact given the risk associated with this scenario is primarily physical risk, which is expected to come through over the longer term. The main impact from the Plan’s perspective is under a 1.5°C “Rapid Transition” scenario, where there is assumed to be a shock around 2025, as markets price in transition costs.

This 1.5°C “Rapid Transition” scenario assumes credit spreads initially widen materially, but recover over subsequent years as defaults do not increase as expected. Equities also suffer in this scenario, but the impact is smaller due to the Plan’s relatively small allocation to public equity. The result is a funding level fall of c. 5% in 2025. This is a description of the impact of a 1.5°C “Rapid Transition” scenario on the Plan’s assets and liabilities at an aggregate level.

A “rapid transition” is one of many scenarios that could occur. The Trustee will therefore consider any potential changes to mitigate this risk alongside the wider risk/return considerations associated with the Plan’s investment strategy. To the effective date of this report the Trustee has not made any changes to the Plan’s investment strategy for the explicit purpose of reducing exposure to climate-related risks. The Trustee notes that there is limited scope to reduce the climate-related risk inherent to the Plan’s investments. This is because of the relatively short timescale over which the Plan is expected to hold assets that have material exposure to these risks.

### Covenant

To address the risks noted above, the Trustee has considered the recommendations from the covenant advisor in each of the following areas:

- to integrate the climate risk analyses on covenant, funding and investment to assess whether these risks are correlated;
- to monitor the climate covenant risks identified in this assessment through the Trustee’s regular monitoring framework - e.g. emerging regulations, extreme weather events, renewable energy pricing, and carbon pricing in key jurisdictions;
- to consider how the climate risk could impact the Plan’s funding targets and desired end-game, the journey planning time horizon and any decisions on covenant risk transfer; and,
- to regularly update and document climate related risks and mitigation strategies in an integrated way.

### Mortality

**Table 4: Liability impacts under different climate scenarios**

Scenario	Aon assumed long-term improvement in mortality	Ultimate liability impact (age 60) from change in mortality
Base Case	1.5% p.a.	-
Failed Transition	0.0% p.a.	-4%
Rapid Transition	1.5% p.a.	-1%

Source: Aon

The ultimate liability impact is the adjustment to be made to the Mercer scenario to allow for mortality effects. Figures are based on impact on male life expectancy but each scenario impacts females to the same extent. The figures are approximate in that they have been calculated to reflect the impact on life expectancy for a member age 60 rather than being calculated based on full membership data for each Section but we consider them to be appropriate for both Sections of the Plan.

## Resilience of the Plan's Investment Strategy

### Impact on mortality

Using analysis provided by Aon, in its capacity as Actuarial Consultant to the Plan, mortality changes directly due to the warming pathway climate scenarios considered are assumed not to be material. Mortality changes are not therefore expected to have a material impact on the funding strategy shortened time period over which the Trustee is considering climate related risks (based on current research).

### Impact on interest rates and inflation

Under a Rapid Transition scenario, attempts by central governments to help support a low carbon transition is expected to be inflationary. This would be expected to increase the value of the liabilities of the Plan in respect of benefit payments over the long-time horizon, which will be largely offset by the movement of the assets supporting the liability hedging portfolio. Therefore, the impact on the funding strategy is expected to be low.

### Summary

Whilst the climate scenario analysis indicated a marginal negative impact to the investment strategy over the timeframe which the Plan is expected to hold assets, the overall impact on the investment strategy and funding strategy is relatively low. Considering climate-related risks alongside other risks that the Plan are exposed to, the Trustee believes the current investment and funding strategies are resilient to climate-related risks. This position will be kept under review.



# Metrics and Targets

## Metrics

The Trustee has chosen to present four climate-related metrics in this report. The climate-related metrics help the Trustee to understand the climate-related risk exposures and opportunities in the Plan’s investment portfolios and identify areas for further risk management, including investment manager portfolio monitoring, and voting and engagement activity and priorities. The metrics in this report are:

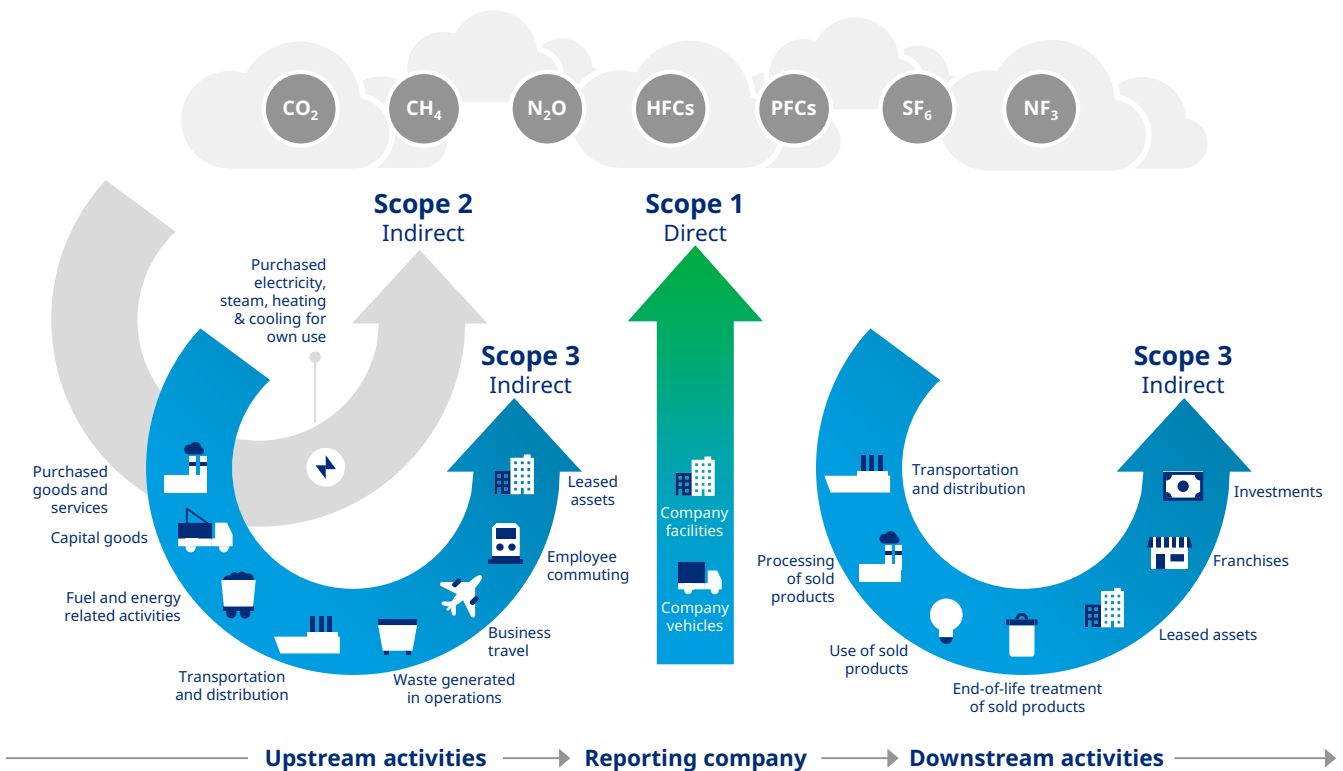
1. Absolute emissions metric: Total carbon emissions;
2. Emissions intensity metric: Weighted Average Carbon Intensity (“WACI”)
3. Portfolio alignment metric: Implied temperature rise; and
4. Additional climate change metric: Data quality

The Trustee recognises the challenges with various metrics, tools and modelling techniques used to assess climate change risks. The Trustee aims to work with its investment advisor and investment managers to improve the approach to assessing and managing risks over time as more data becomes available. The Technical Section of this report sets out the data limitations and assumptions used in collating these metrics.

### 1. Total carbon emissions

**This metric represents the underlying investee company’s or issuer’s reported or estimated greenhouse gas emissions, where available, and is expressed in absolute terms on an annual basis. It includes various scopes of emissions, which are summarised in the following diagram.**

**Figure 8: Scopes of emissions**



Source: Greenhouse Gas (“GHG”) Protocol

There are seven recognised greenhouse gases, as defined by the GHG Protocol. In order to simplify reporting, each greenhouse gas is calibrated relative to carbon dioxide and is reported as ‘carbon dioxide equivalent’ emissions (CO<sub>2</sub>e).



For the purpose of this report, only scope 1 and 2 emissions have been reported. The absolute emission metric is a proxy for the share of GHG emissions that are 'owned' by the Plan through investing in the underlying companies and issuers, including countries (referred to as 'sovereign exposure' through government debt).

**Table 5: Total carbon emissions data**

Asset Class	Fund	Coverage (%)	HP Section		Digital Section	
			Strategic Allocation (%)	Absolute Emissions (tons CO2e)	Strategic Allocation (%)	Absolute Emissions (tons CO2e)
Equity	SSgA - Global Equity	97.6%	8.0%	10,201	8.0%	10,524
	LGIM - Small Cap Equity	90.5%	2.0%	3,159	2.0%	3,259
Multi-Asset Credit	CQS - Credit Multi Asset	77.2%	10.0%	17,241	10.0%	25,280
	Apollo - Total Return Fund	23.7%	10.0%	33,540	10.0%	35,654
Buy & Maintain Credit	LGIM - Buy & Maintain Credit	78.6%	13.0%	14,451	13.0%	14,485
Secured Finance	Ares - Secured Income	-	5.0%	-	5.0%	-
	HSBC - Secured Finance	-	5.0%	-	5.0%	-
Long-Dated Property	M&G - Long Dated Assets Fund	81.8%	8.5%	12,714	8.5%	13,824
Private Markets	Goldman Sachs - Private Debt	-	7.5%	-	7.5%	-
	M&G - Real Estate Debt	-	-	-	-	-
Liability Driven Investments	Insight - LDI	100.0%	31.0%	357,680	31.0%	352,442
<b>Total Section Data Coverage</b>				<b>67.9%</b>	<b>67.9%</b>	
<b>Total Portfolio (tons CO2e)</b>				<b>448,989</b>	<b>455,468</b>	

Source: MSCI, Mercer Calculations and Investment Managers. Pink shading represents data points calculated by Mercer based on holdings information provided by the Investment Managers using MSCI data. Blue shading represents data provided directly by investment managers.

1. With the exception of M&G Long Dated Asset Fund, analysis provided covers Scope 1 & 2 emissions data only. Assumes total fund values of £2,043.7m and £2,108.3m for the HP and Digital Sections, respectively.
2. Total absolute emissions metrics for the liability driven investments mandates include exposure to funded gilts and gilt repo. The Technical Section of this report provides more information on the assumptions that have been made in respect of the liability hedging portfolio.
3. The asset managers for the secured finance, private debt and real estate debt were not able to provide climate-related metric data as at 31 December 2021.
4. With the exception of the LDI portfolio, where there is 100% coverage, the figures in this analysis have been pro-rated at the individual manager fund level (where reasonable data is available) to present full coverage as if full data was available.
5. Coverage is defined as the percentage of underlying fund assets for which there is data available, relative to total fund assets. Further information is outlined in the Technical Section.
6. The Plan's strategic allocation is set by the Trustee, and can also be referred to as the 'Target' allocation of the Plan's assets to the relevant asset class.

The largest asset allocation for the Plan is to the Liability Driven Investment portfolio, and therefore this portfolio makes up the largest proportion of the Plan's absolute emissions. These hedging assets provide protection against changes in interest rates and inflation and therefore the Trustee expects the allocations to these assets to increase over time as the funding level of the Plan improves.

## 2. Weighted Average Carbon Intensity

**WACI is an intensity measure of emissions that takes the Total GHG Emissions figure and weights it to take account of the revenue of the underlying portfolio companies.** This metric is calculated by taking the total carbon emissions of each underlying security, as expressed on the previous page, and dividing by the annual revenue of the same security. For each investment this allows the Trustee to determine carbon intensity per \$1m of revenue generated and therefore provides a better understanding on where specific action might have the greatest actual impact. The Trustee's choice of WACI over other emissions intensity metrics, such as Carbon Footprint, has been driven by data availability from the underlying investment managers.

Analysing the WACI assists the Trustee in identifying carbon-intense sections of the Plan's portfolio.

**Table 6: Weighted average carbon intensity data**

Asset Class	Fund	Coverage (%)	HP Section		Digital Section	
			Strategic Allocation (%)	WACI (tons CO <sub>2</sub> e / \$M Revenue)	Strategic Allocation (%)	WACI (tons CO <sub>2</sub> e / \$M Revenue)
Equity	SSgA - Global Equity	97.6%	8.0%	161.3	8.0%	161.3
	LGIM - Small Cap Equity	90.5%	2.0%	150.3	2.0%	150.3
Multi-Asset Credit	CQS - Credit Multi Asset	77.2%	10.0%	84.0	10.0%	84.0
	Apollo - Total Return Fund	23.7%	10.0%	84.5	10.0%	84.5
Buy & Maintain Credit	LGIM - Buy & Maintain Credit	78.6%	13.0%	307.5	13.0%	288.2
Secured Finance	Ares - Secured Income	-	5.0%	-	5.0%	-
	HSBC - Secured Finance	-	5.0%	-	5.0%	-
Long-Dated Property	M&G - Long Dated Assets Fund	-	8.5%	-	8.5%	-
Private Markets	Goldman Sachs - Private Debt	-	7.5%	-	7.5%	-
	M&G - Real Estate Debt	-	-	-	-	-
Liability Driven Investments	Insight - LDI	100.0%	31.0%	147.0	31.0%	147.0

Source: MSCI, Mercer Calculations and Investment Managers. Pink shading represents data points calculated by Mercer based on holdings information provided by the Investment Managers using MSCI data. Blue shading represents data provided directly by investment managers.

1. Analysis provided covers Scope 1 & 2 emissions data only.
2. The WACI metric for the liability driven investments mandates include exposure to funded gilts and gilt repo. The Technical Section of this report provides more information on the assumptions that have been made in respect of the liability hedging portfolio
3. The asset managers for the secured finance, private debt and real estate debt were not able to provide climate-related metric data as at 31 December 2021.
4. The figures in this analysis have been pro-rated at the individual manager fund level (where reasonable data is available) to present full coverage as if full data was available.
5. Coverage is defined as the percentage of underlying fund assets for which there is data available, relative to total fund assets. Further information is outlined in the Technical Section.
6. The Plan's strategic allocation is set by the Trustee, and can also be referred to as the 'Target' allocation of the Plan's assets to the relevant asset class

### 3. Implied temperature rise

**This is a forward-looking metric that considers the pledges, commitments and business strategy changes that underlying investee companies/issuers have made. It provides a prediction of the potential temperature rise over the rest of the century based on the activities of those companies and issuers.** The metric illustrates the degree of portfolio alignment with the goals of the Paris Agreement (notably to limit warming to well below 2°C by the end of the century).

The Trustee has chosen this metric to include in this report because of its relative simplicity in presentation and a useful way to see, at a glance, the positioning of a fund towards a low carbon economy. Asset allocations with high Implied Temperature Rise metrics are invested in companies or issuers that are not transforming their businesses or activities in order to reduce the reliance on fossil fuels. This is also a measure of climate transition risk with greater transition risk highlighted in asset allocations with a higher Implied Temperature Rise.

**Table 7: Implied temperature rise data**

Asset Class	Fund	Coverage (%)	HP Section		Digital Section	
			Strategic Allocation (%)	Implied Temperature Rise (°C)	Strategic Allocation (%)	Implied Temperature Rise (°C)
Equity	SSgA - Global Equity	97.6%	8.0%	2.3	8.0%	2.3
	LGIM - Small Cap Equity	90.5%	2.0%	2.6	2.0%	2.6
Multi-Asset Credit	CQS - Credit Multi Asset	77.2%	10.0%	-	10.0%	-
	Apollo - Total Return Fund	23.7%	10.0%	-	10.0%	-
Buy & Maintain Credit	LGIM - Buy & Maintain Credit	78.6%	13.0%	2.1	13.0%	2.1
Secured Finance	Ares - Secured Income	-	5.0%	-	5.0%	-
	HSBC - Secured Finance	-	5.0%	-	5.0%	-
Long-Dated Property	M&G - Long Dated Assets Fund	81.8%	8.5%	-	8.5%	-
Private Markets	Goldman Sachs - Private Debt	-	7.5%	-	7.5%	-
	M&G - Real Estate Debt	-	-	-	-	-
Liability Driven Investments	Insight - LDI	100.0%	31.0%	2.0	31.0%	2.0

Source: MSCI, Mercer Calculations and Investment Managers. Pink shading represents data points calculated by Mercer based on holdings information provided by the Investment Managers using MSCI data. Blue shading represents data provided directly by investment managers.

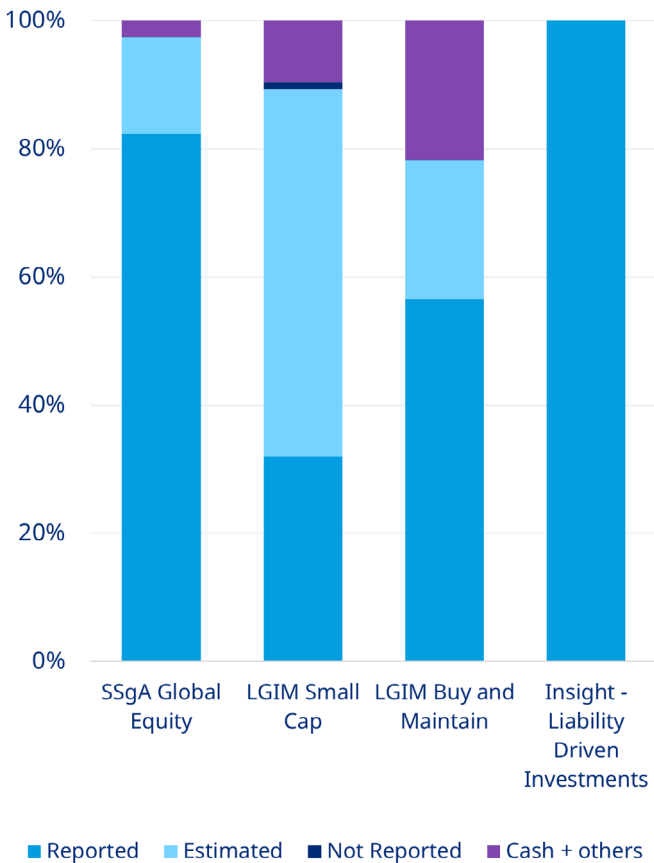
1. With the exception of M&G Long Dated Asset Fund, analysis provided covers Scope 1 & 2 emissions data only.
2. The Technical Section of this report provides more information on the assumptions that have been made in respect of the liability hedging portfolio
3. The asset managers for the secured finance, private debt and real estate debt were not able to provide climate-related metric data as at 31 December 2021.
4. Coverage is defined as the percentage of underlying fund assets for which there is data available, relative to total fund assets. Further information is outlined in the Technical Section.
5. The Plan's strategic allocation is set by the Trustee, and can also be referred to as the 'Target' allocation of the Plan's assets to the relevant asset class.

### 4. Data quality

Data Quality aims to represent the proportions of the portfolio for which the Trustee has high quality data. The Trustee has considered underlying data provided by investment managers that is reported, estimated, not reported and ‘cash and other’ to determine how representative the analysis is of the Plan’s actual portfolio. Results are shown below for the portfolios that hold predominantly public underlying assets (as opposed to private markets assets).

Data Quality also assists the Trustee in monitoring quality of reporting over time, as investment managers/companies are expected to continually improve their reporting on climate-related metrics.

Figure 9: Data quality table



Source: Investment Managers





## Trustee Target

The Trustee will keep its target under review to ensure it remains appropriate and relevant, taking into account any changes to the investment strategy of the Plan, the availability of data and wider market developments. With this in mind the Trustee may change its target in the future.

As the Plan's funding level improves, the investment strategy is expected to evolve as a means of reducing investment risk. This will be achieved through the sale of risk assets and investing further into lower risk assets which are designed to match the movement of the Plan's liabilities. The Trustee has therefore chosen not to set a climate-related target for the Plan's equity mandates given the short timeframe over which the Plan is expected to be invested in the asset class. Instead, the Trustee has agreed to focus on the carbon intensity of the lower risk assets, in particular investment grade credit, given this is expected to have a greater role to play in the Plan's investment strategy moving forwards.

The Trustee believes that setting quantitative targets for the purpose of monitoring the Plan's climate-related credentials provides a robust framework for assessing progress. Quantitative measures also help the Trustee in identifying, managing and tracking the Plan's exposure to financial risks and opportunities that climate change will bring.

Within the investment strategy, the Liability Driven Investment portfolio has the largest allocation. The exposure is mainly to UK government gilts. The Trustee has no control over the carbon intensity of the UK and has concluded that a target set for the liability hedging mandate would be impractical to influence and change.

Most of the remaining asset classes which would be considered low risk currently have limitations with the provision of climate-related data, notably the secured finance and private markets strategies. The Trustee expects that provision of climate-related data will improve for these asset classes over time as reporting on climate-related data become commonplace. Mercer will continue

to work with the investment managers on the Trustee's behalf with the aim of obtaining better data from the underlying assets (when available).

The buy and maintain investment grade credit mandate makes up a significant part of the Plan's carbon risk, both in absolute terms and with regard to carbon intensity. The Plan is the sole investor in its buy and maintain credit mandate, which means the Trustee can make Plan specific amendments to the investment guidelines which dictate the terms of the mandate.

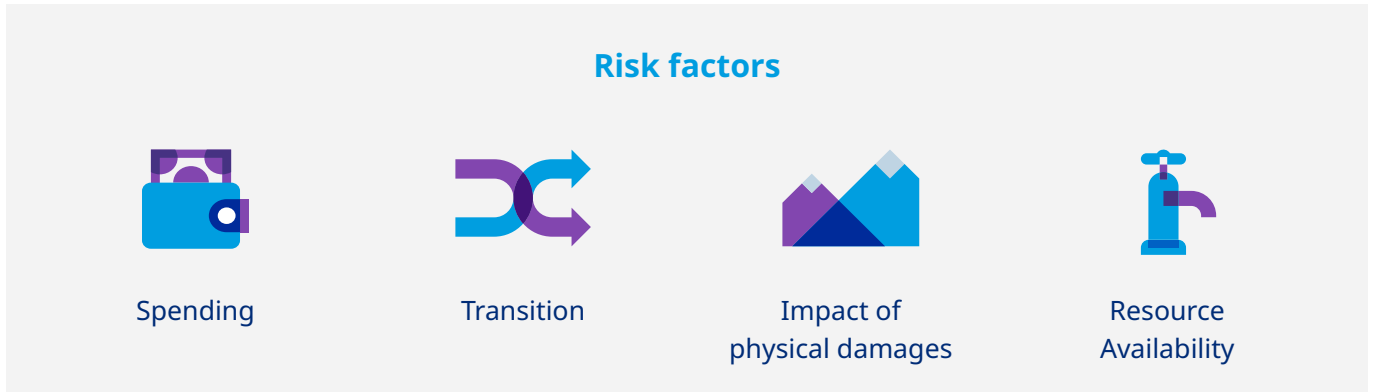
**The Trustee has set its climate-related target to reduce the Weighted Average Carbon Intensity associated with the Buy & Maintain Credit portfolios by 60% by 31 December 2030, from a baseline of 31 December 2021.** The Trustee's carbon reduction target is broadly consistent with a trajectory towards net zero emissions by 2050. The Trustee notes that the expected timeframe of the Plan's investment strategy is to 2030; the Trustee does not believe that achieving a net zero target by this date is feasible based on the requirements of the Plan's investment strategy (and the Trustee's fiduciary duty).



# Technical Section

Figure 10: Climate scenario modelling approach

**1** Four climate risk factors have been identified



**2** **Asset class sensitivity**

The weighting placed on each risk factor will vary by asset class and the risk factors have different degrees of sensitivity under each of the three climate change scenarios.

**3** **Climate scenarios**

An estimate can be placed on the impact on annual asset class returns over multi-year time periods, and to identify where the risk and opportunity priorities lie.

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## Asset class return impacts

Source: Mercer

Climate scenario modelling is a complex process. The Trustee is aware of the modelling limitations. In particular:

1. The further into the future you go, the less reliable any quantitative modelling will be.
2. Looking at average asset class returns over multi-decade timeframes leads to small impacts. The results are potentially significantly underestimated.
3. There is a reasonable likelihood that physical impacts are grossly underestimated. Feedback loops or 'tipping points', like permafrost melting, are challenging to model particularly around the timing of such an event and the speed at which it could accelerate.
4. Financial stability and insurance 'breakdown' is not modelled. A systemic failure may be caused by either an 'uninsurable' 4°C physical environment, or due to the scale of mitigation and adaption required to avoid material warming of the planet.
5. Most adaptation costs and social factors are not priced into the models. These include population health and climate-related migration.

## Data sources

Climate-related metrics provided by Mercer have been sourced from MSCI using stock list data provided by the investment managers. Other data has been requested directly from the asset managers.

## Scope of emissions

Only Scope 1 and 2 emissions data has been included in this report except where noted. This means that for some companies the assessment of their WACI could be considered an understatement. Scope 3 emissions are currently excluded because scope 3 disclosure remains insufficient to use reliably at present. Scope 1, 2 and 3 emissions are as defined by the GHG protocol. The Plan will be required to report on Scope 3 emissions in its second TCFD report and subsequently on an annual basis.

## Data coverage

Data coverage refers to the proportion of an asset in which the various climate-related metric data is available. There are gaps in the data as:

- Some public listed companies are not publishing climate-related data or are providing poor quality data. This is relevant to public equity and corporate bonds. Obtaining data for emerging market equity can also be challenging due to general disclosure and transparency challenges.
- Many private companies do not currently produce climate-related data and coverage for private markets, such as private equity and private debt, will be low, or zero for mature funds.

- Sovereigns, or governments, may not publish climate-related data in the public domain. This is a particular challenge for emerging market debt. For UK government debt, data is available but there is a delay in the data being published.
- Short-term instruments, such as secured finance assets, have limited data available due to the short-term nature of the individual assets.
- For the long dated property portfolio, the occupiers of the buildings in the portfolio have full operational control and there are no Scope 1 or 2 emissions associated with the investments. The asset managers are looking to improve the collection of Scope 3 emissions data – this includes occupier activities where they have direct utility supplier contracts.

In this report, the Trustee has used a pro rata approach to scale up each climate metric in order to present the data as if full coverage was available for each asset. This assumes that the part of an investment fund that does not have data available has the same investment characteristics (for example, same sector or geography) as the part where there is data. For example, where an investment manager can only provide climate metrics on half of the underlying investments for a particular strategy, we have assumed that the remaining half for which data cannot be provided has identical climate characteristics as the half for which climate can be provided. The relevant climate metric as provided by the investment manager has then been scaled up to allow for this. In this example, the data would be doubled to get to 100% coverage.



## Asset class assumptions

### Liability Driven Investment Portfolio

The following assumptions have been made in the calculation of the climate-related metrics for the Liability Driven Investment portfolio:

- Latest annual data for emissions produced in the UK (Scope 1 and 2) as at 31 December 2020, published by the UK government, of 405.5m tonnes of CO<sub>2</sub>e.
- Scope 3 emissions are not included.
- Figures cannot sensibly be aggregated with emissions data for non-gilt assets due to risk of double counting as UK emissions include corporate and household emissions.
- Total market value of gilts in issuance at 31 December 2021, published by the DMO of £2,164,140m (including green gilts).
- UK GDP for 2020, published by the IMF of £2,112,040m.
- Plan's asset position at 31 December 2021.
- The metrics cover the full economic exposure to UK gilts which will be from the physical gilt holdings and any exposure to repo.
- Gilts posted out as collateral by the Plan are included in the gilt valuations and gilts received as collateral are excluded.
- Interest rate swaps, inflation swaps, futures, cash and money market fund holdings have all been excluded.

Category	HP Section		Digital Section	
	Market value of exposure (£m)	Absolute emissions tCO <sub>2</sub> e	Market value of exposure (£m)	Absolute emission tCO <sub>2</sub> e
Funded gilts only	631,385,836	116,662	548,763,442	101,396
Gilts on repo	1,299,187,654	240,053	1,352,420,215	249,889
Combined gilt exposure	1,930,573,490	356,715	1,901,183,657	351,285

Source: Insight, UK Government, DMO and IMF.



## Glossary

### Carbon intensity

The amount of emissions of carbon dioxide (or other greenhouse gasses) released per unit of another variable such as revenue, gross domestic product (GDP), per \$1million invested etc. over a given time period (typically annually). See also Weighted Average Carbon Intensity (WACI).

### Credit spread

The difference in yield between two debt securities of the same maturity but different credit quality. In the Plan's context, this is typically the difference in yield between corporate bonds (of varying credit quality) and UK government bonds.

### Decarbonisation

The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.

### Global warming

The estimated increase in global mean surface temperature expressed relative to pre-industrial levels unless otherwise specified.

### Greenhouse gases

Gases in our planet's atmosphere which trap heat. They let sunlight pass through the atmosphere but prevent heat from leaving the atmosphere. Greenhouse gases include: Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SF<sub>6</sub>), Nitrogen Trifluoride (NF<sub>3</sub>).

### Net zero (CO<sub>2</sub> emissions)

Net zero carbon dioxide (CO<sub>2</sub>) emissions are achieved when CO<sub>2</sub> emissions are balanced globally by CO<sub>2</sub> removals over a specified period. The term "net zero" is also typically associated

with the 2050 date or earlier, as this is aligned with the scientific recommendations to achieve a 1.5°C scenario.

### Paris Agreement

The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on December 2015 in Paris, at the 21st session of the Conference of the Parties (COP) to the UNFCCC. The agreement, adopted by 196 Parties to the UNFCCC, entered into force on 4 November 2016 and as of May 2018 had 195 Signatories and was ratified by 177 Parties. One of the goals of the Paris Agreement is "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels", recognising that this would significantly reduce the risks and impacts of climate change. Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change.



## Physical risks

Dangers or perils related to the physical or natural environment that pose a threat to physical assets e.g. buildings, equipment and people. Mercer's scenario analysis grouped these into the impact of natural catastrophes (for instance sea level rise, flooding, wildfires, and hurricanes) and resource availability (particularly water). See also Transition risks.

## Scope 1, 2, 3 emissions

Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. Emissions are measured over annual periods.

## Transition

The process of changing from one state or condition to another in a given period of time. Transition can be in individuals, firms, cities, regions and nations, and can be based on incremental or transformative change.

## Transition risks

Risks from policy changes, reputational impacts and shifts in market preferences, norms and technology. See also Physical risks.

## Weighted Average Carbon Intensity (WACI)

The carbon intensity of a portfolio, weighted by the proportion of each constituent in the portfolio. Carbon intensity is calculated for each company as (Scope 1 and 2 carbon emissions / \$m sales) over a given time period (typically annually).





## Important notices from data providers

### Mercer

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### Aon: Technical Actuarial Standards ("TAS") Notices

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

The compliance is on the basis that the Trustee is the addressee and the only user and that the document is only to be used to feed into the climate change scenario analysis being carried out for the Plan. If you intend to make any other decisions after reviewing this document, please let us know and we will consider what further information we need to provide to help you make those decisions.

The document has been prepared under the terms of the Agreement between the Trustee and Aon Solutions UK Limited on the understanding that it is solely for the benefit of the addressee.