

TCFD report for year ending 31 March 2023

Aon Retirement Plan (the “Plan”)

Produced by: Aon UK Trustees Limited

Date: September 2023

Introduction

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

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

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

Executive summary

Regulatory Background

As part of the climate change governance reporting regulations, Aon UK Trustees Limited (the “Trustee”) must produce and publish a Taskforce on Climate-related Financial Disclosure (“TCFD”) report for the Aon Retirement Plan (the “Plan”) within seven months of the first Plan year-end after the regulations apply. This is the Plan’s first report, which covers the period 1 October 2022 to 31 March 2023. Thereafter, until such a time as the Plan has been fully insured with an insurer, the Trustee will need to produce a report annually, which will be published online, within seven months of the Plan year-end and be included within the Plan’s annual report and accounts.

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

- **Governance:** The Plan’s governance and oversight of climate-related risks and opportunities.
- **Strategy:** The actual and potential impacts of climate-related risks and opportunities on the Plan’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.

Further supporting information to assist in the reading of the report can be found on pages 30-38. The purpose of the appendix is to provide supplementary information on the impact assessment of the insured assets, the climate risks and opportunities, modelling assumptions made for the climate change scenario analysis and a further explanation of greenhouse gas emissions.

Governance

Climate risk and the Plan

Climate Beliefs Statement

In line with best practice for a plan of this type, the Trustee's ultimate aim is to secure members' benefits through annuity policies with insurance companies. Given the Plan's healthy funding position, this could happen sometime between 2024 and 2029. Before then the Trustee believes that there are short-term risks associated with climate change that may impact the Plan's investment return over the period until the Plan's liabilities are secured.

As such, where it is appropriate to do so, the Trustee seeks to monitor and manage these risks and integrates assessments of climate change risk into its investment decisions. The Trustee also aims to consider potential investment opportunities that may arise from climate-related factors during that time.

In line with the Trustee's strategic objectives and fiduciary duty, the Trustee considers that the most appropriate time horizon for the Plan is the short-term i.e., the next 1 to 3 years. Where appropriate, the Trustee considers transition and physical risks separately.

Notwithstanding the above the Trustee also recognises that the Plan could be subject to much longer-term risks if the Plan's liabilities are not secured with an insurance company within the above timescale. The Trustee therefore also assesses climate-related risks and opportunities over the medium- and longer-term, which the Trustee considers to be 4 to 7 years and 8 to 10 years, respectively.

Role of the Trustee

The Trustee Board is ultimately collectively responsible for oversight of all strategic matters related to the Plan. 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 setting the Plan's climate change risk framework.

The Trustee Board has delegated the ongoing monitoring and implementation of the Plan's climate change risk management framework to the Funding and Investment Sub-Committee ("FISC").

The Trustee has discussed and agreed its climate-related beliefs and overarching approach to managing climate change risk. Details are set out in the respective Statements of Investment Principles ("SIP") for the Defined Benefit ("DB"), Defined Contribution ("DC") and Additional Voluntary Contribution ("AVC") Sections and are reviewed and (re)approved annually by the Board.

The Trustee receives regular training on climate-related issues, to ensure that it has the appropriate degree of knowledge and understanding on these issues to support good decision-making. The Trustee expects its advisers to bring important and relevant climate-related issues and developments to the Trustee's attention in a timely manner.

The Trustee regularly monitors and reviews progress against the Plan's climate change risk management approach.

Role of the FISC

The FISC is a sub-committee of the Trustee and keeps the Trustee apprised of material climate-related developments on a regular basis.

The key climate-related activities undertaken by the FISC, with the support of the Trustee's advisers, are:

- Ensuring investment proposals explicitly consider the impact of climate risks and opportunities.
- Engaging with the Plan's investment managers to understand how climate risks are considered in their investment approach.
- Working with the investment managers to disclose relevant climate-related metrics as set out in the TCFD recommendations.
- Working with its investment advisers to ensure that stewardship activities are being undertaken appropriately on the Plan's behalf.
- Ensuring that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material.
- Engaging with the Sponsor on climate risk and the potential impact on covenant.

Trustee Training and Delegation

The Trustee receives training on climate-related issues on a minimum of an annual basis, 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.

This training includes introducing climate-related risk and opportunities as concepts relevant to investment decision-making, and the TCFD framework as a method for explaining how these risks and opportunities are identified, assessed, and managed.

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.

Over the reporting period, the Trustee and/or FISC dedicated around 9 hours and resource on governance of climate-related risks and opportunities, which involved the discussion of TCFD related disclosures across separate FISC and board meetings.

Role of external advisers

Investment advisers: the Trustee's investment advisers for the DB, DC and AVC Sections provide strategic and practical support to the Trustee and the FISC, in respect of the management of climate-related risks and opportunities and ensuring compliance with the recommendations set out by the TCFD.

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

Plan Actuary: The Plan Actuary will help the Trustee assess the potential impact of climate change risk on the Plan's funding assumptions where relevant, given the lifetime of the Plan.

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

Risk settlement adviser: In the lead up to a potential bulk annuity transaction in the next few years, the Trustee's risk settlement adviser will help the Trustee assess the ability of candidate insurance companies to identify, assess and manage climate-related risks and opportunities. This will also include wider ESG considerations.

Covenant advisor: the Trustee's covenant adviser will help the Trustee understand the potential impact of climate change risk on the sponsor covenant of the principal employer of the Plan.

As part of covenant advice sought, which is typically around the time of the Plan's triennial funding valuation, the Trustee will seek to understand how climate-related factors could affect the sponsoring employer's strategy over time and consider this in the light of the Plan's de-risking journey. In doing so, the Trustee will seek information from the covenant adviser regarding their credentials in assessing climate-related factors.

Strategy

Portfolio resilience and scenario analysis

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

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

The Trustee established a “base case” scenario against which the two other climate change scenarios are compared. The table below describes the scenarios that have been modelled, including the projected rise in global temperatures by 2100 in each scenario.

Optimistic net zero (Base Case) +2.0°C to +2.5°C Emission reductions start now and continue in a measured way in line with the objectives of the Paris Agreement and the UK government’s legally binding commitment to reduce emissions in the UK to net zero by 2050.	Orderly transition +1.3°C to +2.0°C Considers the impact of immediate and coordinated action to tackle climate change using carbon taxes and environmental regulation.	Disorderly transition +2.8°C to +3.0°C Considers the potential impact of climate change if limited action is taken and insufficient consideration is given to sustainable long-term policies to manage global warming effectively.
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Impact Assessment – DB assets

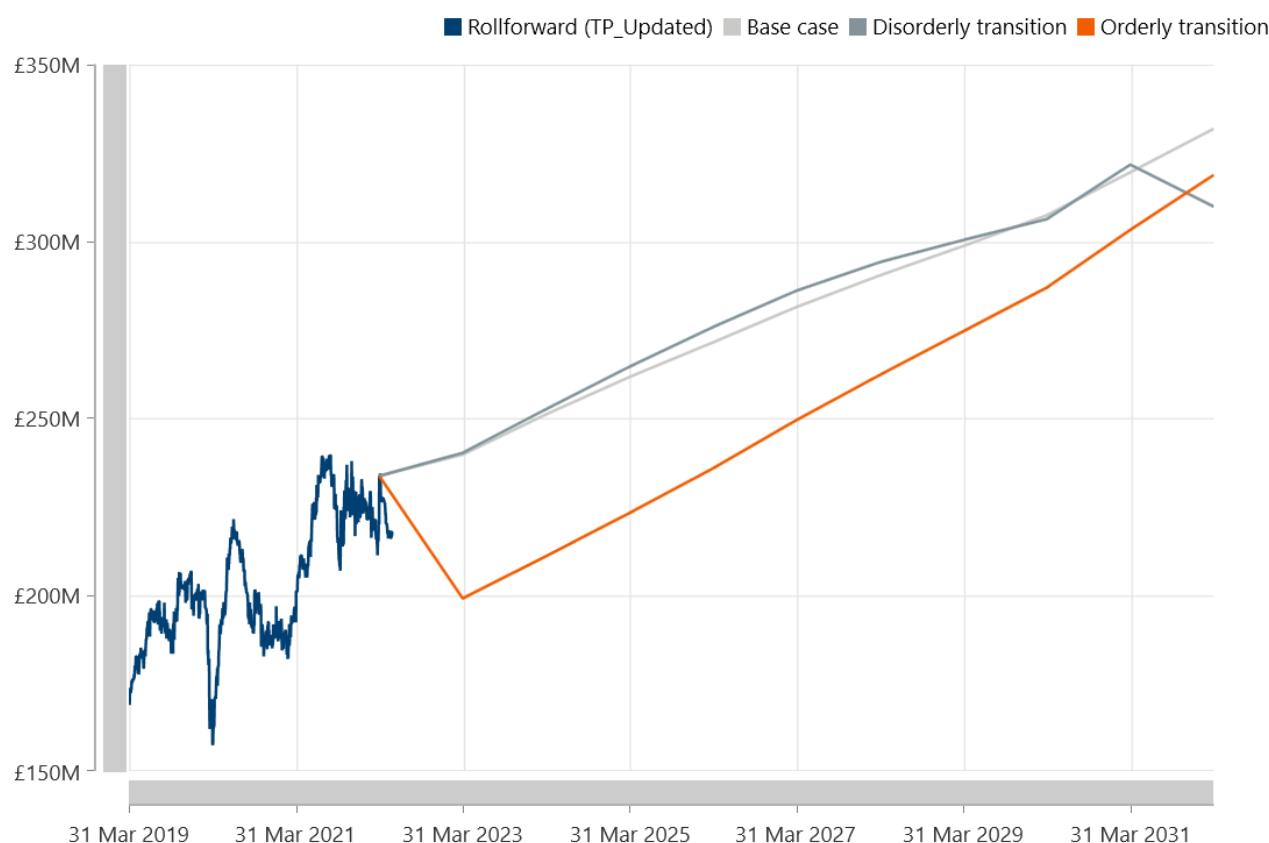
Given the commonality in the investment strategies and liability profile across the four largest sections of the Plan and on grounds of materiality, the Trustee has undertaken quantitative scenarios analysis on the two largest sections, Alexander & Alexander ("A&A") and Aon Bain Hogg ("ABH"). The Trustee considers that the Aon UK ("AUK") and Hewitt Pension Fund ("HPF") sections would exhibit similar climate risk characteristics to the A&A and ABH sections given the similarities. In addition, in order to compare the potential impact on the Plan of de-risking the assets in the event of a buy-out, the Trustee compared the target de-risked strategy of the A&A section, with the current target strategy of the ABH section. The headline analysis and conclusions are summarised below. Since the fifth section, Hewitt Associates Pension and Life Assurance Plan ("HAPLAP"), does not have the same commonality with the four other larger sections, it has been excluded from this analysis as the investments within this section constitute a significantly smaller proportion of the overall benefits of the Plan.

The analyses were completed with scenarios as at 31 March 2022.

A&A Section

The A&A section's investment portfolio exhibits reasonable resilience under the climate scenarios modelled. This is due to the low-risk strategy and high levels of hedging against changes in interest rates and inflation. This is illustrated by the chart below, which projects the section's funding surplus based on its statutory funding liabilities (i.e., the "technical provisions" as defined in the Plan's Statement of Funding Principles) over the next ten years. The projection period is consistent with the time horizon over which the Trustee considers climate-related risks and opportunities for the Plan, as defined by the Trustee in the *Governance* section of this report.

Long-term funding surplus projections under each climate scenario (excluding insured assets and liabilities)



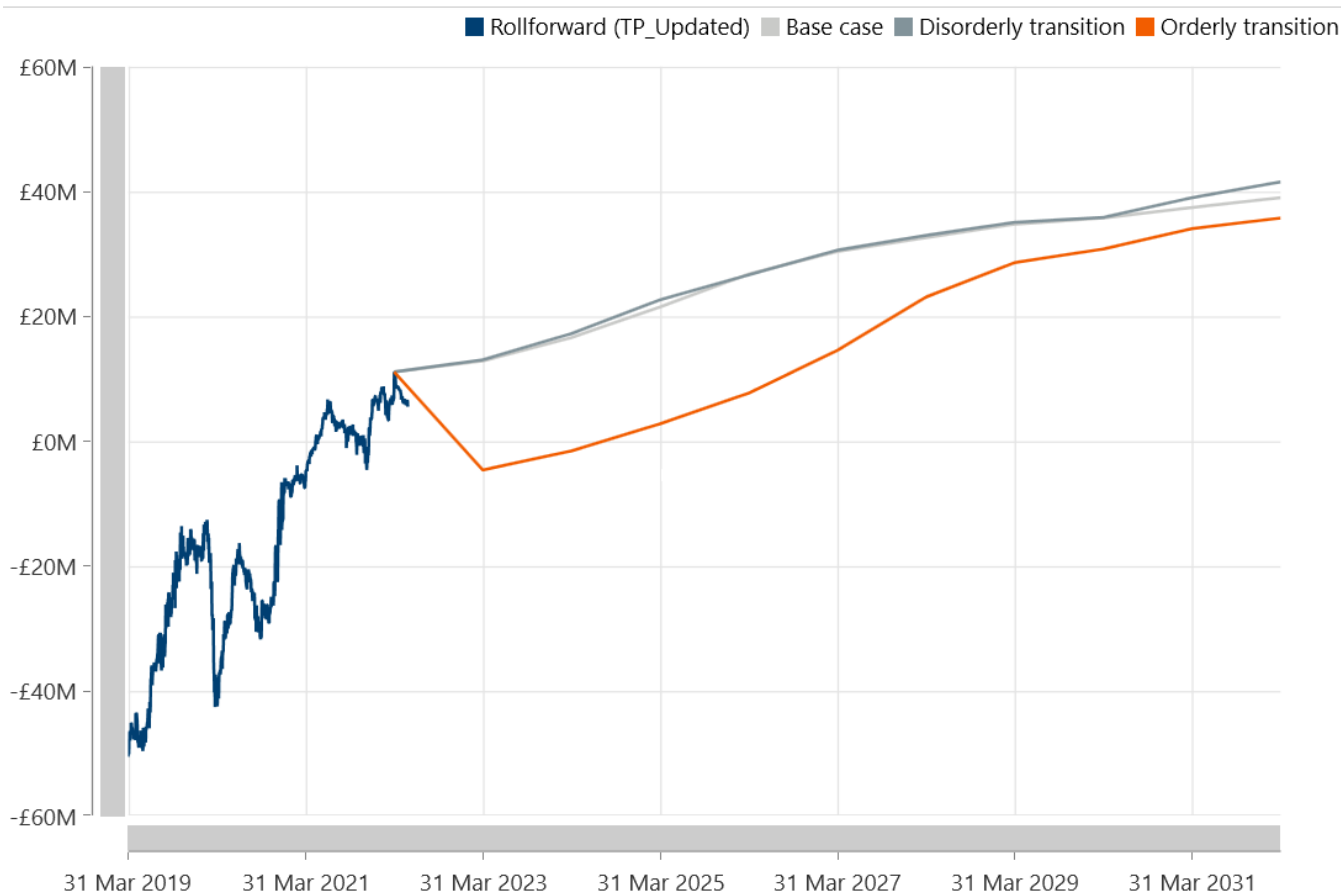
Over the whole period the worst-case scenario for the section (although only marginally) is the disorderly transition. Although initially the funding level improves in line with the base case, after nine years the surplus deteriorates, albeit the impact is small. This leaves the section slightly worse off in terms of funding surplus relative to the base case, although it is possible (and expected) that the Plan might have secured the liabilities via bulk annuities before then.

A more significant impact on the technical provisions surplus is shown under the orderly transition scenario where the section experiences a small reduction in the surplus before slowly recovering. This is mainly driven by the initial impact of credit spreads on the section's assets given the section's allocation to Credit Default Swaps. It should be noted, however, that this impact would not be expected to be seen on the section's Solvency funding position, as the Solvency liabilities would be expected to fall to a similar extent.

ABH Section

Similarly, the ABH section's investment portfolio also exhibits good resilience under the climate scenarios modelled. Again, this is due to the low-risk strategy and high levels of hedging against changes in interest rates and inflation, which is illustrated by the chart below.

Long-term funding surplus projections under each climate scenario (excluding insured assets and liabilities)



That said, whilst the current ABH section portfolio is running more risk compared to the A&A section, the disorderly transition has a smaller impact on the surplus. This is because the ABH section is anticipated to be fully de-risked when this occurs. However, similar to the A&A section, the ABH section is still expected to be slightly worse off in nine years' time.

Also, compared to the A&A section the funding surplus of the ABH section is more volatile under the orderly transition. The section experiences a small reduction in the surplus before slowly recovering. Relative to the current surplus this impact is worse compared to the A&A section. This is because the impact occurs when some of the ABH section investment portfolio is still invested in higher-risk assets.

Conclusion

The scenarios modelled cover a range of good and bad climate change outcomes. The scenarios look at the impact across the assets and liabilities of the A&A section and the ABH section, which comprise a large proportion of the Plan's total assets and liabilities. The climate outcomes modelled include severe, but feasible scenarios rather than more severe "tail risk" events.

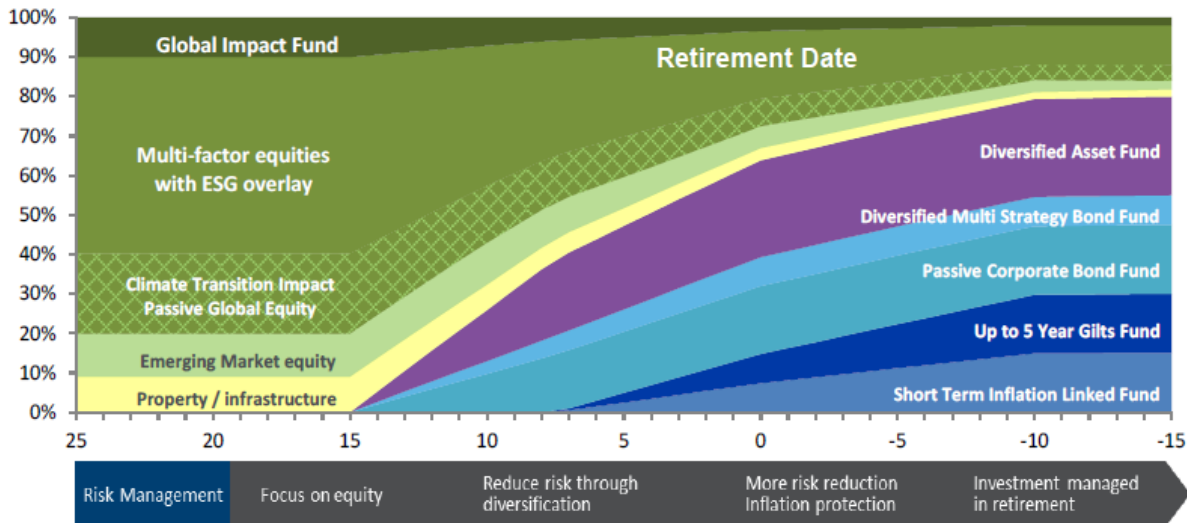
Based on this analysis and the commonality in the investment strategy and liability profile across all four sections, the Trustee has concluded that overall, the Plan's funding position is resilient to all the climate change scenarios considered. This is primarily due to the high levels of hedging against changes in interest rates and inflation. The Trustee is therefore comfortable with the current and target investment strategy in place.

Impact Assessment – DC assets

The majority of the DC assets of the Plan were transferred out into the Aon Master Trust (“AMT”) during the Plan year to 31 March 2021. The remaining DC assets within the Plan are also managed by Aon DC Solutions.

Investment strategy

The investment strategy adopted by the default investment arrangement is shown in the chart below.



The strategy is implemented via ‘target date funds’, with the asset allocation being managed according to members’ terms to retirement. The default strategy, as shown, is the Aon Managed Retirement Pathway to Drawdown. This default has been selected as it allows for flexibility in how members may take their benefits. Retirement Pathway variants targeting annuity and cash are also available to members.

The rationale for the default strategy is as follows:

- A focus on equity investment when members are a long time from retirement. At this stage of the Lifestyle strategy, 70% of the Fund is invested in funds with a climate / ESG focus. A further 10% is invested in the Aon Managed Global Impact Fund, which invests in companies which aim to provide a positive impact on society / the environment.
- A reduction in risk through diversification into other asset classes, and diversification within asset classes (e.g., bonds) as members approach retirement.
- Further reduction in risk through further reduction in equities in favour of diversified assets in the post-retirement phase.

For the climate change analysis in relation to the DC assets the Trustee has looked at three alternative climate change scenarios relative to our assumed ‘base case’. The base case, orderly transition and disorderly transition are the same climate change scenarios as considered for the DB assets. Additionally, for the DC assets, we have considered the ‘no transition’ scenario given the longer investment time horizon of young and mid-career members in particular:

Orderly transition	Disorderly transition	No transition
+1.3°C to +2.0°C	+2.8°C to +3.0°C	+4.0°C
Considers the impact of immediate and coordinated action to tackle climate change using carbon taxes and environmental regulation.	Considers the potential impact of climate change if limited action is taken and insufficient consideration is given to sustainable long-term policies to manage global warming effectively.	No further action is taken to reduce greenhouse gas (“GHG”) emissions leading to significant global warming.

Our impact assessment is qualitative in nature and is intended to illustrate the scenarios that the Trustee believes are of most concern to members. This is largely driven by members' term to retirement, given the impact on both investment strategy and investment time horizon. Younger members are invested in equities and have longer time horizons, and hence greater exposure to climate scenarios that are damaging to expected equity returns in the long term. Older members are invested in more diversified portfolios and have shorter time horizons, and hence have greater exposure to short- and medium-term climate risks.

Our assumed base case is that emission reductions start now and continue in a measured way in line with the objectives of the Paris Agreement and the UK government's legally binding commitment to reduce emissions in the UK to net zero by 2050. The Trustee believes that this scenario is consistent with equity markets delivering positive real returns for members over the long term. Our assessment of the impact of the alternative climate change scenarios is given relative to this base case, over a range of time horizons.

The short-, medium-, and long-term time horizons noted here are not the same as those set out for the DB assets on the Plan. The time horizons of the DC assets are all longer than those of the DB assets for each term. The Trustee considers the short-, medium- and long-term time horizons of the DC assets to be 1 to 5 years, 6 to 10 years, and 10 to 30+ years, respectively.

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 portfolio.

Within the equity portfolio, the investment strategy is climate-risk aware, through investment in the Aon Global Impact Fund, the UBS Global Equity Climate Transition Fund and the ESG overlay within the Multi-Factor Equity portfolio. These investments aim to manage both the risks and opportunities of climate change to improve the overall risk / return characteristics of the portfolio.

Orderly	Disorderly	No transition
Short-term	Short-term	Short-term
Asset portfolios are expected to suffer an initial drop as a result of the costs of immediate coordinated action to tackle climate change.	There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case.	There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case. There is no action taken to combat climate change.
Medium-term	Medium-term	Medium-term
Asset portfolios are expected to recover from the initial shock of transition costs. Relative to the other scenarios, lower impact from physical risks (given action to tackle climate change) is beneficial for portfolios.	Asset portfolios deteriorate sharply as a result of delayed action required to tackle climate change.	Impacts from physical risks gradually become more severe over time leading to a drag on economic growth and risk asset returns. Asset portfolios begins to lag the base case.

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 impacts from climate change despite the large initial transition cost.

Long-term

Whilst asset portfolios do start to recover from the medium-term shock, this scenario is likely to be of most concern for this group of members, which would leave them materially worse off in comparison to the base case.

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.

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 post retirement, the impact they experience will be more likely to include the 'long-term' effects below, albeit mitigated relative to younger members by their lower allocation to equities.

Relative to younger members, the climate risk from asset portfolios is reduced because of the lower allocation to equities and the relatively shorter investment time horizon. However, for this group of members, the timing of the impact of climate risk on assets may mean there is limited time (in terms of remaining working life) to make up any shortfall in expected retirement benefits.

Orderly

Disorderly

No transition

Short-term

Asset portfolios are expected to suffer an initial drop as a result of the costs of immediate coordinated action to tackle climate change.

Short-term

There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case.

Short-term

There is not expected to be any initial impact on asset portfolios and performance is expected to follow the base case.

There is no action taken to combat climate change.

Medium-term

Asset portfolios are expected to recover from the initial shock of transition costs. Relative to the other scenarios, relatively lower impact from physical risks (given action to tackle climate change) is beneficial for portfolios.

Medium-term

Asset portfolios deteriorate sharply as a result of delayed action required to tackle climate change. For this group of members, the timing of a Disorderly transition may mean there is little time (in terms of remaining working life) to make up pensions shortfall.

Medium-term

Impacts from physical risks gradually become more severe over time leading to a drag on economic growth and risk asset returns. Asset portfolios begins to lag the base case.

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 impacts from climate change despite the large initial transition cost.

Long-term

Whilst asset portfolios do start to recover from the medium-term shock, this scenario is likely to be of concern for this group of members, which would leave them materially worse off in comparison to the base case.

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.

Assessing climate-related risks and opportunities

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

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

The Plan's investment portfolio is diversified across a range of different asset classes including equities, credit, and a range of alternative return-seeking assets. Given the number of asset classes and strategies that the Plan invests in, the Trustee has completed a best endeavours exercise to analyse the climate-related risks of each asset class.

The assessment is based on the scenario transition pathways described above. The risks in the analysis are shown relative to the base case scenario. In particular, the no transition scenario (under which physical risks dominate) has been contrasted with the orderly transition scenario (under which transition risks dominate).

The Trustee has chosen these scenarios because it believes that they most appropriately contrast the range of climate risk categories affecting the Plan.



Risk categories

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

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

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



Ratings

The analysis uses a RAG rating system where:

Red denotes a much higher level of financial exposure compared to the base case.

Amber denotes a slightly higher level of financial exposure compared to the base case.

Green denotes a similar level of financial exposure compared to the base case.



Time horizons

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

- short-term: 1-3 years.
- medium-term: 4-7 years
- long-term: 8-10 years

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

Climate risk assessment – DB section

No transition scenario – physical risks dominate

The Plan's Liability Driven Investment (LDI) and credit assets are expected to be highly exposed to climate risks in the medium- to long-term, as government bond yields and corporate bond spreads are expected to gradually rise, however, this level of exposure is broadly similar to the base case scenario to which the no transition scenario is being compared.

The Plan's return-seeking assets are also expected to be exposed, particularly in the medium- to long-term and notably the Plan's holdings in insurance-linked securities.

Asset class	Extent of exposure	Short (1 – 3 years)	Medium / Long (4 – 10 years)
Equities	Low	High	High
LDI (Government bonds)	Very high	Medium	Medium
Credit ¹	Medium	Medium	High
Asset backed securities	Very low	Medium	High
Insurance-linked securities ²	Very low	High	High
Illiquid assets	Low	High	High

¹Excluding asset-backed securities.

²Insurance-linked securities are specific financial instruments whose values are driven by insurance loss events and are not related to the annuity policies held by the Plan.

Orderly transition scenario – transition risks dominate

The LDI and credit assets are expected to be exposed to climate-related risks in the short-term, as government bond yields and corporate bond spreads are expected to rise initially.

The Plan's return-seeking assets are also expected to be exposed in the short-term, as growth and risk markets are expected to perform poorly initially.

However medium- and long-term growth prospects across all of the Plan's asset classes are expected to improve, with the introduction of environmental regulation and transition to clean technologies.

Asset class	Extent of exposure	Short (1 – 3 years)	Medium / Long (4 – 10 years)
Equities	Low		
LDI (including government bonds)	Very high		
Liquid credit ¹	Medium		
Asset backed securities	Very low		
Insurance-linked securities ²	Very low		
Illiquid assets	Low		

¹Excluding asset-backed securities.

²Insurance-linked securities are specific financial instruments whose values are driven by insurance loss events and are not related to the annuity policies held by the Plan.

Covenant risk

The Trustee does not believe that climate-related risks will have a significant impact on the financial strength (“covenant”) of Aon (the “Sponsor”), particularly in the short-term as the Sponsor’s operations are not as directly exposed to climate-related risks compared with other industries such as manufacturing or aviation. The Pensions Regulator (“TPR”) is however placing increasing importance on the Trustee’s understanding of how these risks impact covenant.

For the Sponsor the cost of transitioning to net zero, for which the Sponsor has a target of 2030, will likely require a substantial capital investment, and could cause a drag on medium-term cash generation. Failure to achieve net-zero and responsible investment targets could result in reputational damage and loss in market share if the Sponsor falls behind competitors.

The Trustee notes there is a reputational risk to the Sponsor, which is the area which could potentially have the biggest impact on covenant. If external stakeholders believe the Sponsor is ‘greenwashing’ or acting unethically, then that could drive clients away, impacting financial performance and ultimately the covenant. Broader ESG factors could also become increasingly important over the longer-term.

The Trustee, with the help of its covenant adviser, will monitor the Sponsor’s progress against ESG targets, particularly those relating to climate change.

Conclusion

As the Plan approaches the possibility of being able to secure its liabilities by means of fully insuring the liabilities with an insurance company, the principal risks that are likely to be of most concern to the Trustee relate to the matching and liquid credit assets. Climate-related risks associated with the Plan’s investments in global equities and illiquid assets are likely to be of less concern to the Trustee over this period. However, if the Plan’s circumstances change and the target timeframe to full insurance is extended, then these risks could become of more concern to the Trustee in the longer-term.

The Plan currently holds a significant proportion of assets in annuity policies, and the Trustee has minimal control over the governance related to these assets.

Climate-related opportunities

Arguably, potential investment opportunities are more limited for the Plan given the de-risking of the investment strategy and the potentially close proximity to being able to secure the liabilities with bulk annuities, compared to other pension schemes. That said, the Trustee recognises that as the Plan continues to de-risk, the Plan's investments in UK Government Bonds (through the matching portfolio) and Liquid Credit could give rise to potential opportunities in the next few years. More detail on this is set out below. Potential opportunities in property, infrastructure and illiquid credit are likely to be less relevant for the Plan in the short-term but could become more relevant in the longer-term if the timescale before a possible full insurance is extended.

UK Government Bonds

Green gilts provide LDI mandates with a climate-related opportunity where the bonds they buy are specifically linked to the financing of green initiatives. The UK government's green financing framework sets out six key areas where the proceeds will be invested: clean transportation, climate change and adaptation, renewable energy, energy efficiency, pollution prevention and control, and living and natural resources.

Liquid Credit

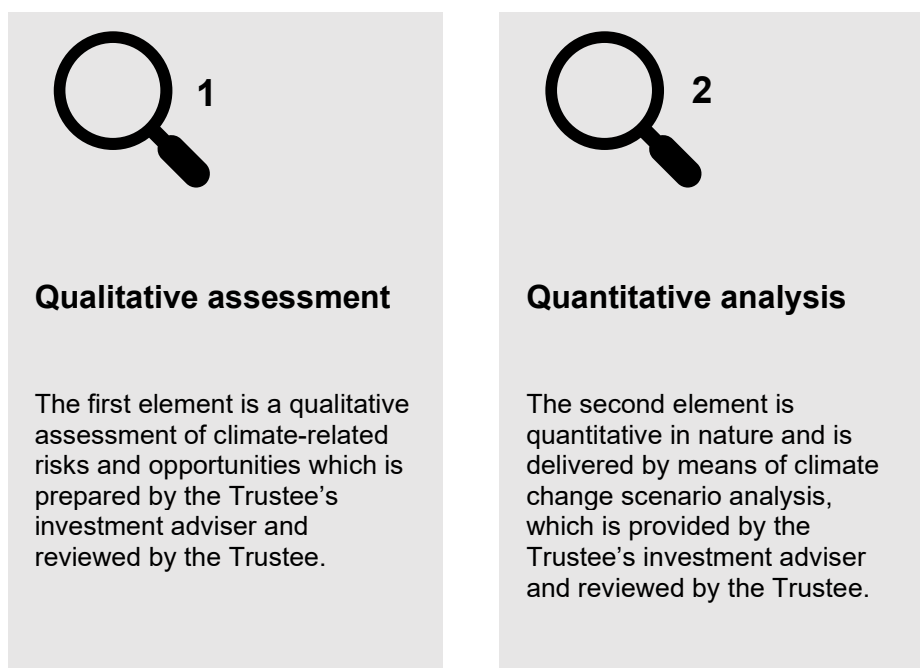
Green bonds, as well as companies that are transitioning like those setting Science Based Targets or companies focusing on generating revenues from climate change solutions such as renewable energy, energy efficiency, electric vehicles, circular economy etc. Many financial sector firms issue green bonds, which present a great opportunity for fixed income climate-related investment. Although climate solutions-oriented opportunities will be limited in low climate impact sectors, many companies can be enablers of the transition such as financing, technology, and communications sectors.

Risk management

Our process for identifying and assessing climate-related risks

As described earlier in this report, the Trustee recognises that the Plan is most likely to be exposed to short-term climate-related risks, as the Plan is likely to be able to consider a full insurance in the next few years. Longer-term risks would therefore be less applicable to the Plan; however, the Trustee acknowledges that this would change if the timescale to a possible full insurance is extended.

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



Together these elements give the Trustee a clear picture of the climate-related risks that the Plan is exposed to, subject to the consideration that the impact of climate change is not yet fully understood or widely agreed upon, and that there is currently considerable debate on what the true impact of climate change will be over time. Where appropriate, the Trustee distinguishes between transition and physical risks. All risks and opportunities are assessed with reference to the time horizons that the Trustee has identified as relevant to the Plan.

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

Our process for managing climate-related risks

The Trustee has also taken the following steps to integrate climate-related risks and opportunities into the Plan's risk management framework and processes.

- **Training** – The Trustee receives training on responsible investment to understand how ESG factors, including climate change, could impact the Plan's assets and liabilities. The Trustee will continue to receive this training on an ongoing basis as part of its TCFD reporting.
- **Advisers** – As set out in the Statement of Investment Principles ("SIP"), the Trustee reviews its adviser objectives to ensure that its advisers have appropriate climate capability, and bring important, relevant, and timely climate-related issues to the Trustee's attention.
- **Investment strategy** – The Trustee ensures investment proposals consider the impact of climate risks and opportunities.
- **Actuarial and covenant** – The Trustee ensures that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material and evaluates its advisers understanding of climate-related factors in accordance with the process set out in the Governance pillar.
- **Managers** – The Trustee engages with the investment managers, as set out in the Statement of Investment Principles ("SIP"), to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately.
- **Integrated Risk Management ("IRM") framework** – Climate-related risks are included in the Plan's wider risk management framework, which is overseen by the FISC on a regular basis.
- **Plan documentation** – The Trustee includes consideration of climate-related risks in the Plan's other risk processes and documents, such as the risk register and the SIP, and regularly reviews these.
- **Covenant** – The Trustee seeks to understand the climate-related risks to the sponsor over the short-, medium-, and long-term.

Integration into overall risk management

The Trustee considers and manages climate-related risks within its wider investment strategy to ensure that the overall investment objective and its principal duty to the members (to pay pensions as they fall due) remains achievable. The Trustee ensures that climate-related risks are embedded into the Plan's overall risk management in two main ways.

Governance approach to integrating climate related risks

As outlined in the Governance section, the Trustee has clearly defined areas of responsibility for ESG and climate risk. In particular, the FISC is responsible for developing and overseeing the approach to responsible ownership and climate management and reporting. These arrangements ensure that climate risk is considered alongside the Trustee's other risk considerations so that they can be identified, assessed and managed in a proportionate way, coherently with the Plan's other risks.

Where significant concerns arise, these will be addressed by the FISC on a case-by-case basis and appropriate actions are agreed.

The Trustee has arranged to receive training on climate-related issues, at least annually, to ensure that they have the appropriate degree of knowledge and understanding of these issues to support good decision-making. The Trustee also expects its advisers to bring important and relevant climate-related issues and developments to its attention in a timely manner.

Investment approach to integrating climate related risks

The climate scenario analysis undertaken for the Trustee considered the funding position based on the effect of climate risk on the Plan's assets and liabilities. The Trustee has determined that no change is currently required to the investment strategy based on the results of its scenario analysis. This is one of the methods by which the evaluation and consideration of climate risk is integrated into its framework for investment strategy decisions.

Climate risk considerations are integrated into asset-level decision making – as appropriate to each asset class – through the Trustee's stewardship and application of each investment manager's policy on climate change which is evaluated by the Trustee.

As the Plan approaches the possibility of being able to secure its liabilities by means of fully insuring the liabilities with an insurance company, as previously mentioned in the Governance section of this report, the Trustee will need to carefully select the right insurer. When selecting its insurer, in addition to other considerations, the Trustee will exercise its knowledge to ensure that the insurer demonstrates:

- A good understanding of ESG and Responsible Investment;
- A good understanding and awareness of climate-related risks; and
- A preparedness to change policies and actions in line with the latest developments in relation to climate-related risks and opportunities.

Metrics and Targets

Where are we now?

Our climate-related metrics

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

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

The Trustee uses some quantitative measures to help it understand and monitor the Plan's exposure to climate-related risks.

Total Greenhouse Gas emissions The total greenhouse gas emissions associated with the portfolio. It is an absolute measure of carbon output from the Plan's investments, expressed in million tons CO₂e.

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, expressed in tons CO₂e/£M invested.

Data quality A measure of the proportion of the portfolio that the Trustee has high quality data for.

Binary Target Measurement The percentage of portfolio assets with declared net-zero or Paris-aligned targets.

Measuring greenhouse gas emissions

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

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

Scope 1

All direct emissions from the activities of an organisation which are under its control; these typically include emissions from its 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

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 makes it hard to collect accurate data. The metrics for the Plan's DB and DC sections are shown below, where appropriate.

DB Section

The Plan's DB climate-related metrics

In the tables below are the climate-related metrics for the Plan's DB assets. The metrics are shown separately for the portfolio excluding LDI, and the LDI portfolio to ensure that the aggregated figures include internally consistent methodology as far as is possible.

Portfolio Metrics, Excluding LDI

Asset class	Assets (£M)	Total GHG (tCO ₂ e)	Carbon footprint (tCO ₂ e/£m invested)	Data quality (%)	Binary target Measurement (%)
Illiquid assets	187 (15%)	36,847	704	100%	Currently unavailable
Liquid Alternatives	7 (1%)	0	Not provided	0%	Currently unavailable
Annuities	1,023 (84%)	42,578	73	57%	3%
Total (excluding LDI)	1,217 (100%)	73,695	115	52%	3%

Source: Investment managers

Insurers: It is important to note that each annuity provider will have their own methodology for calculating emissions; the approach as given to the investment adviser by the annuity providers can be found in the calculation notes.

LDI Portfolio Metrics

Section (LDI manager)	Assets (£M)	Long Exposure (£M)	Total GHG (tCO ₂ e) ⁴	Carbon footprint (tCO ₂ e/£m invested) ^{1,3}	Data quality (%) ¹	Binary target Measurement (%) ²
Alexander & Alexander (Insight)	695 (56%)	703	123,281	175	100%	Not applicable
Aon UK (Insight)	281 (23%)	326	57,093	175	100%	Not applicable
Aon Bain Hogg (LGIM)	123 (10%)	Not reported	9,723	80	99.1	Not applicable
Hewitt Pension Fund (AIL) ⁵	147 (12%)	100.5 ⁵	19,631 ⁵	195 ⁵	100%	Not applicable

Source: Investment managers

Notes on the metrics calculations

The carbon metrics

The investment adviser calculated the carbon metrics for the Plan based on the information provided by the managers as necessary. The table below shows for each asset class the broad approach used for calculating each metric.

Asset Class	Approach
Liquid alternatives	No data was provided by the investment managers
Illiquid assets	<p>Note: Only one investment manager holding illiquid assets provided carbon metrics in respect of the Plan's investment.</p> <p>Total GHG emissions The investment manager provided the total carbon emission metrics for the fund.</p> <p>Carbon footprint Using the total carbon emission, the investment adviser calculated the Plan's proportion of the investment fund's carbon footprint by calculating <i>Total emissions of the fund / (£M assets invested in the fund x coverage of assets in the fund)</i></p> <p>Data quality The investment manager provided data coverage for the fund, which has been used as a proxy for data quality for the fund.</p>
LDI	<p>¹The metrics above represent the long only exposure of gilts in the portfolio (including repo exposure) i.e. include both the emissions in respect of physical exposure to gilts, and emissions in respect of synthetic exposure to gilts through specific derivate vehicles.</p> <p>²SBTi is not applicable to gilt holdings – the UK government's commitment to net-zero emissions cannot reasonably be extended to apply to its gilt holdings, and the investment adviser has not taken a house view on the reasonableness of this commitment.</p> <p>³Annual UK greenhouse gas emissions data (Scope 1 and 2) for 2022, published as a provisional figure by the UK government, of 417.1m tCO₂e, divided by total UK government debt at 31 March 2023, taken as the market value of gilts in issuance of £2,379,327M.</p> <p>⁴The Trustee acknowledges that it has limited scope to influence the Carbon Footprint of the UK Government.</p> <p>⁵The metrics provided for the Hewitt Pension Fund (Aon Investments Limited) are as at 31/12/2022, including the long exposure of gilts in the portfolio, which is based on the £62.1M investment in the Insight Pooled LDI fund.</p> <p>Carbon footprint The investment managers provided the carbon footprint metrics for each fund.</p> <p>Total GHG emissions The investment managers provided the total GHG emissions for each fund.</p> <p>Data quality The investment managers provided data coverage for each fund, which has been used as a proxy for data quality for each fund.</p>

Annuity	<p>Carbon footprint The insurers provided the carbon footprint metrics for each section.</p> <p>Total GHG emissions Using the carbon footprint, the investment adviser calculated the Plan's proportion of each investment Buy-in policy's emissions by calculating <i>carbon footprint x £M Plan assets invested in the fund x coverage of the assets</i></p> <p>Data coverage The insurers provided data coverage for each fund, which has been used as a proxy for data quality for each fund.</p>
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Data Quality

Because not all the Plan's investment managers were able to provide all the requested data, the reported total emissions metrics do not include all the Plan's GHG emissions. Therefore, the metrics show the Plan's total GHG emissions to be lower than they really are. The carbon footprint that has been reported represents the footprint only for the assets for which emissions data was available.

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

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

Data Limitations

Data availability for the carbon emissions for the Plan's assets amounted less than 100% for all asset classes.

For the insured assets, data was requested from 8 insurers and data was received from 4 of the insurers. Data was received for all elements of the LDI portfolio. Of the 9 investment managers from whom data was requested in respect of the uninsured assets held by the Plan, only 3 were responsive to data requests (including the two LDI managers). The main detractors from data availability were:

- 2 managers do not currently track carbon emissions data for the requested funds.
- 1 manager noted that the size of the fund no longer met the requirements for internal ESG reporting by managers.
- 1 manager was in the process of finalising its own internal approach to calculating carbon emissions and whilst this was not available at the time of reporting, we would expect to receive this information in future reports.
- 4 Managers were unresponsive to data requests.

The Trustee, through its investment adviser, will engage with the Plan's investment managers that were unable to supply full emissions data for this analysis in order to improve carbon data transparency and reporting in the future.

DC Section

Over the Plan year to 31 March 2021, the majority of the DC assets of the Plan were transferred out into the Aon Master Trust.

Due to the materiality of the remaining DC assets in the Plan (<1% of total assets), the climate-metrics analysis and subsequent target for these assets have been excluded from this report.

Looking to the future

Our climate-related target

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

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



Asset Class	Current Data Quality¹	Target data coverage
Liquid alternatives	0%	50%
Illiquid assets	28%	50%
LDI	100%	100% ²
Annuity	57%	80% ³

¹Current Data Quality represents the data available as at 31 March 2023

²The LDI target represents the inclusion of synthetic exposure to gilts in a consistent manner across investment managers.

³The Trustee acknowledges that it has little ability to influence the carbon metrics reported by insurers.

Notes in relation to the target data coverage:

- The data coverage targets have been set to collate carbon emission data across scopes 1 and 2.
- The Trustee will consider an appropriate target to set covering the scope 3 emissions in its next disclosures report.
- The Trustee recognises that the data coverage and quality for equities is already strong. It therefore plans to ensure reporting remains over 95% in future years.
- The Trustee recognises that whilst it does not have much control over the issue, it will be looking to improve the data quality of the insured assets.

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

Appendix 1: Impact assessment – Insured assets

The Plan's insurers have performed their own Climate Change Scenario modelling to identify the asset classes held in respect of the insured assets of the Plan that are most materially exposed to climate risks and qualitatively understand how they may be impacted. The modelling included an assessment of the risk exposure of Orderly Transition, Disorderly Transition, and No Transition scenarios. The assessment included the impact on both their businesses and investment portfolios.

Based on the output of the assessments carried out, the insured assets of the Plan are relatively resilient to climate change risk, acknowledging that there are scenarios that could lead to a material deterioration in the security of the assets.

The insurers modelling showed that a disorderly transition scenario is likely to be of the most concern to the security of the insured assets. Under this scenario there are high-risk exposures to the investment portfolio of the insured assets.

Overall, the insured assets are likely to perform strongest under an orderly transition scenario. This represents the fastest transition to a green low carbon economy, combined with limited physical impacts from climate change despite the large initial transition cost.

Appendix 2: Climate Risks and Opportunities

Climate Risk Assessment – transition risks

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

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

Climate Risk Assessment – Physical risks

A changing climate can lead to changes in the frequency and severity of extreme or incremental hazards. The TCFD recommendations refer to these hazards as acute and chronic, respectively.

Acute hazards represent severe and extreme events and are location specific (e.g., droughts, heatwaves, storms, wildfire etc).

Chronic climate change represents the background incremental changes in, for example: temperature, precipitation, and sea level rise over several decades.

Acute and chronic climate-related hazards

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

Climate-related opportunities

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

Appendix 3: Climate Change Scenario Modelling Assumptions

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

This appendix has been written by the investment adviser for compliance purposes in respect of the Climate Change Scenario Modelling.

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

The model assumes a deterministic projection of assets and self-sufficiency liabilities for each section, using standard actuarial techniques to discount and project expected cashflows.

- i. 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.
- ii. The parameters in the model vary deterministically with the different scenarios.
- iii. Note no allowance is made for expenses, with modelled asset/liability cashflows left unaffected by these factors.

The liability updates and projections are considered appropriate for the analysis. However, they are approximate and full actuarial valuations carried out at the same date may produce materially different results. The liability updates 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 Plan 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 Plan 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 strategies under different market conditions.

Key Assumptions

	Temperature risk by 2100	Reach net zero by	Carbon price (2030/2050)	Introduction of environmental regulation
No transition	+4°C	After 2050	\$40 / \$50	None
Disorderly transition	< 3°C	After 2050	\$65 / \$340	Late Aggressive
Orderly transition	1.3°C – 2°C	2050	\$100 / \$215	Coordinated

Source: Aon

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 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 Protocol¹ 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 (CO₂e). This enables the different gases to be compared on a like-for-like bases, relative to one unit of carbon dioxide.

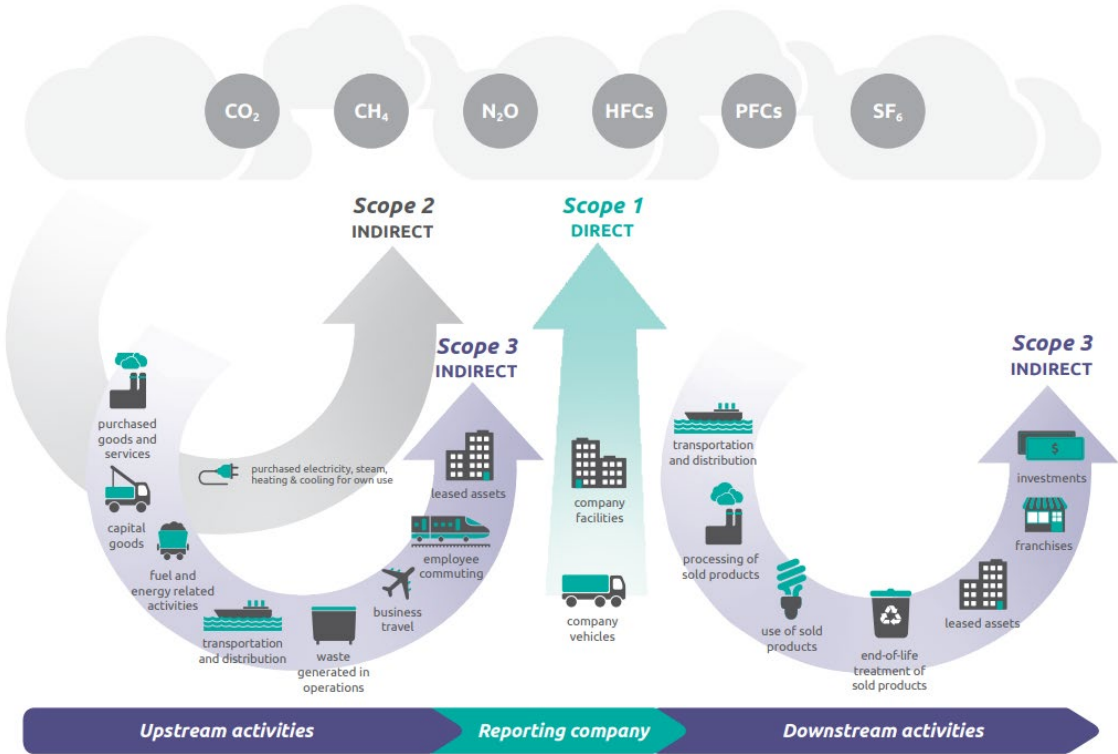
Six main greenhouse gases identified by the Kyoto Protocol

					
Carbon dioxide	Methane	Nitrous oxide	Hydro-fluorocarbons	Per-fluorocarbons	Sulphur hexafluoride
CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆

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

¹ https://unfccc.int/kyoto_protocol

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

Glossary

Governance	refers to the system by which an organisation is directed and controlled in the interests of shareholders and other stakeholders. ² 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. ³
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. ⁴
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. ⁵
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. ⁶
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 use 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. ⁷

² A. Cadbury, Report of the Committee on the Financial Aspects of Corporate Governance, London, 1992.

³ OECD, G20/OECD Principles of Corporate Governance, OECD Publishing, Paris, 2015.

⁴ TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

⁵ Ibid

⁶ Ibid

⁷ Ibid

Greenhouse gas emissions (“GHG”) scope levels⁸

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.⁹

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).¹⁰

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.¹¹

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.¹²

⁸ World Resources Institute and World Business Council for Sustainable Development, The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), March 2004.

⁹ PCC, Climate Change 2014 Mitigation of Climate Change, Cambridge University Press, 2014.

¹⁰ TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

¹¹ Ibid

¹² Energy Saving Trust, What is net zero and how can we get there? - Energy Saving Trust, October 2021