BMW (UK) Operations Pension Scheme

Climate change report in line with the Taskforce on Climate-Related Disclosure (TCFD) recommendations for the year ended 31/12/2024

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1. Introduction

This is the fourth climate change report for the BMW (UK) Operations Pension Scheme, and it has been prepared in line with the recommendations set out by the Task Force on Climate Related Financial Disclosures ("TCFD") and the statutory requirements prescribed by the Department of Work and Pensions.

BMW (UK) Trustees Limited ("the Trustee"), is the Trustee of the BMW (UK) Operations Pension Scheme ("the Scheme").

The purpose of this report is to provide further understanding of the Scheme's exposure to climate-related risks, the Scheme's resilience to these risks and the climate related-opportunities that may be considered. It also explains the approach that the Trustee has taken over the last few years towards addressing climate change issues and provides an update on the progress the Trustee has made towards its climate goals.

The Trustee recognises that there is increasing scientific evidence that climate change is accelerating and that continued increases will have an irreversible and catastrophic impact on the environment and our way of life. Extreme weather events including flooding, drought, storms and wildfires are increasing in frequency and these have significant financial and human consequences. Additionally, there are other negative implications such as reduced availability of water for human consumption and for agriculture and hydro-electric power production. Severe heat can also have detrimental health implications, resulting in strain on health services as well as direct detrimental human impacts.

From 1 October 2021, the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 introduced requirements relating to reporting in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, to improve the quality of governance and the level of action by trustees in identifying, assessing and managing climate risk.

Greater transparency around climate related risks should also lead to more accountability and provide useful decision-making information for investors and pension scheme beneficiaries. As well as negatively impacting pensions through costs from natural disasters, climate change can also provide opportunities with the shifting from fossil fuels to renewable energy, increasing resource efficiency, and the opening of new markets through product and services innovations. The Trustee is therefore focussed upon taking opportunities to invest sustainably and in a way that will provide long-term value and protect members' pensions, whilst also supporting action against the impacts of climate change. Aligning the best outcome for members and protecting the environment are key priorities for the Scheme.

The Trustee fundamentally believes that organisations of all kinds will need to continue to adapt to ensure global climate change initiatives are delivered. As a result, protecting members' best interests and sustainability will be more closely linked than ever before. The global transition to a more sustainable economy will create risks which the Trustee must seek to mitigate and will also present opportunities that should be embraced. The Trustee has therefore worked continuously with the corporate sponsor to form an aligned vision with regards to climate change. It is important for the Trustee to embrace the transition to a 'net zero' economy and ensure that the Scheme is well positioned for any disruption this may cause.

The Trustee invested significant time in developing and enhancing a framework aligned with the aims of the Task Force on Climate-related Financial Disclosures (TCFD). The Trustee have acknowledged that this this will be an ongoing and evolutionary process but believe strong progress has already been made towards the long-term climate change goals identified by the Scheme and in alignment with the TCFD framework.

In the fourth iteration of the report the Trustee reaffirms its priorities towards managing climate-related risks and further outlines the Scheme's progress to each of the eleven TCFD recommendations. The approach and

goals outlined in the previous reports remains consistent, with the focus and commitment to climate related actions remaining embedded within the Trustee decision making process.

The Trustee has also completed further analysis on the emission metrics and will continue to work with and challenge its investment managers, so they too are aligned to the Scheme's climate related goals and vision. The development of the Scheme's key carbon metrics is explained in more detail in the Metrics section of this report.

The Trustee supports the Paris Climate Agreement to limit global warming to well below the two degrees Celsius target and has committed itself to a carbon neutral target by 2050. As part of the preparation for the inaugural TCFD Report in 2021, the Trustee also set a target to reduce its carbon intensity by 50% by the year 2030 versus a 2019 baseline as an interim measure. As explained in the 2023 TCFD Report, following the unforeseen impacts and necessary actions that were taken during the Gilts Crisis in 2022, including a significant sell down of the corporate bond portfolio and other higher emitting asset classes, this interim target has already been met. The Trustee are confident that that the Scheme actions taken since the Gilts Crisis have had a long-lasting positive effect on the Scheme's carbon emission status and its subsequent trajectory towards its climate related goals.

With respect to the Carbon Neutral target, the Trustee acknowledges this will continue to be challenging and ambitious, but also imperative for meaningful change to take place. The journey remains in its early stages, but the Trustee believes that positive progress has already been made towards the Scheme's climate goals.

The report that follows expands on the TCFD disclosure requirements originally established by the Financial Stability Board and set in force for occupational pension schemes by the DWP. The report has been prepared in line with the most up to date guidance issued by both the DWP and The Pensions Regulator. The Trustee believe that the Scheme is fully aligned to the TCFD objectives but also recognise that the approach and development of the reporting will need to continually evolve and be enhanced in the journey to reach the Scheme's stated vision and objectives.

An overview of the key activities undertaken, and the journey so far are outlined below.

Manager engagement	Carbon data analysis	Climate risk assessment	Trustee training and engagement	Target setting and implementation
Ongoing collaboration with all 'in-scope' managers to support with the risks and opportunities identification process. A broad and wide range of climate risk across the Scheme's investment portfolios has led to the Trustees requesting and performing further data analysis and scenario modelling.	Multi-year analysis of total carbon emissions and carbon intensity at investment manager level. Inclusion of implied temperature rise (ITR) metric from 2022.	Detailed risks and opportunities review by investment portfolio to understand key areas of focus. Asset class scenario stress testing to understand potential impacts from five alternative climate scenarios. Two new climate-related scenarios analysing mortality impacts added into 2023 report.	Responsible investment surveys completed by Investment Committee members to support in forming the Trustee's overall Climate Mission Statement. TCFD training presented to full Trustee Board and ongoing risk monitoring now integrated into key risk tools.	Net zero by 2050 commitment with interim 50% reduction targets established. Climate aware equity portfolio integration and carbon reduction tilts established in corporate bond portfolios. Implementation plan to achieve net zero aspirations developed.

Figure 1 - Key activities undertaken since 2021.

2. Our TCFD Framework

The TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.

The disclosure recommendations are structured around four thematic areas that represent core elements of how companies and organisations operate:

- **Governance**: The Scheme's governance around climate-related risks and opportunities.
- **Strategy**: The actual and potential impacts of climate-related risks and opportunities on the Scheme's strategy and financial planning.
- **Risk Management**: The processes used to identify, assess and manage climate-related risks.
- **Metrics and Targets**: The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

The four recommendations are interrelated and supported by eleven recommended disclosures that build out the framework with information that should help investors and others understand how reporting organisations think about and assess climate-related risks and opportunities.

The disclosure requirements relating to each theme have been included below their respective heading to enable the reader of the report to understand the obligation and how the Trustee has addressed each recommendation.

3. Governance

The TCFD recommendations state that the Scheme should

a) describe the Trustee's oversight of climate-related risks and opportunities.

b) describe management's role in assessing and managing climate related risks and opportunities.

Governance is the way the Scheme operates and the internal processes and controls in place to ensure appropriate oversight. The latest General Code of Practice, published on 28th March 2024, defines the systems of governance and requirement for appropriate and robust internal controls

"All pension schemes need to have systems of governance and internal controls that : provide the governing body with oversight of the day-to-day operations of the scheme, include any delegated activities for which the governing body remains accountable and provide the governing body with assurances that their scheme is operating correctly and in accordance with the law"

The latest General Code also reiterates the requirement for Pension Schemes to establish and operate adequate internal controls and assess the risks and opportunities associated with climate change over the short, medium and long term. It clarifies the requirement to report on the activities undertaken and align to the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD)

The Trustee Board has a composition of ten Trustee Directors which typically meet on a quarterly basis. In order to facilitate management of the Scheme, committees of the Trustee Board have been formed to concentrate on specific matters and meet as required. The separate committees in operation are

- The Audit & Governance Committee ("AGC"),
- The Administration & Discretionary Benefits Committee,
- The Investment Committee ("IC"), and
- The Nominations and Succession Planning Committee.

The roles of the Trustee, the relevant committees, the internal Pension Services team and the Scheme advisors in relation to climate change risks and considerations have been outlined below. Working with the Scheme advisors, the Trustee has taken appropriate advice when it comes to their climate change responsibilities.

Role of the Trustee

- The Trustee is ultimately responsible for oversight of all strategic matters related to the Scheme. This includes defining the governance and management framework relating to environmental, social and governance (ESG) considerations and climate-related risks and opportunities.
- The Trustee has discussed and agreed its climate-related beliefs and overarching approach to managing climate change risk. Details are set out in the Statement of Investment Principles ("SIP") and are reviewed and (re)approved by the Trustee as required.
- The Trustee is ultimately responsible for all material decisions related to climate change and the TCFD disclosure requirements. This includes approving the Scheme's 'Climate Mission Statement', reaching agreement on which metrics to report and ratifying appropriate targets for the Scheme.
- The Trustee receives regular training, at least on an annual basis but more frequently if required 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 monitors upcoming rules and regulations from the Pensions Regulator and other relevant bodies.

- The Trustee annually reviews its business plan and objectives, which includes its means of operating. This includes delivery of information to enable its decision-making, and how meetings are conducted. Whilst immaterial to the overall impact of climate change, the Trustee recognises the balance between use of technology and the need for travel and physical meetings and acts accordingly.

Role of the IC

- The Trustee Board has delegated oversight of the Scheme's climate change risk management framework to the IC.
- The IC seeks to ensure that any investment decisions appropriately consider climate-related risks and opportunities within the context of the Scheme's wider risk and return requirements and are consistent with the climate change considerations as set out in the SIP.
- The IC monitors and reviews progress against the Scheme's climate change risk management approach on a regular basis.
- The IC keeps the Trustee Board appraised of any material climate-related developments through regular updates, reporting key activity undertaken by the IC on a quarterly basis.
- The IC is responsible for the regular monitoring of climate related risks and opportunities and the preparation of the annual TCFD report itself, which is subject to Trustee Board ratification.
- The IC seeks active input from advisors on climate change in order to stay up to date on current developments and regulatory requirements.
- The IC reviews the risk register at least annually, taking account of climate change where this is a relevant factor affecting the identified investment related risks.

Role of the AGC

- The AGC is responsible for the preparation and maintenance of the overall Integrated Risk Management framework, including ownership of the Scheme's risk register. Together with the IC, it has integrated climate risk into this framework and now monitors KPIs in this respect.
- To review and approve cost requirements associated with climate change initiatives.
- To challenge the IC on climate related risks and opportunities.

Role of BMW (UK) Pensions Services Limited ("PSL")

- The Trustees are supported in running the Scheme by the in-house pensions team, PSL. Day-to-day responsibility for the implementation of the Trustee's climate risk management approach has been delegated to PSL.
- To support the Trustee in collecting and reporting on climate change data, for review and approval by the IC.
- To work with the Scheme's investment consultant to ensure investment proposals explicitly consider the impact of climate risks and opportunities when presented to the IC.
- To liaise with existing investment managers to understand how climate risks are considered in their investment approach. This includes working with managers to disclose relevant climate related metrics required for TCFD reporting.
- Stay up to date with climate related developments and proactively seeking investment opportunities or ideas that could enhance the ESG and climate change focus of the Scheme's investment portfolio.

- To provide dedicated resources to support with the preparation of the TCFD report and associated requirements. This includes the development of a climate database and ongoing efforts to maintain this.

Role of other advisors or stakeholders deemed relevant

- **Investment consultant:** The Trustee's investment consultant provides strategic and practical advice to the Trustee, IC and PSL 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 climate change scenario modelling which the Trustee uses to assess the Scheme's exposure to climate-related risks. The consultant supports the Trustee in reviewing its asset managers on at least a triennial basis which includes an ESG rating which the IC will consider. The consultant also supports the Trustee with preparation of key policy documents (such as the SIP) and will support with the integration of climate change considerations. The consultant will keep the IC up to date on latest developments with regards to climate change, including investment opportunities where appropriate. This includes advice on ESG tilts and integration and consideration of market conditions connected to climate change investments (e.g. review of the premium attached to 'green' government bonds).
- **Scheme actuary**: The Trustee's actuary will support with the triennial valuation process and providing up to date estimates of the Scheme's liabilities. The actuary will consider and integrate any potential impact from climate change into the modelling assumptions as appropriate.
- **Legal advisors:** The Scheme's legal advisors will support the Trustee in staying abreast of any applicable legislation or regulation in relation to climate change. Regular updates will be presented to the Trustee Board as and when new developments arise. In addition, the TCFD report is reviewed by the advisors to ensure it meets the regulatory requirements.
- **Covenant advisor**: In assessing the strength of the covenant, the Trustee expects the advisor to consider any material climate change risks that may have an impact on the strength of the corporate sponsor; recognising that the ultimate parent company has no legal commitment to the Scheme. Whilst covenant ratings under different climate change scenarios are not explicitly referenced in the covenant reporting, the Trustee would expect this to develop over time.
- **Investment managers**: The Trustee will engage with the investment managers on climate change considerations as required. Manager engagement considerations are outlined under the 'Risk Management' section of this report. Input from the Investment Consultant is leveraged with regards to climate change ratings and credentials.
- **Corporate sponsor**: The sponsor is supportive of the Trustee's disclosure obligations and TCFD commitments and there is a strong alignment with regards to climate strategy and the targets outlined later in this report. However, it is noted that decisions taken with regards to TCFD and in identifying, assessing and managing climate-related risks and opportunities are the sole responsibility of the Trustee. Although a dedicated pensions services team exists within the sponsoring employer, this department acts to support the Scheme from an administration and accounting perspective and is not responsible for making any Scheme-wide decisions. Such decision-making rests purely with the Trustee and it is strictly ensured that no conflicts of interest exist.
- **Scheme members**: Whilst Scheme members are a key stakeholder, members' views with regards to climate change are not explicitly sought at this time.

4. Strategy

The TCFD recommendations state that the Scheme should

> a) describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.
>
> b) describe the impact of climate related risks and opportunities on the organisation's business, strategy and financial planning.
>
> c) describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a two degrees Celsius or lower scenario.

The Trustee are fully aligned to the appropriate management of climate-related risks and opportunities and consider it to be an integral part of their duty to manage these risks and opportunities within the Scheme's investment portfolio and strategy.

The Scheme's approach and commitment to tackling climate-related risks and challenges is outlined in the SIP, latest version dated 6 December 2024 :

> "The Trustee recognises that climate change is one of the material ESG factors that pose a potential financial risk over a timescale it's concerned about, and that as an institutional investor, the Trustee has an ability to help tackle the challenges posed by climate change (such as reducing the portfolio's climate footprint). Where possible, the Trustee periodically considers how climate-related risks may impact on the Scheme's investments and funding position. The Trustee will review climate-related metrics, including the carbon intensity of the invested portfolio. The Trustee will engage with managers who have a relatively high carbon intensity portfolio."

The Trustee also developed a strategic vision in relation to climate change and in 2022 developed the following Climate Mission Statement:

> "The Trustee believes that delivering the best possible outcome for our members and protecting the environment go hand in hand. In line with the BMW Group, the Trustee is committed to the Pension Scheme becoming carbon neutral by 2050 and supports the Paris Climate Agreement to limit global warming to well below the two degrees Celsius targets. The Trustee believes that the best outcomes for our members and tomorrow's economy are based on the decisions we take today."

One of the measures that the Trustee monitor and report going forward is the carbon intensity of its investment portfolio. This metric looks to measure the tonnes of CO2(e) the asset portfolio is responsible for, for each £1m of investment. In line with the climate mission statement, the Trustee is targeting a net zero carbon footprint by 2050 and has set an interim target to reduce the Scheme's carbon intensity by 50% by the year 2030 (relative to 2019). Further detail regarding climate metrics that the Trustees currently monitor and the latest results are included in the 'Metrics and Targets' section.

In order to appropriately consider risks and opportunities, the Trustee defined the following time horizons:

- **short term** - three years, given the intended changes to the Scheme's current investments and being broadly aligned to the triennial valuation period
- **medium term** - between 3 and 10 years, given the expected changes in climate change data quality and climate regulations over this period
- **long term** - over 10 years, in line with the longer-term aspirations of the Trustee with regards to the Scheme reaching full funding on a self-sufficiency basis. The average duration of the Scheme liabilities is also in excess of 10 years.

When considering climate-related risks and opportunities for the Scheme, the existing risk monitoring frameworks were leveraged. More detail on the process that the Trustee has undertaken to integrate the risk management process is outlined in the 'Risk Management' section of the report.

The transition to a lower-carbon economy requires significant changes to be made and will bring a variety of different types of risk. The financial and reputational impacts of such changes will vary depending on the type of organisation, political intervention, consumer sentiment and a variety of other factors. Depending on the success and speed of the transition, climate change will also pose physical risks, impacting the way organisations operate today.

In considering climate risk, the Trustee primarily categorise these as either a transition risk or a physical climate risk.

Further detail, including types and examples are outlined in figure 2.

Transition climate risk	Physical climate risk
Policy and Legal Asset write-offs, impairment and/or increased operating costs as a result of: - Increased pricing of GHG emissions - Enhanced emissions reporting obligations - Mandates on and regulation of existing products and services - Exposure to litigation	**Acute** Increased severity of extreme weather events such as cyclones and floods leading to possible write-offs and early retirement of existing assets. Risk of increased operating costs to mitigate or higher capital expenditure to repair damaged facilities. Risk of higher insurance costs.
Technology Asset write-offs, reduced demand for existing products and services, additional R&D requirements and capital spend for new technology caused by: - Substitution of existing products and services to lower emission alternatives - Unsuccessful investment into new technologies - Costs to transition to lower emissions technology	**Chronic** Changes in weather patterns and extreme variability, rising mean temperatures and rising sea levels. Increased operating costs from workforce impacts, supply chain disruption and additional risk mitigation measures.
Market Reduced demand for goods and services, increased production costs, rising energy costs and potential re-pricing of assets caused by: - Changing customer behaviour - Uncertainty in market signals - Increase cost of raw materials	
Reputation Reduction in revenue, increased costs and capital availability risks as a result of: - Shifts in consumer preferences - Stigmatisation of sector - Increased stakeholder concern or negative stakeholder feedback.	

Figure 2 – Example types of climate risk.

Scenario Analysis

One of the tools that the Trustee has utilised for assessing risks and opportunities is scenario analysis with reference to the time horizons outlined above. Over the first 3 iterations of the TCFD Report, the Trustee with support of the Scheme's investment consultant and actuary, developed two separate scenario analyses. The first was a review of the impact of the strategic asset allocation and hedging levels that were in place in 2021 whilst the second was a review to look further into the mortality impacts of climate change and the subsequent effects this would have on the Scheme .

The various scenarios that were modelled for the original 2021 scenario analysis are outlined below, with some brief narrative. Further information on the results and conclusions from the 2021 scenario analysis is included in Appendix C.

Scenario	Warming*	Description
Base case	~2°C –2.5°C	Emission reductions start now and continue in a measured way in line with the objectives of the Paris Agreement and the UK government's legally binding commitment to reduce emissions in the UK to net zero by 2050.
Disorderly / Transition	<4°C	The world economy remains oriented towards improving near-term economic prospects, with companies and governments taking a "business as usual" approach. Eventually, market participants begin to fully grasp the implications of climate change and there is a growing realisation that current levels of action are inadequate. Market values price-in high levels of economic damage and the irreversible loss.
Orderly Transition	<2°C	Increased public awareness of climate change risks galvanises opinion and leads to governments undertaking widespread action globally to aggressively mitigate and adapt to climate change. A high global greenhouse gas tax and carbon cap is introduced.
Abrupt Transition	<2°C	The effects from increasingly extreme weather events in the next five years lead to widespread public concern over climate change. This leads to governments introducing policies to drive a rapid reduction in greenhouse gas. Delayed action on reducing emissions mean that the costs of tackling the problem are higher.
Smooth Transition	<1.5°C	Private sector innovation and a green technology revolution, combined with government coordination, help drive progress towards tackling climate change.

*Degree warming relative to pre-industrial levels by 2100.

Figure 3 – Scenario Modelling.

The Trustee are committed to fully considering the potential impacts of climate change as part of their consideration of the long-term strategy for the Scheme. The two analyses that were undertaken provided useful insight into the potential impacts on climate change of asset allocation decisions and how mortality changes arising from the direct and indirect impact of climate change may be material to the Scheme's liabilities and the funding strategy.

The guidance issued by both the DWP and The Pensions Regulator states the scenario analysis only needs to be updated every three years unless fundamental or significant changes have taken place since the original analysis was completed. The Trustee is therefore not required to perform a new scenario analysis for the 2024 report but are committed to performing an updated scenario analysis in 2026 that will consider the updated Scheme valuation and strategy that was completed at the end of 2024. The table below shows the development of the asset allocation from when the original scenario modelling was performed in 2021 and the position at the end of 2024. Over this time the asset allocation has been further simplified with asset classes which were with inherently more carbon intensive in nature such as EMD and hedge funds having been

removed over the period. The Trustee expect that a revised scenario analysis would therefore likely produce a result and conclusion that would be more positive from a climate impact perspective. For comparison purposes, the asset allocation used for the 2021 modelling is shown in figure 4 below along with the latest asset allocation position as at the end of 2024 :

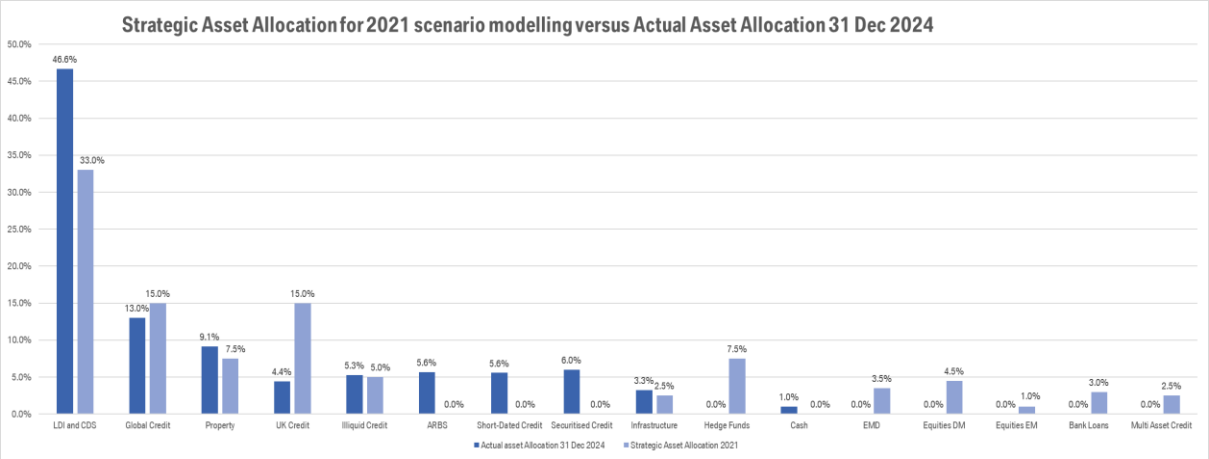

Figure 4 – Strategic Asset Allocation 2021 Modelling and Actual Allocation 31 Dec 2023.

The detailed results and conclusions from both the Scenario Analysis that were undertaken are included in the Appendix (items C and D).

Climate-Related Risks and Opportunities

To further review and understand the Scheme's climate-related risks and opportunities, the Trustee has considered in turn the pillars of the Scheme's Integrated Risk Management tool, namely Investment Risk, Liability Risk, Covenant Risk and Operational and Regulatory Risk

Investment risk (including a review of Asset Classes)

As part of its commitment to continually assess the climate resilience of the asset portfolio, the Trustee continues to engage in a deeper review of risks by asset class and also as part of the asset allocation strategy review, the most recent of which was completed at the end of 2024. The most material asset classes to the Scheme are LDI, UK and Global Corporate Debt and UK property and the approach to these assets in relation to climate-related risks and opportunities and the wider Scheme strategy is outlined below.

The process to identify risks and opportunities that the Trustee has undertaken is outlined in the 'Risk Management' section of this report. Whilst not all risks and opportunities are captured and documented in this report, noteworthy findings and examples (where applicable) are summarised below.

- **Liability Driven Investment (LDI) and collateral portfolio.**

The LDI portfolio is predominantly made up of UK government bonds to deliver the Scheme's interest rate and inflation rate hedging strategy. The Scheme also maintains a collateral portfolio, further comprising UK government bonds which is used to support the collateral requirements for the longevity swap. The Trustee views UK government debt as a low-risk asset and a vital risk mitigation tool with regards to hedging.

The carbon emissions and intensity metrics for UK government debt has been reviewed which generally compare favourably to the carbon metrics of the other assets within the investment portfolio. The UK government has made significant strides in being one of the most vocal in announcing carbon reduction targets, setting significant reduction objectives over the coming years and targeting net zero by 2050. As this aligns with the Trustee's Climate Mission Statement and the assets are a key risk tool, it is expected that government bonds will continue to remain a core investment for the Scheme.

The Scheme has also continued to monitor the activity in the 'green gilt' space and will review developments here and incorporate into the decision-making process. Whilst none of the conventional government bonds have yet been migrated to green labelled bonds, this will continue to be considered as a potential opportunity for the Scheme going forward.

Further opportunities which will be kept under review by the IC are; ESG considerations regarding counterparties the Scheme transacts with and potential exclusionary screens embedded within the cash holdings (e.g. money market funds).

- **UK and Global Credit**

The Scheme has a significant allocation to corporate bonds. These assets are generally considered 'risk reducing' in nature but the underlying securities will typically be susceptible to both transition and physical risks as described previously. The assets held across these investment mandates spanned a wide array of sectors and geographies as would be expected in a diversified asset portfolio. As such, certain corporates held within the portfolio inevitably have a materially higher climate risk than other holdings. However, the carbon metrics and Value at Risk (VaR) properties are generally reviewed at an aggregated level to understand the accumulated risk position. It is recognised that the carbon intensity of the corporate bonds is positioned above that of the sovereign debt holdings, but because there is a high level of diversification (both across manager and individual investments) the Trustee is comfortable that the aggregate level of risk is mitigated.

During the risk identification process, it was recognised that some single name issuers were attract higher risk metrics. These include utilities, natural resource and energy companies. The Trustee expects the asset managers to be aware of potential climate risks and opportunities and the associated risk and return implications of these sectors and to manage the portfolio accordingly in line with the ESG credentials outlined in their respective Investment Manager Agreements. From manager engagement and ongoing discussions, it is clear that each manager has developed proprietary tools to rate, challenge and engage with issuers which have lower than average ESG ratings.

The Trustee has not specifically imposed sector or single name exclusions as part of either the corporate bond strategy or within the Investment Manager Agreements. Furthermore, the Trustee wants to better understand the full impacts of exclusionary approaches for not only risk and return effects but also the impact on these sectors delivering change without appropriate financing and engagement. However, in order to make progress in this area, and to support the Scheme's objectives, the corporate bond mandates have integrated within them a 20% carbon intensity reduction versus their respective benchmarks. To deliver this, the manager assesses the highest emitters on a sector and company level, overlays corporate credit analyst assessment and screens-out the highest intensity bonds. The investment managers have stated that this process does not impair the ability to deliver their target return objectives. Managers have also provided updates to the Trustee in terms of their approaches to realise positive climate transition solutions highlighting the importance of decarbonisation objectives being evaluated alongside traditional investment objectives and the need to consider forward looking indicators when seeking to decarbonise investment portfolios. Managers have focused on building appropriate carbon reduction investment strategies and explained the required building blocks needed to achieve this. They have highlighted the commitment and engagement required to facilitate real-world emission reductions and the importance of appropriate target setting objectives utilising both a bottom-up and sector specific approach to support the 2050 Net Zero target.

- **UK direct property**

For the Scheme's UK direct property portfolio, carbon metrics such as intensity and VaR are not readily available from the carbon data provider due to the private nature of these investments. However, the Trustee continues to obtain a degree of carbon data directly from the asset manager which is considered as part of the risks and opportunities assessment.

As expected with direct property, physical risk has been identified as a key threat with increased likelihood of impact over longer time horizons. Examples include increased costs from flood damage, repair or adaption of properties from increasing temperatures and increases in insurance premiums.

In addition, transition risk is also present with assets needing to comply with new and future regulations, supply and demand dynamics with carbon friendly buildings and increasing energy costs or alternatives.

The manager of this portfolio is embracing the transition to net zero and has set targets to achieve net zero carbon across the entire real estate portfolio by 2050 or sooner. The manager also strives to reduce operational carbon and energy intensity of landlord-controlled areas by 60%, by 2030. This close alignment to the Scheme's objectives should support climate risk mitigation. In addition, the manager is generally of the opinion that additional expenditure to reduce the carbon footprint of the Scheme's property portfolio adds value (via demand of occupiers and reduced operating costs for example).

Through 2024, the manager has continued to present updates to the Scheme on the Net Zero roadmap and has provided regular insight and reporting on the individual properties held within the portfolio. This has included updates on the carbon reduction actions already taken (e.g. removal of gas from properties and the reaching of minimum energy efficiency standard ratings) and also the further opportunities foreseen in both the short and medium term. The Scheme is aware that appropriate metrics and information is becoming increasingly more available, and the manager is fully committed to utilise and act on such data in their journey to achieve the climate related goals that have been set. The Trustee is comfortable with the current climate change exposure and direction of travel of this asset class.

- **Equity portfolios (Global and Emerging Markets) and Emerging Market Debt**

The 2024 strategic asset allocation review reiterated the Trustees view that exposure to these asset classes is not appropriate over the short or medium time horizon. Whilst this view is not driven purely based on climate change, it is encouraging to see that this supports risk mitigation under adverse climate scenarios.

- **All other investments**

At the latest strategic asset allocation review that was completed at the end of 2024 it was agreed to continue the trajectory of the Scheme towards simplification and with limited exposure to inherently more risky assets. Additionally the Trustee agreed to retain the existing managers and not to add any new asset classes.

The Trustee will continue to expand the risk and opportunities analysis and will report on the results within the future iterations of the TCFD reporting. It is acknowledged that greater transparency is required for certain asset classes (such as securitised credit, global property and illiquid credit assets) and the Trustee has committed to expand manager engagement to make progress here. It is expected that, over time, a consensus will be formed on the appropriate disclosure of climate change metrics for all asset classes and the Trustee will seek to embrace these opportunities as they develop.

The Trustee acknowledges that to deliver its overall objectives some level of climate risk is inherent in the asset classes in which the Scheme invests. Eliminating exposure in full is not considered to be a realistic target and the Trustee has therefore embraced the process of closely monitoring the risks and opportunities that are present. The Trustee recognise that a deeper understanding of these risks and further mitigation activities will be required over time and the Trustee is committed to expand the asset classes in scope for review in the years ahead. Through setting and achieving challenging climate change targets, new risks will come to light and actively reducing the carbon intensity towards the net zero goal should position the Scheme well in protecting against these. The analysis already performed has demonstrated the overall resilience of the Scheme's asset portfolio in a wide array of climate scenarios and the high levels of diversification across the asset base should support in mitigating the overall climate risk. The Trustee's commitment to reviewing the climate-related metrics and taking action to reduce the carbon intensity of the invested portfolio is also

summarised in the latest SIP. The SIP reaffirms the active focus of the Scheme to engage with those managers who have a high carbon intensity portfolio as highlighted in the introduction to Strategy section.

Liability risk

The Trustee recognises that different climate-change scenarios may have an impact on key funding assumptions, in particular with regards to life expectancy assumptions. As outlined earlier in the Strategy section, the 2023 scenario analysis was able to illustrate the materiality of climate change to the Scheme's liabilities and funding strategy (see appendix D).

In recognition of the liability risks and impacts a proportion of the life expectancy risk is hedged via the use of a longevity swap arrangement. The Trustee will continue to engage with the Scheme actuary on an ongoing basis regarding climate change topics and any key considerations.

Covenant risk

It is clear that the automotive industry continues to face challenges and scrutiny with regards to climate change. Many of the risks and opportunities that the Trustee has identified through this process will also be relevant to the Scheme's ultimate sponsor and could therefore lead to covenant impact.

The latest covenant assessment completed in November 2023 by the Scheme's covenant advisor highlighted again the Group-wide initiatives to reduce carbon footprint and the opportunities being pursued in clean technology. It reinforced the regulatory focus on emission targets and how this continues to be an area that will require substantial investment over the near-term. The current trend with regards to ESG was assessed as 'broadly neutral' and no significant additional climate-change risks were highlighted at this time. Additionally, the covenant advisor recommended that the Trustee should consider incorporating covenant into a future scenario analysis for its TCFD report. This recommendation will be addressed by the Trustee for the next TCFD report. In general, the Trustee looks to monitor covenant risk via the covenant advisor and covenant risk mitigation (whether climate risk or other factors) is addressed as part of the Scheme's triennial valuation process.

On an annual basis, the Trustee Board is provided with an update from the head of the BMW AG Group Treasury function on topics such as product updates, strategic developments, financial performance results and ongoing initiatives. The most recent update in June 2024 included further discussions on sustainability, CO2 reduction targets across the value chain and the progress with regards to further electrification of the product portfolio. It also covered the latest developments on the Neue Klasse platform which will launch its first car during 2025. This platform incorporates a new architecture and sustainability approach with a major focus on the use of secondary or recycled components. The update also gave the Trustee further insight on the BMW Group's research and development activities and its embedded commitment to protecting natural resources and critical raw materials. Climate change topics impacting the sponsor are an area that the Trustee expects to further engage with the Company on going forward.

As noted within this report, the Trustees climate change target is generally considered aligned with the ultimate corporate sponsor's objectives and this exercise has not highlighted any additional covenant risks.

As per the latest triennial valuation and asset liability modelling, achieving full funding on a self-sufficiency basis is considered in reach over the medium term. Reliance on sponsor covenant should therefore reduce over time and longer-term climate change risks that may impact the sponsor are potentially reduced.

Operational and Regulatory risk

The introduction of the TCFD requirements has created some operational and regulatory risk for the Trustee as well as any further climate change disclosure requirements that may come into effect in the future. The Trustee maintains a matrix of Trustee duties and responsibilities which had recently been updated to recognise the current regulatory obligations relating to climate change and this document is maintained on a

regular basis. Relevant policy or process reviews are highlighted to the relevant sub-committee. Input is taken from the Scheme's legal adviser in terms of meeting regulatory requirements as needed.

In order for the Trustee to be suitably aware of their responsibility with regards to climate change regulation, ongoing annual training regarding climate change risks, impacts, opportunities and regulation will continue to be provided for trustees and others involved in the Scheme governance along with in depth coverage of the requirements, metrics and conclusions drawn from climate-related analysis that is undertaken.

The introduction of recording and publishing climate change metrics has also introduced some operational risk for the Scheme with regards to ensuring the data presented is calculated and reported correctly. The PSL team supports with this process where a climate change database has been developed and a 'four-eyes' review of the output is in place. In addition, the IC reviews climate change metrics as required.

Overall, the Trustee considers that the operational and regulatory risk associated with climate change is well controlled.

5. Risk Management

The TCFD recommendations state that the Scheme should

a) describe the organisation's processes for identifying and assessing climate-related risks.

b) describe the organisation's processes for managing climate-related risks.

c) describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

Risk management is a core part of the Scheme's overall governance framework, and the roles of the Trustee and various sub-committees are outlined in the governance section above. There are planned and regular reviews of the integrated risk management tool and risk registers for which climate change is now a key consideration.

The TCFD disclosure requirements has encouraged the Trustee to more actively consider how climate change risk can impact the objectives of the Scheme. As part of this process, the IC regularly reviews the existing risk register to specifically consider how climate change can be integrated into the risk monitoring tool, as climate change is a key factor relating to other identified investment-related risks.

In addition, the IC works closely with the AGC to ensure climate change is being appropriately considered in the wider integrated risk management framework. The Trustee is comfortable that the risks already captured in the investment risk register is sufficient to monitor and assess risk in relation to climate change impacts. The AGC includes two KPIs to monitor climate risk; the investment portfolio's carbon intensity and the climate VaR. Whilst the latter is still in the process of being fully developed the inclusion of both of these KPIs have supported heightening the prominence of climate risk in the Scheme's overall risk management tool.

The core approach the Trustee has taken in assessing the level of climate risk across the investment portfolios has been to engage with the Scheme's asset managers, obtain and analyse portfolio level carbon data and to perform asset-class level scenario modelling. Further detail on each approach is outlined below.

Manager engagement

As part of the risks and opportunities review conducted by the IC, detailed feedback is requested from each of the in-scope managers of their assessment of the key risks and opportunities for their respective portfolios. The responses to this continue to be varied in nature with some managers providing significantly more detail than others. The exercise is deemed helpful in understanding the way each manager considers climate change risk and the Trustee will continue to engage and request information from managers for this topic and work with them to improve the quality of the output.

Manager engagement also takes place through the regular triennial review cycle of each investment manager in the Scheme's portfolio. These reviews consider the investment consultant's latest ESG rating which will entail significant manager engagement with the investment consultant's research team. In addition, the IC may opt to follow up directly with the manager if further clarification or questions arise.

With regards to new appointments for the Scheme, the IC challenges the managers on their ESG and climate change credentials and the general approach taken with regards to responsible investment. This requirement is now embedded in the onboarding process with climate change requirements featuring heavily in the required presentation material.

Portfolio level carbon data analysis

In line with the metrics and targets that the Trustee has decided to monitor and disclose (see 'Metrics and Targets'), the IC reviews the total carbon emissions and intensity of each of the investment managers in the

portfolio wherever possible. This is reviewed on at least an annual basis and the development over time will be used to support the monitoring of climate risk in the portfolio. In addition, the Trustee is able to observe these metrics at an individual security level which can be used to identify the top carbon contributors.

Asset-class level scenario modelling

As outlined in the Strategy section of this report, the Trustee has previously undertaken appropriate asset-class scenario analysis with the support of the investment consultant. In line with the prescribed guidance, this will continue to be conducted at least once every three years with annual reviews introduced to ensure that no significant changes are identified that require a more frequent analysis.

Modelling the Scheme's asset classes under a variety of potential climate scenarios is considered a valuable risks and opportunities assessment tool. The output helps the Trustee to evaluate possible return expectations and the resulting impact on the Scheme's funding level and can be useful in determining the strategic asset allocation to mitigate adverse climate scenarios.

As a result of the climate change journey so far, the Trustee has made several updates to key documents to reflect ESG considerations. This has included updates to the SIP, the Engagement Policy Implementation Statement ('EPIS') and the IC Terms of Reference ('ToR').

The latest SIP and EPIS, including some recent engagement examples are included on the following website:

https://pensioninformation.aon.com/bmwschemes/default.aspx

Overall, the Trustee is satisfied that climate change risk has been suitably integrated into the organisations overall risk management and associated policies. Moreover, the Trustee is comfortable that the Scheme is fully aligned to the Pension Regulator's latest General Code of Practice issued in March 2024 which requires Pension Schemes to have appropriate systems of governance and operate adequate internal controls to assess the risks and opportunities associated with climate change.

6. Metrics and Targets

The TCFD recommendations state that the Scheme should

> a) disclose the metrics used by the organisation to assess climate related risks and opportunities in line with its strategy and risk management process.
>
> b) disclose scope 1, scope 2, and, if appropriate, scope 3 greenhouse gas (GHG) emissions, and the related risks.
>
> c) describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

In considering which metrics to select and report, the Trustee reviewed a number of possible alternatives. To report meaningful data and move forward in delivering the Trustee's climate change objectives, it was important that the following conditions were met:

- the metrics are objective, understandable, trackable over time and support decision making
- they are consistent and comparable across their portfolio where possible
- data coverage is sufficient to be considered representative of the asset class in question.

In line with the DWP and tPR guidance, the Trustee is required to select and report on four metrics. This must include one absolute emissions-based metric, one emissions intensity-based metric, one additional climate change metric and one portfolio alignment metric.

The portfolio alignment metric contrasts with the other required metrics which look at historical data points and is instead a forward-looking measure of how aligned a portfolio is to the Paris Agreement's target of limiting the extent of global temperature increases above pre-industrial levels.

The Trustee opted to report on the following four metrics:

- The **total carbon emissions** defined as the total tonnes of CO2(e) the investment portfolio is responsible for (through the supply of capital).
- The **carbon intensity** of the portfolio, defined as the total tonnes of CO2(e) for each £1m of investment.
- **Data quality**, representing the percentage of the asset base where carbon data is available.
- **Implied Temperature Rise**, representing the impact of the portfolio on global climate targets expressed as a temperature level (in °C)

Further detail on each of these chosen metrics is included in the appendix section to support the reader of the report in interpreting the data presented. Additionally, the Trustee recognises that there are inherent limitations and uncertainty around the data that has been gathered and analysed. These limitations are also explained in the appendix section.

Defining a target for the Scheme

In forming an appropriate target, the Trustee sought to ensure that this aligned with the overall mission statement of reaching carbon neutrality by 2050. In delivering this long-term target, the Trustee supported an interim measure on the Scheme's journey to net zero. The first objective is to reduce carbon emissions by half and the Trustee has set the Scheme the following target:

With reference to a baseline year of 2019, the Trustee will target a carbon intensity reduction of 50% by the year 2030.

The Trustee opted to set their reduction target using the carbon intensity measure to avoid any impacts from asset value changes over time and has taken steps towards delivering this target. This includes a commitment that ESG and carbon considerations should be integral to the election of any new investments.

In forming the overall target, the IC explored what large corporates were targeting and what the UK government's objectives were when it came to climate change. As a large proportion of the Scheme's assets are invested into public companies and government bonds, it was important that the target was comparable to ensure its achievability.

The IC has also considered the UK's seventh carbon budget which was published in February 2025. The report outlined the recommended target to achieve an 87% reduction in UK emissions by 2040, setting the 5-year budget for 2038-2042 at 535 MtCO2e. This seventh carbon budget reiterates the overarching goal of reaching net zero in 2050 which aligns with the Trustee's mission statement.

It was also observed that many large corporates have made commitments to become net zero by 2050 and reduce carbon emissions by 50% by 2030.

A commitment was made by the Trustee and the IC to continue to explore the development of an implementation plan but concluded that it was not necessary to over formalise this approach or introduce an annual target. Instead, the Scheme has committed to continue looking at potential further actions and initiatives to support the carbon intensity objective and has agreed that the internal, non-official target of a 6% reduction in carbon intensity per annum should continue.

Additionally, the sponsor is supportive of the Trustee targets and, through interaction at the IC meetings, notes strong alignment with the objectives of the BMW Group.

Metrics as at 31/12/2023

For the latest TCFD report, the Trustee has elected to show four years' worth of data. The reason for this is to demonstrate the fundamental shift in both the portfolio size and the material improvement in the emissions metrics over this period, the reasons for which are described below.

Metric	2023	2022	2021	2020
Total assets [£m]	5,042	5,183	8,053	8,229
Total emissions [tonnes of CO2(e)]	**1,024,958**	**1,090,660**	**3,574,114**	**4,456,636**
thereof total emissions derived from corporates	304,360	338,982	1,380,875	1,530,419
thereof corporates (scope 1/2 emissions)	50,723	49,204	224,349	232,209
thereof corporates (scope 3 emissions) [1]	253,637	289,778	1,156,527	1,298,211
thereof emissions derived from derivatives [2]	-	-	128,681	129,283
thereof sovereign debt emissions	398,353	392,748	947,231	1,513,938
thereof assumed emissions derived from assets not in scope [3]	322,245	358,930	1,117,327	1,282,996
Total carbon intensity [tonnes of CO2(e)/£m]	**203**	**210**	**444**	**542**
Warming potential [2100 portfolio alignment - Degrees Celsius] [4]	**2.8**	**2.8**	**2.9**	**3.0**
Data quality metric [In scope assets*Data coverage] [4]	**67%**	**62%**	**60%**	**63%**
In scope assets [% of assets subject to carbon data analysis]	69%	67%	69%	71%
Data coverage [% of assets in scope for which carbon data is available for]	98%	93%	88%	89%

[1] Scope 3 emissions reported using MSCI estimation methodology

[2] Emissions from derivative instruments reported separately as required. Relates to synthetic equity portfolio introduced in 2020.

[3] Emissions are estimated using the same carbon intensity for in scope assets

[4] Warming potential and data quality metrics restated for 2021 and 2020 due to inclusion of corporate element of LDI

Figure 5 - Emission metrics at 31 Dec 2023.

Over 2023, the Scheme's total emissions decreased from 1.1 million tonnes of CO2(e) in 2022 to 1.0 million tonnes of CO2(e). This led to a further reduction in the carbon intensity measure, which fell to 203 tonnes of CO2(e) per £1 million of assets in 2023, down from 210 in 2022. While these metrics show only a marginal improvement compared to the previous year, it is worth noting that the sharp decline in emissions during the prior review was primarily driven by the portfolio restructuring, necessitated by the Gilts Crisis in Autumn 2022. At that time, a substantial portion of the corporate bond portfolio was sold to maintain sufficient collateral for interest rate and inflation hedges. Since corporate bonds typically have higher emissions than government gilts, this shift favourably impacted the Scheme's overall emissions metrics. Additionally, the removal of equities and emerging market debt (EMD) from the portfolio during 2022 further improved the Scheme's emissions metrics for that year.

By the end of 2023, corporate bonds accounted for 14% of the portfolio by value (£722 million) consistent with the percentage held at the end of 2022 (£741 million). This contrasts with the 33% allocation at the end of 2021 which equated to £2,618 million. Across the overall corporate bond portfolio both the total carbon emissions fell by over 10% over the year (from 339k tonnes CO2 in 2022 to 304k tonnes in 2023) Equally, the carbon intensity fell by almost 8% over this period demonstrating the continued focus by the investment managers on climate change metrics within the mandated portfolios.

The carbon metrics have also been favourably impacted by the 15% (£423 million) increase in the Scheme's holdings of UK Gilts during 2023. This increase in holding coincided with a further reduction in the overall carbon intensity of UK Gilts, which fell from 131 tonnes of CO2 per £1 million of government debt to 114 tonnes.

The Trustee is encouraged to see that the overall metrics have improved but acknowledge that the trajectory of the carbon emission and intensity metrics is heavily influenced by asset allocation, particularly in relation to the proportion of sovereign bonds held.

Regarding the Implied Temperature Rise (ITR) metric, the 2023 figure remained unchanged from 2022 at 2.8°C. While this is an improvement compared to 2020 (2.9°C) and 2021 (3.0°C), it remains significantly above the 2.0°C target set by the Paris Agreement. The Trustee recognizes the need for substantial reductions in this metric and emphasizes the importance of supporting actions to achieve this goal. On the data quality front, the Trustee noted further positive changes, largely due to the evolving asset mix, with more assets now falling within the scope of carbon data reporting. Additionally, there was an increase in the availability of carbon data for corporate bond holdings, which the Trustee found encouraging.

In summary, the Trustee highlights that the material improvements in the emissions metrics over the last 2 years were primarily the result of significant portfolio changes following the Gilts Crisis of 2022, rather than specific climate-related actions. Nonetheless, the Trustee acknowledges that its strategic asset allocation decisions, in particular the conscious decision to avoid certain asset classes, have positively influenced the Scheme's emissions metrics. Furthermore, the actions of asset managers to reduce carbon-intensive investments, particularly within the Global Bond portfolio, have also contributed positively. The Trustee remains committed to focusing on assets where outcomes can be influenced through manager engagement, selection, and mandate adjustments.

The Trustee also recognizes that as the availability and accuracy of carbon data improve, the Scheme's carbon emissions metrics could potentially increase in the future. Therefore, the Trustee remains vigilant and committed to monitoring both its own climate-related actions and those of its investment managers to achieve its climate objectives. To meet its goals, the Trustee acknowledges that further efforts are required to continue reducing the carbon intensity of the Scheme's assets

7. Progress to date / Looking forward

The Trustee is committed to managing climate related risks and opportunities effectively and has invested significant time in developing a framework that is aligned with the recommended TCFD disclosures. This framework has supported the Trustee in identifying, assessing and monitoring climate related risks and opportunities and the Trustee will continue to develop it to help the Scheme reach its long-term climate change goals The Trustee is encouraged by the further progress that has been made through 2024 but is also very aware that additional work must be done. The Trustee is cognisant of the fact that acting against climate change requires sustained effort and is a long-term commitment.

In its endeavour to tackle climate risk and reduce emissions, the Trustee is making clear and active investment decisions and continues to engage positively with managers to ensure that climate aware solutions are integrated into the Scheme portfolio. The commitment to achieving net-zero carbon emissions by 2050 is central to the strategy, and the Trustee will continue to work closely with investment managers and advisors to adapt the approach as climate change data quality improves and the assets evolve. The carbon reduction tilts integrated into the corporate bond portfolio and green initiatives being pursued in the UK property mandate are examples that further demonstrate the Trustee's commitments to purse its climate goals.

The detailed scenario modelling that has been performed has shown that the adjustments to the strategic asset allocation are effectively aligned to help mitigate the adverse impacts anticipated from climate change. Additionally, the acknowledgment of climate change's influence on mortality rates and its subsequent effect on the Scheme's liabilities has reinforced the Trustee's commitment to developing and implementing a comprehensive plan to achieve its ambitious climate change objectives in the coming years.

Ongoing manager engagement and carbon data analysis of the investment portfolio has played a key role in understanding the current situation of where the risks and opportunities lie. The Trustee will closely monitor climate change developments and will look to embrace opportunities that arise along the way. The Trustee is also committed to expanding the number of asset managers that are subject to detailed carbon data reporting and will strive to increase the data quality score over time. The Trustee acknowledge that such transparency is vital and are actively engaging with the asset managers to make further progress.

The Trustee is committed to the Pension Scheme becoming carbon neutral by 2050 and although major progress has been made in reducing the carbon intensity of the Scheme year on year, it is important for the Trustee to remain focused on the risks and opportunities of climate change. It is aware that the Scheme should invest in assets that demonstrate both climate change awareness and with companies who are instigating and actively supporting appropriate calls to action. Whilst this commitment is inherently important to the Trustee, it is acknowledged that the delivery of these objectives will, in part, rely on the successful transition to a lower carbon economy as a collective effort from governments, corporations and all market participants in general.

Signed on behalf of the Trustee by

D Foerster, Chairman 8 July 2025

8. Appendices

Appendix A – Metric Definitions and Explanations

Metric 1 – Total carbon emissions

This is the Trustee's chosen absolute emissions-based metric and is calculated in line with GHG protocol methodology, reported in tonnes of CO2(e). CO2(e) is a well-established equivalency metric which converts other harmful greenhouse gases into a single equivalent CO2 number. This metric seeks to apportion the asset holder's ownership share of an underlying investment and is calculated differently based on the type of asset.

For investments into public companies (either equity or debt holdings), the value of the investment is compared to the total enterprise value of the company including cash. The calculation for each holding in an investment portfolio is shown below, and summed accordingly:

$$\sum_{i=1}^{n}\left(\frac{Current\ value\ of\ investment_i}{Enterprise\ value\ including\ cash_i} * issuer's\ scope\ 1,2\ \&\ 3\ GHG\ emissions_i\right)$$

For sovereign debt (e.g. UK government bonds), emissions are calculated based on energy consumption per capita and are not categorised into scope 1, scope 2 and scope 3 emissions. The apportionment of the total emissions is arrived at by comparing the value of the Scheme's holdings versus the total outstanding debt of the issuing sovereign. The formula for this calculation is outlined below:

$$\sum_{i=1}^{n}\left(\frac{Current\ value\ of\ investment_i}{Total\ government\ debt_i} * total\ government\ emissions_i\right)$$

As the calculation of these two asset types differ, it makes the aggregation of data challenging. However, in order to estimate the total carbon emissions of the Scheme's investments, these will be summed at a total level as outlined below:

Reported emission type	Explanatory note
Emissions derived from corporates	As above, will be further broken down into scope 1&2 and scope 3 emissions.
Emissions derived from sovereign debt instruments	As described above with no further breakdown available.
Emissions derived from derivative instruments	Emission arising from derivatives will be reported separately and will follow the same logic as described above but in relation to the total notional exposure of the derivative instrument (as opposed to market value).
Assumed emissions from assets not in scope	For assets where no carbon data has been captured, an assumption is made that these assets will have the same carbon intensity as the assets where carbon data is available. Further detail is outlined under 'Metric 3 – Data quality'.
Total emissions	**Represents the total Scheme emissions and is the sum of the components outlined above.**

Metric 2 - Carbon Intensity

This metric is calculated as the total carbon emissions (as described above) per million pounds invested for the Scheme's assets and expressed in tons of CO2(e)/£M invested.

The formula for this calculation is outlined below for corporates:

$$\frac{\sum_{i=1}^{n}\left(\frac{Current\ value\ of\ investment_i}{Enterprise\ value\ including\ cash_i} * issuer's\ scope\ 1,2\ \&\ 3\ GHG\ emissions_i\right)}{Current\ portfolio\ value\ (£M)}$$

The formula for this calculation for sovereign debt is as follows:

$$\frac{\sum_{i=1}^{n}\left(\frac{Current\ value\ of\ investment_i}{Total\ government\ debt_i} * total\ government\ emissions\right)}{Current\ portfolio\ value\ (£M)}$$

As this metric represents the total emissions, relative to the portfolio size, it makes comparisons between investment portfolios and different points in time more achievable. For this reason, the Trustee has opted for this metric to be the primary focus when it comes to setting targets for the Scheme.

Metric 3 - Data quality

This metric will be used to monitor the overall data quality of the carbon data captured for the total Scheme assets. It will consider the volume of Scheme assets that have been deemed 'in-scope' for carbon data reporting and, the proportion of carbon data available for those assets deemed in-scope. The data quality metric will therefore be defined as:

$$Data\ quality\ metric\ (\%) = In\ scope\ assets\ (\%) * Data\ coverage(\%)$$

As referenced earlier in the strategy section of this report, carbon data for some asset classes was not readily available for the first TCFD report. For some asset classes, the industry is still trying to form a consensus on how to attribute carbon data and how to collect, analyse and present consistent and reliable information. For this report, the IC performed a review of the asset portfolio to determine which asset managers should be considered in scope based on the underlying asset type and the materiality to the overall Scheme assets. Any asset manager representing more than 5% of total Scheme assets, or where it was known that readily available information existed was reviewed by the IC.

The Trustee will measure what the total proportion of assets are where carbon data is considered available, reliable and has been obtained as part of this exercise. This will be defined as 'in scope assets' and will be calculated as follows:

$$In\ scope\ assets\ (\%) = \frac{Value\ of\ Scheme\ assets\ where\ carbon\ data\ has\ been\ obtained}{Total\ value\ of\ Scheme\ assets}$$

In addition to monitoring the percentage of assets which are in scope for carbon data reporting, the Trustee will also measure the percentage of assets where carbon data is available for each in scope asset portfolio.

This metric will be named 'data coverage' and for each in scope asset portfolio will be calculated as follows:

$$Data\ coverage\ (\%) = \frac{Total\ value\ of\ securities\ for\ which\ carbon\ data\ is\ available}{Total\ value\ of\ in\ scope\ assets}$$

For in scope assets, where carbon data is not available for every underlying investment in an asset portfolio, the data will be extrapolated and assumed representative of the analysed portfolio (assuming the data coverage % is considered acceptable).

For example, if a portfolio of £100m has data coverage of 50% and this 50% has X tonnes of attributable CO2(e) emissions, it will be assumed that the £100m of investments has a total of 2X tonnes of CO2(e) emissions.

This logic is applied to the total carbon emissions metric and the carbon intensity measures which are reported. Whilst grossing up the data for missing data is not a perfect solution, it is considered the general

approach to adopt in these cases and is preferred to the alternative of understating the carbon emissions of the assets.

Metric 4 – Implied Temperature Rise

The Implied Temperature Rise (ITR) metric is a forward-looking metric designed to show the temperature alignment of the investment portfolio with global temperature goals. It attempts to estimate a global temperature rise associated with the greenhouse gas emissions of the scheme investment portfolio and is expressed as a numeric degree rating (e.g., 1.5°C, 2°C). The ITR methodology uses the idea of a "remaining carbon budget". Those companies likely to generate emissions below their allocated budget are said to "undershoot" it while those projected to exceed the budget" overshoot" it. The total portfolio carbon emission over/undershoot is then converted to a degree of temperature rise.

In order to calculate the ITR metric for the portfolio, the Trustee have chosen to use the data and calculations provided by MSCI ESG Research since it is considered that this is currently the most accurate methodology and uses the most readily available data at the current time. It is also therefore likely to be the most widely used calculation methodology which will in turn enable consistent comparisons to be made across companies and sectors and therefore enable appropriate conclusions to be drawn.

In terms of methodology, the MSCI ESG Research use Intergovernmental Panel on Climate Change (IPCC) guidance to understand how much global carbon budget is left and then derive company-level carbon budgets consistent with this. They then calculate companies' projected emissions out over the next five decades based on their emissions track record, stated reduction targets and other data.

To calculate the Implied Temperature Rise the following formula is used

$$\textit{Implied Temperature Rise} = 2°C + \textit{Relative company-level over/undershoot} \times \textit{Global 2°C Budget} \times \textit{TCRE Factor}$$

The TCRE Factor included in the calculation refers to the Transient Climate Response to Cumulative Carbon Emissions (TCRE) which was established by the IPCC and provides a relationship that links each additional unit of emissions emitted beyond the available remaining global 2°C carbon budget to degrees of additional warming.

For the calculation, a TCRE factor of 0.000545°C warming per Gt CO2.2 is used which means that for each GtCO2 exceeding the global 2°C carbon budget, an additional ~0.000545°C warming over 2°C can be expected. Using the calculation above, this relationship is then used in the Implied Temperature Rise methodology to convert a company's or portfolio's allocated carbon budget over-/undershoot into a degree of warming expressed in degrees Celsius (°C). An implied temperature of 1.5°C, for instance, indicates that a company is projected to remain within its share of a carbon budget that would keep warming this century to 1.5°C. An implied temperature of 2.5°C or 3°C, in contrast, would show that the company's emissions align with temperatures that keep rising, bringing greater harms.

In order to calculate the overall ITR for the Scheme portfolio all of the ITR available data from MSCI ESG Research on assets that made up the Scheme's portfolio at the year end was first collected. For each asset class within the portfolio, an ITR measure was then calculated taking a weighted average for each component asset in that class relative to proportion of the asset class that it represented. A second weighted average by portfolio size for each asset class was then calculated to arrive at an overall ITR figure for the total portfolio.

Overall, the Trustee considers that these four metrics will enable them to track the progress of their overall strategic objectives with regards to climate change. These metrics will be reviewed and utilised by the IC as a risk monitoring tool and their appropriateness will be considered on an ongoing basis.

Where possible, the Trustee has sought to obtain independent, third-party data for the Scheme's asset portfolio and has in so doing, purchased climate data from MSCI to obtain the carbon data metrics outlined

previously. All data shown in this report has been compiled using MSCI data unless otherwise stated. The Trustee has engaged with MSCI for this exercise due to expertise in this area and its prevalence in the marketplace. Many of the Scheme's investment managers are also sourcing data from MSCI and having an aligned view of the carbon data was considered beneficial.

Appendix B - Limitations of the carbon data and metrics

Whilst the Trustee has invested significant resource in gathering and analysing carbon data, it recognises that some limitations and uncertainty remain. The data disclosed in this report has been prepared on a best endeavours basis, however, the following should be highlighted:

- The majority of data presented is sourced from a third-party provider, MSCI. Whilst the Trustee has conviction in the supplier, the results may differ if an alternative provider was used.
- Scope 3 emission data presented utilises the data providers estimation methodology for consistency and comparability. This may differ to what an underlying issuer has reported as their scope 3 emissions for example.
- As described under the data quality section, emissions are extrapolated based on available data. Whilst this extrapolation appears reasonable to the Trustee, it may not be fully representative of the underlying assets. As the data quality metric increases over time, the metrics may improve or deteriorate as a result.
- Data is captured at certain times of the year to reflect the reported year. However, in some instances, the data may yet to be updated and still reflect the previous year emission data. The IC has reviewed this and is comfortable that the data presented is sufficiently representative of the stated year.
- Emissions derived from corporates (e.g. public bonds and equity) are not calculated in the same way as sovereign debt. However, in order to provide a total emissions number, the Trustee consider it appropriate to aggregate the data accordingly.
- Enterprise values for corporate emissions are sometimes stated in USD or EUR values and have been converted accordingly. This calculation is deemed straightforward but does introduce another variable in the calculation.
- The ITR metric is new and still evolving. There are several technical and methodological challenges related to calculating ITR, no commonly agreed terminology to refer to the metric, and little understanding of advancements that would be needed to improve the usefulness of ITR disclosures.
- Different methodologies will lead to different ITR estimates that are not directly comparable. Variations in methodologies may also lead to under or overestimates of implied temperature rise, and consequently an exaggerated indication of climate-related risk.
- Currently the calculation of ITR seems to be feasible only for certain carbon-intensive sectors (e.g., utilities, oil and gas, and road transport) or specific asset classes rather than for a fully diversified portfolio. Assessing other factors, such as the company's business model, historical performance, and management actions, may also be relevant but are not currently taken into account in the methodologies.

In general, the Trustee notes that there appears to be no common or market standard with regards to carbon data reporting at this time. If standardisation or regulation comes into force with more prescriptive guidance on this topic then the Trustee may be required to restate the numbers outlined in this report.

Appendix C - 2021 Scenario Analysis - Asset Allocation

For the inaugural TCFD Report, the IC completed an asset allocation scenario analysis. For each scenario outlined, all asset classes in the strategic asset allocation were modelled and projected forward over the next 20 years. Consistent with the timeframes outlined previously for short-, medium- and long-term considerations, annualised returns for each scenario were reviewed and the funding surplus in 20 years' time was considered.

The liability projections were based on a static set of cashflows as at the time of the analysis and were projected forward using the interest rate and inflation rate assumptions applicable to each scenario. Within the analysis, the Scheme's hedging levels of 90% were assumed to stay constant in all cases. The liabilities were discounted on a gilts + 0.5% p.a. basis throughout. Although the hedging level was subsequently increased to 100% on a gilts + 0.5% basis as part of the 2022 Strategic review, this change would not have impacted the results of the analysis as described below.

The results of the analysis conducted are included below:

	Base Case	Disorderly transition	Orderly transition	Abrupt transition	Smooth transition
Short term[1] return (% p.a.)	2.8	2.9	(1.5)	3.3	3.4
Medium term[1] return (% p.a.)	3.3	4.5	5.1	3.0	3.5
Long term[1] return (% p.a.)	3.2	0.3	3.9	3.0	3.5
20-year return (% p.a.)	3.2	2.1	3.5	3.0	3.5
Change in surplus over 20 years (£m)	3,229	255	3,372	2,518	3,817
Change in surplus relative to base case over 20 years (£m)	N/A	(2,974)	143	(712)	587

Figure C.1 – Annualised return projections by scenario and funding surplus estimates.

Positive expected returns were projected in all scenarios across all time frames, with the exception of the 'orderly transition' scenario. However, the negative financial short-term impact from immediate global action to aggressively tackle climate change (via high carbon taxes and caps) led to longer term improved returns due to a boost in growth prospects in subsequent years.

The 'disorderly transition', which is considered a realistic 'worst case' scenario, showed that the expected surplus in 20 years' time was significantly reduced. However, this scenario assumed a significant delay in a call to action and the medium-term annualised returns were in fact ahead of the base case assumption. If this scenario was to play out in practice, it is highly likely that the Scheme's funding level would have improved significantly prior to the adverse assumptions taking effect. In this instance, it is probable that the Scheme will have de-risked significantly and would not experience the drop in surplus that the analysis predicts.

In all scenarios, with the exception of the 'smooth transition' case, the performance of equities exhibited the most downside risk. As part of the 2021 strategic asset allocation review, the Trustee agreed to remove exposure to this asset class during 2022. Whilst this decision was not driven purely based on the basis of climate change, it was encouraging to see that this supported risk mitigation under adverse climate scenarios.

In conclusion, the climate change scenario modelling performed in 2021 showed that the Scheme had a relatively high degree of climate resilience under all four scenarios, driven by the high level of diversification in the assets, low risk strategy and high levels of hedging against changes in interest rates and inflation expectations.

The scenario analysis outlined that core climate related risks for the Scheme sit within the asset portfolio. Nevertheless, and in line with the Pensions Climate Risk Industry Group (PCRIG) guidance, consideration has been given to other relevant factors such as liability and covenant risk.

Appendix D - 2023 Scenario Analysis – Mortality Impacts

For the third TFCD Report the Trustee commissioned a review by the Scheme actuary to look further into the mortality impacts of climate change and the subsequent effects this would have on the Scheme. This analysis covered both the transition and physical risks described earlier in the Strategy section. As shown below the effects of climate change, and the actions or measures taken by governments, businesses or individuals, will be felt at different times in the future and to different extents. The Trustee believes it is important to understand how the Scheme's exposure to climate related risks may change over time.

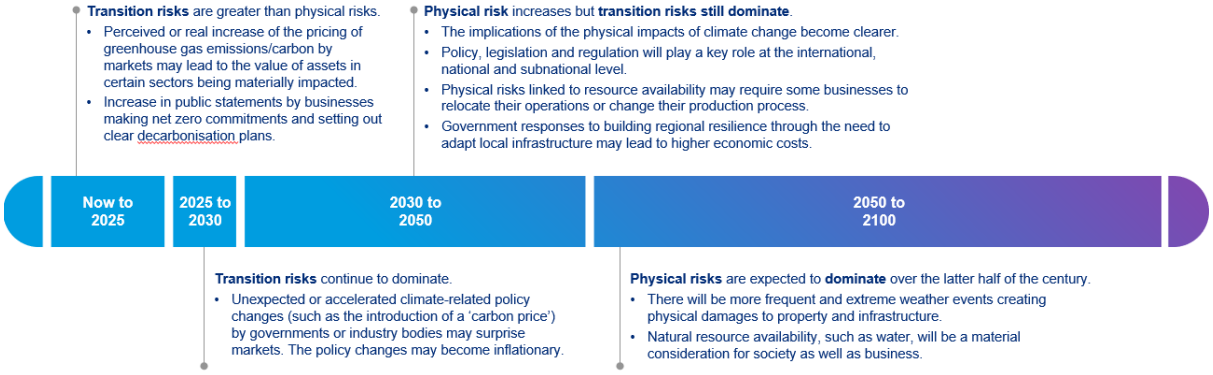

Figure C.2 – Impact of transition and physical risks on mortality over time.

The scenarios considered by the Trustee for this analysis are in line with those detailed in the table below, i.e. Rapid Transition, Orderly Transition and Failed Transition. We also show one further scenario, 'Limited Transition ', which falls between the Orderly and Failed Transition scenarios.

Temperature Rise by 2100	~ 1.5 to 2 °C	~ 3 °C	~ 4 °C
Overview	Early transformation to a low carbon economy, in order to limit global warming to no more than 2°C by the end of the century.	Delayed climate action leads to a failure to meet the Paris Agreement goal of keeping global temperatures to well below 2°C by the end of the century.	No transformation to a low-carbon economy, as global warming is allowed to rise to 4°C by the end of the century.
Risk Factors	Transition risks are 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 not experienced until post 2035 but will be more material than under the 1.5-2°C scenario. Physical risks are greater in magnitude and will be experienced sooner.	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.
Narrative	Global action starts today, driven by policy and regulation as well as consumer sentiment. Emissions peak in the 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 carbon emissions are flat by 2050 but still high in absolute terms. Coal is still a significant part of the energy mix. Towards the middle of the century, irreversible physical damages will be experienced including a reduction in available water.	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.

Figure C.3 – Mercer's climate change scenarios.

In modelling scenarios for mortality impacts, the Trustee's advisors have made use of:

- Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) as defined by the UN Intergovernmental Panel on Climate Change (IPCC), including estimated projected temperatures.
- Relationships between each SSP and a range of socioeconomic and other variables as published by the UK Climate Resilience Program and modelling of how changes to those variables would affect UK mortality rates.
- UK-based climate projections from the Met Office, with correlations between past climate data and mortality rates being used to predict future influences.

The modelling indicated the following scenario outcomes, each compared to mortality assumptions constructed with no explicit allowance for climate-related risks:

SSP	RCP	Likely temperature increase to 2100 vs pre-industrial	Scenario	Life Expectancy Change		Scheme Liability Impact**
				Age 25	Age 65	
1	1.9	Within ~ 1.5 ºC	Rapid Transition	+ 2 months*	+ 20 months*	+ 3.8%
1	2.6	Within ~ 2 ºC	Orderly Transition			
2	4.5	Within ~ 3 ºC	Limited Transition	- 12 months*	+ 12 months*	+ 1.6%
3	7	Within ~ 4 ºC	Failed Transition	- 62 months*	- 3 months*	- 2.2%

Table Figure C.4 – Impact of climate scenarios on life expectancy and Scheme liabilities.

Based on the range of scenarios above, climate-related longevity uncertainty is higher in respect of younger generations, though there is more funding risk associated with climate-positive scenarios and their implications for improved shorter-term mortality for current pensioners. Key drivers of differences in life expectancies between the scenarios include GDP growth and health care provision, in addition to the impact of temperature rises.

Based on this analysis, mortality changes arising from the direct and indirect impact of climate change may be material to the Scheme's liabilities and the funding strategy. The Trustee will keep this under review, and in the meantime consider the potential impacts of climate change as part of their consideration of the long term strategy for the Scheme.

* It is important to note that these "Results" are based on longevity projection models and third-party data which may produce output that differ materially from actual outcomes. The Results are set out for informational purposes only and should not be used for any other purpose. In particular, the Results should not be relied upon and they are not suitable for repurposing, copying, redistributing or modifying. The model provider disclaims all liability and makes no representations about the suitability for any purpose of the Results and such content is supplied on an as is basis, without any warranty of any kind.

9.Glossary

Carbon Footprint: The carbon emissions associated with the activities of a person, company or other entity. Commonly used as a measure of an entity's carbon intensity, expressing the concentration of carbon emissions for a given unit (e.g. per dollar of enterprise value).

Carbon intensity: Carbon emissions relative to a given unit, in this case per £1m of investment as defined in the 'Metrics and Targets' section of the report.

Carbon Neutral: For a project or entity to be carbon neutral, any CO2 released into the atmosphere is balanced by an equivalent amount being removed. This may be achieved through financing or otherwise supporting efforts to remove CO2 from the atmosphere, such as the development of renewable energy projects or planting trees, or through the use of carbon credits or carbon trading schemes.

Climate Value at Risk ("VaR"): A risk estimation model to support the assessment of scenario-specific risks arising from transition and physical impacts. The VaR model that the Trustee is currently utilising is owned and maintained by the climate data provider.

CO2(e): A unit to express the impact of a greenhouse gas, signified as the amount of CO2 with an equivalent impact on global warming. The amount of CO2 is commonly expressed as tonnes, also known as metric tons (1,000kg). Other non-carbon greenhouse gases (such as methane) are converted into a single equivalent CO2 figure for practical reasons and to support comparability.

DWP: The Department for Work and Pensions is the British Government department responsible for welfare, pensions and child maintenance policy.

Enterprise value including cash: A measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization. Enterprise value includes in its calculation the market capitalization of a company but also short-term and long-term debt as well as any cash on the company's balance sheet.

Environmental, Social & Governance ("ESG"): ESG refers to a broad range of topics, each of which may be subject to a range of regulatory standards and subjective points of view. Environmental criteria include the impact an entity may have on the environment, such as its carbon emissions. Social criteria include how an entity manages relationships with employees, suppliers, customers and communities within which it operates. Governance includes an entity's leadership structures, executive pay, internal controls and shareholders rights, for example.

Four eyes review: A control procedure that requires two individuals to approve or review an action before it can be taken.

Financial Stability Board: An international body that monitors and makes recommendations about the global financial system. It was established after the G20 London summit in April 2009 as successor to the Financial Stability Forum.

GHG protocol methodology: GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. It is the world's most widely used greenhouse gas accounting standards.

Green government bond / Green gilt: A bond issued by the UK government to finance projects that have clearly defined environmental benefits.

Greenhouse gas ("GHG") emissions: The UN Framework Convention on Climate Change, under the Kyoto Protocol, has identified seven gases as of particular concern with regard to climate change: carbon dioxide,

methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride. Emissions of these gases are typically converted into carbon dioxide equivalent (CO2(e)) for reporting purposes.

Implied Temperature Rise ("ITR"): a forward-looking metric designed to show the temperature alignment of the investment portfolio with global temperature goals. It measures, in aggregate, a portfolio's temperature alignment (in °C) to keeping the world's temperature rise to 2°C by 2100.

Integrated Risk Management ("IRM"): IRM is a risk management tool that helps trustees identify and manage the factors that affect the prospects of meeting the Scheme objective, especially those factors that affect risks in more than one area. The overall strategy the trustees have in place to achieve this objective will be dependent on the Scheme's and employer's circumstances from time to time.

Liability Driven Investment ("LDI"): An investment strategy with a core focus on hedging of the Scheme's exposure to changes in interest rates and inflation. Hedging assets predominantly include bonds, swaps and other derivatives as required.

Long term return: The per annum return stated in the scenario analysis results for the time period 11-20 years.

Medium term return: The per annum return stated in the scenario analysis results for the time period 4-10 years.

Net zero: Net zero emissions refers to a reduction of greenhouse gas emissions, with the goal of balancing emissions produced and removed from the atmosphere. Unlike a commitment to carbon neutrality, a net zero pledge will therefore include a commitment to reducing emissions.

Paris Climate Agreement: The Paris Agreement is an international treaty on climate change, adopted by 196 parties at the December 2015 UN Climate Change Conference in Paris. Its goal is to limit global warming to well below 2 degrees Celsius, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

Pensions Climate Risk Industry Group: A cross-government group established to develop industry-wide guidance for pension scheme trustees on climate-related risks and alignment with the recommendations of the TCFD.

Scope 1, scope 2 and scope 3 emissions: Greenhouse gas (GHG) emissions are typically split into three categories. Scope 1 emissions are direct emissions from sources owned or controlled by an entity. Scope 2 emissions are indirect emissions, generated by purchased energy. Scope 3 emissions are indirect emissions, not included in scope 2 emissions, that occur in the value chain of the entity. These include both upstream and downstream emissions.

Short term return: The per annum return stated in the scenario analysis results for the time period 1-3 years.

Statement of Investment Principles ("SIP"): A required policy document that details the principles which control how a pension scheme invests. The SIP sets out principles governing how decisions about investments are made and has been prepared in accordance with all relevant legislation and best practice guidelines.

Task Force on Climate-related Financial Disclosures ("TCFD"): The Financial Stability Board established the TCFD to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit and insurance underwriting decisions. This in turn can enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposure to climate-related risks.

The Pensions Regulator: The public body which regulates work-based pension schemes in the UK.