Diageo Pension Scheme

2022/23 Scheme Year

Taskforce on Climate Related Financial Disclosures (TCFD) Statement

Introduction

This statement sets out the approach of the Trustee of the Diageo Pension Scheme (the "Scheme") to assessing, monitoring and mitigating climate-related risks in the context of the Trustee's broader regulatory and fiduciary responsibilities to its members.

We believe that climate change is a systemic risk and an immediate concern. In order to ensure a sustainable future and to safeguard economic growth, we believe that concerted global action is required to tackle the climate crisis. The Scheme is a long-term investor and we believe that improved transparency on climate related matters will lead to improved investment decisions which in turn will improve member outcomes.

We are supportive of any initiative that helps improve disclosures and enhances transparency. The TCFD framework provides a structure for companies, asset managers, asset owners, banks and insurance companies to outline the steps they have undertaken to identify, manage and monitor climate related risks and opportunities. The framework is designed to increase comparability but allow sufficient flexibility to communicate the specific approach adopted by each entity. The TCFD recommendations apply to asset owners like the Scheme and we fully support this initiative.

This is our second report on our Taskforce on Climate-related Financial Disclosures ("TCFD") and this statement is expected to continue to evolve over time as our approach and the actions we take develop.

This statement has been prepared in accordance with the regulations contained within The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and provides details of the Trustee's approach against the four pillars set out by the TCFD:

- **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 investment strategy, and financial planning.
- **Risk management**: The processes used by the Trustee to identify, assess, and manage climate-related risks for the Scheme.
- **Metrics and targets**: The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

As well as developing our own reporting for TCFD, we prefer our underlying investment managers to be aligned with TCFD as part of their overall demonstration that ESG factors are being measured, reported and most importantly being used to inform all investment decision making. Through taking this approach we expect our managers and assets under management to work towards becoming aligned to achieving net zero by 2050. We will continue to monitor this through the regular reporting we receive.

Summary of this year's report

Over the past year we have continued our work to understand and, where possible, measure the climate risks within the Scheme's investments and to take actions towards mitigating those risks.

An important part of the mitigation of climate risk will be reducing the greenhouse gas emissions of the Scheme's assets over time. We have set out our aspiration for the Scheme to reach a net zero position in the following statement:

The Trustee aims to achieve net zero greenhouse gas emissions for all Scheme assets by 2050. The Trustee is comfortable that this is in line with its fiduciary responsibility to the Scheme and its members. The Trustee's key aim is to make a real world impact on global emissions, which will be achieved through engagement with the Scheme's investment managers in relation to their policies and processes and to improve data quality, as well as reallocation of capital where appropriate. The Trustee will continue working with the Scheme's managers to gather the relevant data to allow well informed targets to be put in place which are appropriate for each asset class and expects different parts of the portfolio to follow different trajectories as it works towards this aim.

This commitment is based on the expectation that governments and policy makers will deliver on their commitments to achieve the 1.5°C temperature goal of the Paris Agreement.

A large percentage of the Scheme's assets are currently held in UK government bonds and this percentage is due to increase over the coming years as the Scheme continues its de-risking journey. Our ability to achieve our net zero goals is therefore largely reliant on the UK government meeting its own net zero goals.

The key highlights and findings of our 2022/23 TCFD report are set out below.

Governance
The Trustee has overall responsibility for identifying and managing the climate related risks faced by the Scheme. We are supported by a range of other parties including the Pensions Investment Committee (PIC), our Responsible Investment Sub-Committee, our advisers and investment managers. We have produced and maintain a governance policy that sets out the roles and responsibilities for each of these parties in relation to climate change management and have robust processes in place to ensure that we manage these risks appropriately and always retain oversight. This year we refined our RI policy and beliefs to include reference to biodiversity given work towards the Scheme's net zero objective will require consideration of this closely related area. We also reviewed the exclusions policy which we introduced last year to ensure it remains fit for purpose. The exclusions policy considers investments we believe are in opposition to our RI policy, such as companies / countries subject to international sanctions, controversial weapons or companies with high reliance on thermal coal. The exclusions policy is incorporated into the RI policy and can be accessed via a link provide on page 7 of this report.

As set out below, the Responsible Investment Sub-Committee has met regularly with the Scheme's investment managers over the past year and are using their regular meetings to carry out ongoing reviews of each manager's progress in this area.

Strategy and risk management:
During the year, in line with our risk management policy, we have continued to work towards understanding and managing the climate risks and opportunities within the Scheme at two levels:

- **Assessing each investment mandate in turn** – Building on our work last year, we have continued to work closely with our investment managers to understand the climate risks within our investment mandates. We have held focussed meetings with each of our managers to discuss the processes they use

to identify and manage climate risks and the ability we have to set specific targets or make changes to our investments to reduce these risks. A summary of the risks identified to date is set out on page 11 of this report. This year we have seen some improvement in data across many of our mandates and have agreed the wider ESG metrics that several of our managers will report on going forwards. However, data remains limited for a number of our mandates, as set out in the table below, and we continue to focus on data improvements as part of our manager engagement efforts.

- **Assessing climate risk within the overall investment and funding strategy** – We have carried out updated scenario analysis, to test the resilience of the Scheme's funding strategy under a range of possible climate scenarios, this year focussing on a combination of qualitative and quantitative analysis. Noting the current limitations of quantitative modelling, this analysis provided us with some comfort that our current strategy has a high degree of resilience to climate change.

During the year we have incorporated climate risks into our decision making alongside the other risk factors we consider when assessing our strategy and have continued to incorporate ESG considerations when building and reviewing our mandates. In particular, we have:

- Introduced a minimum ESG score threshold for one of our ABS mandates.
- Agreed an offsetting strategy in relation to the existing emissions target for the property mandate.
- Considered the availability of climate data and the ability to integrate RI and climate objectives into the investment parameters when selecting investment grade credit as a new asset class which will form a key part of our long term strategy.

Metrics and targets:

Building on our progress to date, we are working with each of our investment managers to agree the climate and wider ESG related metrics we want them to provide on a regular basis and any targets we will set for each mandate. This year, we have made progress in agreeing and reviewing metrics with several of our managers and continue to work with all other managers to encourage data improvements. We have also reviewed and updated the targets set for all managers to improve the level and quality of data they provide to us in relation to climate change over the next Scheme year. In addition, we have reviewed the targets set last year for two of our investment mandates to reduce emissions over set time periods.

The table below provides a summary of our current approach and progress within each of our investment mandates.

Asset Class	Manager	Current Approach
Property	**Savills IM**	We are reducing our allocation to property as a result of our most recent strategy review. We have agreed with Savills Investment Management (IM) to reduce the total emissions of our property mandate by 50% by 2030 and to strive to reach net zero carbon emissions for the total mandate by 2040. Our assessment of progress against this target indicated that the manager is currently behind schedule for reducing the portfolio's emissions. However, we note that these developments are to some extent affected by increased data coverage and changes to methodology for calculating and estimating carbon emissions. Savills IM are currently in the process of appointing a 3rd party adviser to assist with all areas of net zero journey planning and ESG reporting. We expect this to be a positive step in terms of the information provided to us and our ability to engage with Savills IM on planned actions.
Private Equity **Real Assets**	**Pantheon**	The actual data coverage is currently very low for this mandate, however Pantheon have made good progress since last year and are now able to provide estimated data covering most of the private equity and real assets. Data quality and coverage will remain an area of focus for manager engagement going forward and we plan to engage with Pantheon on an ESG Reporting Template they are developing to assess wider ESG metrics and information. This mandate is due to run-down over the next 10 years.
Multi-Asset Bonds	**Western**	We have a much higher level of emissions data for this mandate and we have agreed with Western to aim to achieve a 50% scope 1 and 2 WACI reduction by the end of 2030 (with discretion given to the manager as to how progression towards this target should be actioned over time). We have also agreed interim milestones with the manager which will be used to monitor progress against this target. The recent assessment indicated that Western are ahead of the expected trajectory for reducing carbon intensity within the mandate. During the year we also agreed a set of wider ESG metrics which Western will report on a regular basis, including considering Western's own ESG scores for holdings and how each holding aligns with the Paris Agreement. This mandate will form part of the Scheme's target terminal strategy.

Direct Lending	**HPS**	HPS have made improvements in terms of emissions data quality over the last year and are now able to provide some actual data (with estimates used where this is not possible). A set of wider ESG metrics has also been agreed with HPS which they will share with us on a regular basis. These metrics include consideration of HPS's own ESG scores for holdings and any key ESG incidents flagged by their screening model. The mandate is due to run-down over the next 5 years.
Leveraged Loans	**M&G**	Over the last year, M&G started liquidating this mandate (in line with the agreed de-risking strategy for the Scheme) and we expect this to be completed in the coming months. As such, there is now very limited scope for obtaining any climate data for this mandate.
Real Estate Debt	**M&G**	Data continues to be very limited for this mandate. M&G highlighted that given the nature of the asset classes, it is unlikely that any meaningful data will become available for exiting loans although they are seeing some developments in terms of reporting for new deals. The mandate is due to run-down over the next 5 years and M&G will not be investing in any new deals on behalf of the Scheme.
Asset Backed Securities	**M&G**	There has been some progress on climate data availability for this mandate over the past year although at present, M&G are still only able to provide estimated metrics. At present, data quality is not good enough to set any explicit climate targets for the portfolio as a whole however we plan to assess this position regularly. We have also agreed a set of wider ESG metrics with M&G to share on a regular basis in which include ESG scores for portfolio holdings and a summary of any emissions targets set by deal sponsors. Based on this, we have recently set a new constraint for the mandate in relation to the minimum M&G ESG score required for inclusion in the portfolio. This mandate will form part of the Scheme's target terminal strategy.
CLO	**Insight**	The mandate has been fully sold down during the last Scheme year.
Secured Finance	**Insight**	Data is currently very low for this mandate. There are known data challenges in the structured credit sector due to an absence of market data providers. The manager is investigating options to improve data availability and we will continue to engage with them regarding progress. The majority of the liquid assets within the portfolio were sold during the last year, with the illiquid loans expected to run-off over the next 10 years.

Cash	Insight	Our liability driven investment (LDI) mandate forms a key part of our long term strategy. However, the potential to set targets or make changes within these mandates is currently quite limited and dependent upon the UK government meeting its climate goals. We receive a good level of emissions data for this mandate, largely based on UK emissions. We have also agreed a set of wider ESG metrics that Insight now report to us regularly, including their internal ESG ratings for derivative counterparties, each counterparty's level of alignment with the Paris Agreement and a summary of Insight's engagement efforts.
LDI Portfolio (Gilts, derivatives and Network Rail bonds)		

Collaboration

We believe that collaboration with other investors and industry initiatives will help us achieve the Scheme's aims. As we included in last year's report, we have joined two collaborations, Accounting for Sustainability (A4S) and the Occupational Pensions Stewardship Council which aim to bring investors together to discuss and share ideas around the management of climate change. Further details on these two collaborations are included in Appendix C. We continue to look for other opportunities to contribute on a larger scale to climate and wider ESG issues.

Next steps

Over the coming year, our focus will be on

- Continuing our work with managers to improve data and to agree key metrics and targets for our investments, using our net zero aim as a guide to the actions that we take.
- Ensuring that our ESG policy and net zero aspiration is taken into account as we continue the Scheme's de-risking journey, focussing on those mandates which are intended to form part of the Scheme's long-term strategy. Particular focus will be given to the opportunity to include strong ESG and climate characteristics into our new investment grade credit mandate.
- As part of the upcoming 2024 Actuarial Valuation, consideration of climate risks and opportunities will form a part of the Sponsor covenant review.

The following pages provide detail on our 2022/23 climate risk disclosures.

Governance

The Scheme's RI policy considers the whole Environmental, Social and Governance ("ESG") spectrum. This includes climate change which the Trustee gives due consideration given its financial materiality. Below, we have referred to climate change, however the relevant sections in the RI policy may instead refer to ESG more broadly.

How we retain oversight of climate-related risks and opportunities

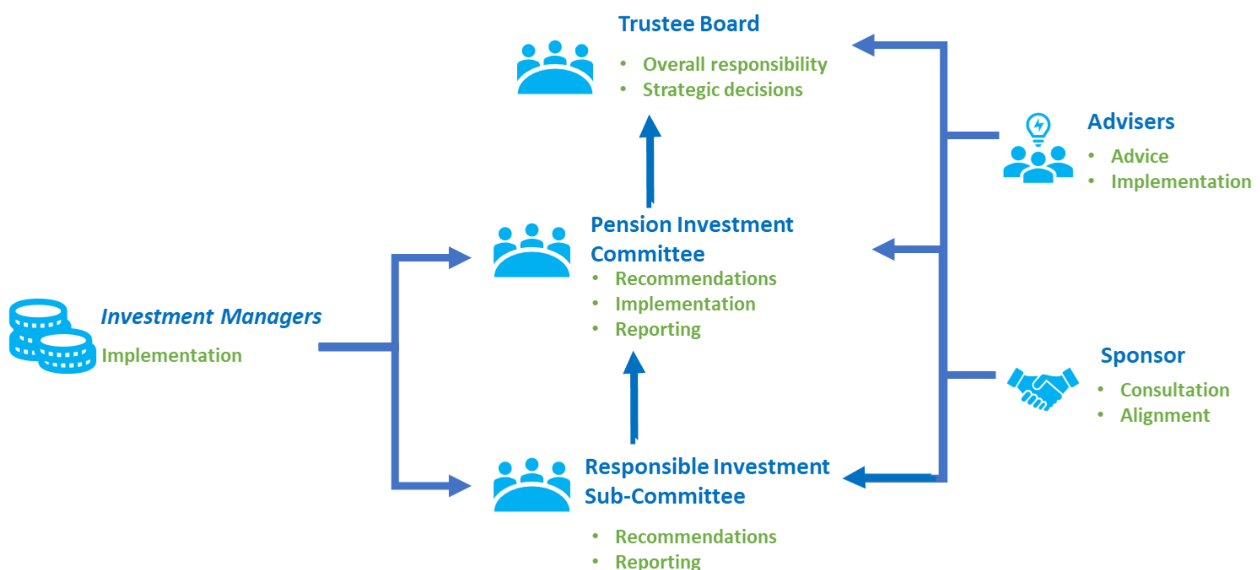
The Scheme's Responsible Investment (RI) Policy sets out the Trustee's key RI beliefs and the approach which will be taken to implement those beliefs. The Trustee retains overall responsibility for the setting and implementation of the Scheme's RI Policy which includes responsibility for ensuring all regulatory requirements are met and that the Scheme's governance processes are sufficient to ensure the proper management of all ESG related risks.

Implementation of the overall investment strategy, including implementation of the Scheme's RI Policy is delegated to a dedicated Pensions Investment Committee (PIC) which consists of a sub-set of the Trustee board. To assist the PIC in its role in assessing and managing ESG risks and opportunities, the PIC has established an RI Sub-Committee who are responsible for ensuring the Trustee and PIC considers and appropriately addresses all relevant RI related matters. The RI Sub-Committee has been formed from a sub-set of the PIC. The Trustee, PIC and RI Sub-Committee also receive advice and support regarding ESG and climate related risks and opportunities from its investment advisers and actuarial advisers. As part of their work, the Scheme's advisers also identify climate related risks and opportunities for the Scheme and report to the Trustee as appropriate.

The Trustee maintains oversight of climate related risks and opportunities which are relevant to the Scheme through the governance processes in place and maintains a governance document, which records the current structure and forms an appendix to the RI Policy. Trustee effectiveness reviews are carried out periodically, which include assessment of the governance structures in place. This, together with the discussions held with the Scheme's advisers and sub-committees at regular meetings, enables the Trustee to satisfy themselves that all parties are taking adequate steps to identify and assess climate risks and opportunities.

The Scheme's Sponsor, Diageo Plc, maintains its own RI Policy, objectives and action plan. Through the RI Sub-Committee, we maintain an ongoing dialogue with the Sponsor to ensure both parties are aware of each other's approach in this area. We ensure those issues relevant to the Scheme are considered where appropriate and aim to ensure synergy between the Trustee's and Sponsor's approach to climate related issues.

The current governance structure of the Scheme and key relationships is illustrated in the diagram below.



Roles and responsibilities in assessing and managing climate related risks and opportunities

The parties with a role in the Scheme's management and how they incorporate the identification, assessment and management of RI, and in particular climate related risks and opportunities is set out below, along with the methods we use to assess each party.

Pensions Investment Committee (PIC)

The PIC is expected to incorporate RI considerations into its management of the Scheme's assets, identifying and managing climate related risks and opportunities in all areas including asset allocation decisions, manager appointments and its monitoring of the Scheme's current investment managers. ESG opportunities will be assessed as part of any strategy review work and in particular as part of the implementation of any new asset class. The PIC relies on information provided by the Scheme's investment and actuarial advisers and investment managers in making these assessments. This information is provided to the PIC at their regular meetings with their advisers and managers and through their investment advisers' support in maintaining the Scheme's Climate Risk Dashboard. Key ESG and climate metrics are also included in a strategic dashboard, considering the Scheme's overall strategy, which is considered by the PIC at the start of each meeting.

The PIC aims to meet with each manager once per year and at that meeting asks each manager to provide updates on their RI activities and key risks identified within the mandate, along with any new opportunities the PIC should be aware of. Details of how climate considerations are incorporated into the Scheme's processes are included in the Risk Management section of this report.

The PIC reports on its activities at Trustee Board meetings three times each year, which includes actions taken in relation to RI. The RI topics to be covered at these meetings are determined based on the key priorities at that time, which for this scheme year have focussed on the implementation of targets set for the Savills IM and Western mandates and the Scheme's exclusions policy, exploring targets and wider, non-emissions based, ESG metrics for the Scheme's other mandates and the production of the Scheme's 2022/23 TCFD report.

Responsible Investment Sub-Committee

The RI Sub-Committee (Sub-Committee) is a sub-set of the PIC. The key aims of the Sub-Committee are to identify and carry out all key tasks required to enable the Trustee to:

1. Act in line with the beliefs and principles set out in the Trustee's RI policy.
2. Continue to progress towards becoming more active in all areas of RI.
3. Meet the requirements of the climate related regulations that came into force from October 2021 and any future related regulations.

The PIC have agreed a Terms of Reference (ToR) which sets out the composition and key responsibilities of the Sub-Committee. One key responsibility of the Sub-Committee is to work with the Scheme's investment managers to understand and direct each manager's activity in this area. The Sub-Committee hold focused meetings with the Scheme's managers to discuss relevant ESG metrics, targets and any key risks identified. Opportunities to improve the ESG characteristics of each mandate, or other opportunities being considered by the manager (such as alternative fund options) are also discussed at these meetings.

The Sub-Committee provide regular updates to the PIC and to the Trustee and provide recommendations to the PIC and Trustee for approval. There is a standing item at PIC and Trustee meetings for RI updates which provides opportunity for the Sub-Committee to highlight and discuss any new risks or opportunities identified. The PIC have oversight of the Sub-Committee's activities and are responsible for appointing members of the Sub-Committee and the Committee Chair.

Diageo Pensions Team

The Diageo Pensions Team support the RI Sub-Committee in arranging meetings and taking forward agreed actions between Sub-Committee meetings. The Pensions Team also has responsibility to ensure appropriate levels of resource are available to complete all RI associated requirements, including TCFD reporting.

Investment Advisers

The Scheme's investment advisers are responsible for assisting the Sub-Committee and the PIC to ensure climate related risks and opportunities are embedded into all investment decisions. They provide advice and training to the Sub-Committee, the PIC and Trustee on regulatory requirements and are expected to incorporate climate considerations into their advice regarding any strategy changes or manager appointments. Climate risks and opportunities are identified by the Scheme's investment advisers through their discussions with each investment manager and through the climate scenario analysis which was carried out earlier this year.

We have set objectives for our investment advisers which include objectives relating to the advisers' support in all RI considerations. The investment advisers are assessed against these objectives annually and the objectives themselves are assessed regularly to ensure they remain appropriate.

Actuarial Advisers

The Scheme's actuarial advisers are responsible for identifying any climate considerations which should be incorporated into the Scheme's funding strategy (both short and long term) and in the Scheme's integrated risk management plan. This will include the setting of individual financial and demographic assumptions and also the Trustee's assessment of the covenant of the Sponsor.

Investment Managers

The Scheme's investment managers are expected to integrate ESG considerations, including climate change, to the extent possible, into their management of each of the Scheme's mandates. They are also expected to provide sufficient climate and wider ESG reporting to allow us to understand and challenge the manager's efforts in this area. The investment managers identify climate related risks through analysis of their individual holdings and where appropriate, through carrying out scenario analysis for their portfolios. The Trustee expects different parts of the portfolio to follow different trajectories but are working with each manager to drive continuous improvements.

During the appointment of any new manager, the PIC assesses each manager's RI capabilities, with assistance from their investment advisers, to ensure that the manager's approach is aligned with the Trustee's RI Policy (including exclusions policy). Once appointed, the PIC monitors the strategy and performance of all managers regularly. The RI-Sub Committee focuses on assessing each manager's RI processes and policy and challenges managers on any issues identified. The Sub-Committee maintains a record which is updated based on information provided by and discussions held with the investment managers. This document records the Sub-Committee and investment advisers' views on each manager's RI Policy and integration of ESG considerations into the investment process and sets out the approach and actions the Sub-Committee and PIC plan to take to address any risks identified. This is shared with the Trustee regularly and will be updated annually as well as following each manager meeting.

Any issues identified and the outcome of this monitoring is fed back to the Trustee at regular Board meetings.

Strategy

The climate related risks and opportunities we have identified

We define climate risk to be the potential impact on future financial returns that may arise from climate change. Climate risk is typically split into two parts:

- Transition risk: the impacts that may arise from policy change and technological advancement
- Physical risk: the risk from changing weather patterns or the frequency/severity of extreme events

We are a long-term investor. Our current target is to achieve full funding on a low risk long term funding basis by 2030. The policy response to a changing climate will present both risks and opportunities to long term investors like the Scheme. This will likely impact our ability to deliver our long-term objective and so it is crucial we manage climate risk appropriately.

In the context of our journey planning and investment horizon, we have defined short, medium and long-term. These definitions have been reviewed during the last Scheme year in preparation for drafting our second report. We agree they remain appropriate given the Scheme's circumstances, but have adjusted the medium term definition to reflect the passage of time and the time remaining until 2030. Our current definitions are included below.

Time Horizon	Definition
Short term	Rolling 3 year periods, re-set at the end of each Scheme year, in line with a typical valuation cycle.
Medium term	2030 (7 years), to coincide with the target date for full funding set out above.
Long term	2040, this is close to the duration of the Scheme and so the point at which the Scheme will be very mature.

We will continue to review these timescales regularly and will amend the definitions as and when required.

We expect transition risks to feature more prominently over shorter-time periods. This view is predominantly driven by the likely escalation in climate change regulation over the short to medium term. Over longer-term periods, we expect physical risks to feature increasingly. Both transition and physical climate risks will impact the Scheme during its lifetime.

Risks and opportunities relating to climate change are identified through the various processes involved in managing the Scheme, which are set out in the Risk Management section of this report. The RI Sub-Committee maintains a Climate Risk Dashboard which records the risks and opportunities identified through these processes that impact the Scheme's funding and investment strategy. This dashboard is used to evaluate the risks and opportunities against the impact on the Scheme's funding strategy and investment strategy and to prioritise areas for action.

The table below sets out a summary of the key risks currently identified and monitored by the RI Sub-Committee and PIC, for each of the asset classes in which the Scheme invests.

Climate Risks by Asset Class

Mandate	Key Risk Identified	Risk impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
Growth					
Property	• Some properties, totalling £122m, exposed to high climate risk identified through latest physical risk audit - exposures to river and coastal floods and risk of winter/storms and drought stress. • Potential new regulations on minimum efficiency levels. Introduction of UK sustainable disclosure regulation and SFDR will require increased data. • Exposure to tenants whose business and therefore rents may be impacted following the impacts of transition risks. • Risk of stranded assets, not meeting the green transition criteria. • Tax imposed on property owners for carbon embodied in the buildings.				• Improved valuations as a result of making physical changes ahead of regulatory requirements. • Participation in building sector innovation through development work. • Participation in discussions regarding optimal offsetting strategies where required.
Private Equity	• Manager believes climate risks very low for mandate but data to support this is currently low and so 'high' risk assigned in the short term. As portfolio is in run-off, the impact of this risk will reduce over time. • Small allocation (c3%) invested in the energy/utilities and industrial sector.				
Real Assets	• Mandate has c55% exposure to sectors which typically have climate risk & opportunities exposures including, upstream energy, transportation, power & utilities, renewables & energy efficiency, timber and metals & mining.				• Renewable investment opportunities

Mandate	Key Risk Identified	Risk impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
Income					
Multi-Asset Bonds	• Environmental risk exposures coming from issues which aren't aligned with EU Green Taxonomy and projects for a greener society. • Risk that sovereign assets do not meet their climate targets.				• Investments in "green bonds".
Direct Lending	• Extreme weather events – may impact some industrial production companies given location. • Holdings in insurance brokers – extreme weather events may result in risks and opportunities here. • Exposures to companies with long supply chains and risk of supply chain disruption. • Lack of actual company climate data disclosure. US policy around disclosure generally lagging Europe. • Oil and gas holdings have key climate risk, although this exposure is now small given the mandate is running off.				• Mandate in run off with no new investments and so opportunities are limited.
Leveraged Loans	• Limited data due to lack of transparency. • Risk of underlying companies not setting or meeting climate targets.				
Real Estate Debt	• Underlying properties exposure to climate risk which impacts repayment of loans. • Limited data due to lack of transparency. • Exposure to underlying tenants whose business and therefore ability to pay rents to borrowers may be impacted following the impacts of transition risks.				• Mandate in run off with no new investments and so opportunities are limited.
Secured finance mandates	• Limited data due to lack of transparency. • The Manager has reported that within the Auto ABS holdings there is a prevalence of internal combustion engine assets in the pools but this is reducing with newer deals.				• Potential to invest in 'green Residential

Mandate	Key Risk Identified	Risk impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
	• Commercial Mortgage-Backed Security (CMBS) assets lending to properties in coastal cities as the value of these properties could be impacted if investors become focussed on risk of flooding. • Currently limited transparency to underlying holdings exposure to climate risk.				Mortgage-Backed Securities (RMBS).
Protection					
LDI Portfolio (Gilts, derivatives and Network Rail bonds)	• Climate change impact on government borrowing and expenditures. • Government not meeting its climate objectives. • Counterparty banks not meeting relevant climate regulations and standards, leading to an increase in credit risk.				• Investment in green gilts.
Cash	• Government not meeting its climate objectives. • Given very short duration of the assets, we consider the level of risk to be very low.				

For mandates which do not form part of the long term strategy, we have assessed the longer term risk as green (low).

Climate related risks are also assessed at an overall strategy level. The Sub-Committee, PIC and Trustee assess climate related risks and opportunities when setting investment and funding strategy and when reviewing the employer covenant. The table below sets out a summary of the key risks currently identified and monitored by the Sub-Committee and PIC, for each area of the Scheme's overall funding strategy.

Climate Risks – Funding Strategy

	Identified Risks	Impact (RAG)		
		Short term	Medium Team	Long Term
Investment Strategy	Overall strategy identified as resilient to climate risks as part of recent scenario analysis, although under the assumption that financial markets continue to function as normal. The results of the analysis support continued de-risking of the Scheme's investment strategy. Low levels of climate data provided by our investment managers continues to be a key risk.			
Funding	Scenario analysis carried out as part of strategy review indicated that current funding strategy is resilient to climate risks. Longevity impact from climate change and potential uncertainties in the funding assumptions introduced by climate risk. Impact of climate risk on longevity trends will take time to emerge so might expect minimal impact short term with the greatest impacts longer term.			
Covenant	Risk of Company not meeting climate targets or risk of the Company not being rewarded appropriately for its climate R&D efforts - either of these may impact profitability and strength of covenant under different scenarios. Risk of physical damage to the Company's assets and risk of supply chain disruptions if climate change not addressed appropriately. Risk of consumer impacts on sales/profits, from cost of living changes or changes in preferences. Although strong funding position today, long time horizon for Scheme means impact of these factors on covenant will continue to be important.			

Given the uncertainty around climate change, the potential global approach and therefore the balance of transition and physical risks that may manifest over the longer term, the long-term risks to the Scheme have all been classed as medium. This reflects our prudent approach to rating these. At the total Scheme and funding strategy level, focus has been on identifying and minimising risks. Opportunities are considered as we review each investment mandate and as we implement the agreed changes to reduce overall risk within the Scheme's investment strategy, including the appointment of the Scheme's new investment grade credit mandate.

How climate-related risks and opportunities impact our investment and funding strategy

We continue to dedicate considerable time and resource to ensuring that climate risk is appropriately embedded within our investment processes. This has largely been in the form of engaging with the Scheme's investment managers and when setting investment strategy, considering the resilience of our strategy to climate change risks. Given the maturity of the Scheme and the de-risking journey that we are on to stabilise the Scheme's strong funding level, certain asset classes where ESG influence might be greater and measurement easier are not currently appropriate for the Scheme's strategy from a risk and return perspective. Our focus remains on reducing risks as far as possible through the integration of ESG considerations and taking the opportunities we do have to make positive changes to our assets.

A key example over the past year is our work in relation to the Scheme's new investment grade credit mandate.

Case Study - Incorporating climate change into our strategy

When reviewing the Scheme's strategy and considering de-risking actions to be taken, the PIC and Trustee have considered the climate risks and ESG characteristics of each investment portfolio when selecting portfolios to increase/reduce exposure to.

This year, we made the decision to introduce an investment grade credit mandate with a view to this forming a key part of our long-term strategy. Increased availability of climate data and the ability to integrate RI and climate objectives into the mandate was part of the rationale for this change in strategic asset allocation. Please see Appendix B for details of our target long-term strategy.

In agreeing mandate guidelines, we have worked with the Scheme's chosen investment manager to agree objectives and constraints which will align with our RI policy and support our journey towards net zero, whilst continuing to provide sufficient levels of return and diversification of risks.

The guidelines we have agreed for this mandate include:

- Exclusions in line with the Trustee's own exclusions policy.
- Screening out of the lowest ESG scoring bonds, based on the manager's scoring system.
- A minimum level of investment in bond issuers who are aligned to the Paris agreement.
- A minimum level of investment in bonds for which proceeds have been assessed by the manager as supporting a positive environmental or social outcome.

Other examples of our work during the year include:

- The Sub-Committee have held meetings with each of the Scheme's investment managers to agree a suite of wider ESG metrics, beyond agreed emissions based metrics, to provide a broader picture of the key ESG considerations for each mandate.
- Refining our RI policy and beliefs to include reference to biodiversity given work towards the Scheme's net zero objective will require consideration of this closely related area.
- Last year we agreed an overarching aim for the Scheme's assets to achieve net zero greenhouse gas emissions for all Scheme assets by 2050. This aim has helped act as a guide as we continue to set targets and take action in relation to each of our underlying investment mandates.
- The Sub-Committee continued work to assess the ability to set climate related targets for each of the Scheme's investment mandates and reviewed those already in place. Since our last report we have:

- Introduced a minimum ESG score threshold for a further mandate. This is covered in the Metrics and Targets section of this report.
- Agreed an offsetting strategy in relation to the existing emissions target for the property mandate. The Sub-Committee spent time debating the different options available and relative merits and considerations of each. The agreed strategy will see purchase of carbon offsets up to a limit plus a reserve fund for occupier improvements for property assets. Offsetting will relate to bringing developments to a 'net zero' standard and only for residual emissions that cannot be removed through innovative building design and development management. A monitoring process has also been agreed for the offsetting strategy along with triggers for review of the strategy. We will aim to use this monitoring to assess the effectiveness of the offsetting strategy over time. Our property manager Savills IM also intend to appoint a 3rd party adviser to help implement this strategy.

- We also considered refreshed climate scenario analysis in our review of investment strategy following the merger of the Scheme with a smaller related scheme (covered further in the section below). In our review we concluded that the various limitations of current quantitative scenario analysis reduce its usefulness in making decisions or taking action, but that qualitative considerations are more useful at this time.
- By including specific references to ESG and climate related risks within the objectives of the Trustee's strategic advisers, we receive frequent training on the management of climate related risks and opportunities.

Going forward, the RI Sub-Committee are continuing to identify opportunities to set climate specific targets on the different investment mandates as part of wider net zero journey planning. We also continue to engage with the Sponsor on its own climate transition plans and commitments. As part of the upcoming 2024 Actuarial Valuation, consideration of climate risks and opportunities will form part of the covenant review.

How resilient is our investment and funding strategy to climate change risks?

We first carried out climate scenario analysis, considering the Scheme's assets, liabilities and market conditions as part of the strategy review following the 2021 actuarial valuation. Given the Scheme's strong funding position and de-risked strategy, we felt that updated stochastic asset liability modelling (and associated climate scenario analysis) bespoke to the Scheme was unlikely to yield further benefit or provide new information. Therefore, this year we refreshed our scenario analysis using a combination of qualitative and quantitative assessment to think about what downside scenarios could disrupt or materially impair the Scheme's ability to meet benefit payments under both the current and the target terminal (de-risked) strategy.

In debating the scenario analysis and outputs, the Sub-Committee agreed that existing qualitative climate scenario analysis tools have many limitations and often derive little useful information for taking action. In particular, the current funding regime means our strategy will include a large allocation to UK government bonds. Being a well funded Scheme, we have limited appetite for illiquid assets that could provide opportunities to finance the transition to a net zero economy. For this reason, we focussed more on qualitative discussion around the potential impacts of climate change and although we carried out some high level quantitative analysis, have given less weight to the outcome of this.

Climate Scenarios Considered

We considered the impact of three climate scenarios which differ by how quickly and decisively the world responds (or fails to respond) to climate change. Quantitative analysis was used to illustrate the potential impact on the expected return from our investment strategy under the scenarios and qualitative analysis and discussion used to assess the impact on liabilities and covenant. The scenario analysis was carried out using a model produced by the Scheme's investment adviser. The analysis is not entirely bespoke as it is based on an example

pension scheme with a similar investment strategy, but we deem this to be appropriate given the Scheme's circumstances.

In the table below we summarise these scenarios. In each scenario it is assumed that there will be a period of disruption affecting financial markets, caused by the impact of measures to combat climate change (transition risks) or the fallout from it (physical risks). It is also assumed that in these disrupted periods there will be significantly greater volatility in key variables like inflation, investment returns and yields.

In the first two scenarios, the global average temperature increase at 2100 is expected to be at or below 2°C and in the third scenario, temperature rises are expected to exceed 2°C. A more detailed description of each of the scenarios is included in Appendix B.

Aggressive mitigation → Business as usual

Green Revolution	Delayed Transition	Head in the Sand
Concerted policy action starting now e.g. carbon pricing, green subsidies Public and private spending on "green solutions" Improved disclosures encourage market prices to shift quickly Transition risks in the short term, but less physical risk in the long term High expectation of achieving <2°C warming	No significant action in the short-term, meaning the response must be stronger when it does happen Shorter and sharper period of transition Greater (but delayed) transition risks but similar physical risks in the long term High expectation of achieving <2°C warming	No or little policy action for many years Growing fears over ultimate consequences leads to market uncertainty and price adjustments Ineffective and piecemeal action increases uncertainty Transition risks exceeded by physical risks Low/no expectation of achieving <2°C warming

Timing of disruption: Immediate → 10+ years

Intensity of disruption: High → Very high

Climate Scenarios – Conclusions

Based on the specific scenarios considered and thinking about potential funding impact, we are comfortable that the current funding position provides sufficient buffer to withstand both potential risks and some combination of risks, and still secure the underlying benefits.

The assessments described in the sections above suggest the funding and investment strategy is resilient to climate change, assuming existing financial systems continue in their current form. We recognise the potential for wider systematic risk, for example, default of the UK government on its debt if attempts to limit global temperature rises fail. These systematic risks could impact our ability to meet our objectives but cannot be removed due to their nature. We therefore focus our approach on where we can have the highest impact on real world outcomes and risk reduction, and those which are of strategic importance to us.

This analysis will be carried out on at least a triennial basis. We are monitoring developments within the industry to evolve climate scenario analysis and engage on this topic as part of our involvement in industry wide collaborations.

How resilient is the Scheme's covenant to climate change risks?

As part of the 2021 covenant evaluation, an assessment of the principal risks facing the Sponsor was carried out, including risks that could threaten the Sponsor's business model, future performance, solvency or liquidity and therefore threaten the Sponsor's viability.

The recent scenario analysis highlighted that whilst the current strong Scheme funding position reduces reliance on the Sponsor today, the Scheme has a long time horizon remaining. The impact of climate change risks will continue to be important. As part of the upcoming 2024 Actuarial Valuation, consideration of climate risks and opportunities will form a part of the covenant review.

In line with embedding climate-related issues into the Scheme's Integrated Risk Management (IRM) framework, we will also consider the impact of climate risk to the Scheme's liabilities. This will include possible margins of prudence to make allowance for the economic impacts of climate change, as well as the long-term effects of climate change on assumptions such as longevity and mortality.

Risk Management

The processes we use to identify and assess climate related risks and opportunities

As part of the Trustee's responsibility for the setting and implementation of the Scheme's RI Policy, the Trustee must ensure that ESG related risks, including climate change, are identified, assessed and effectively managed and that management of these risks is integrated into the overall risk management of the Scheme. We delegate aspects of this responsibility to other parties, but retain overall oversight, as set out in the Governance section of this report. Below, where we have referred to ESG risks more broadly, this will include consideration of climate change risks.

ESG and in particular climate related risks can be identified by various parties including the RI Sub-Committee, PIC, Trustee, investment managers or the Scheme's advisers as part of the ongoing management of the Scheme. ESG risks are identified as part of the following processes:

- **Investment strategy reviews** - We consider ESG risks as part of the Scheme's regular investment strategy reviews that are carried out alongside each actuarial valuation and on an ad-hoc basis as required. The Scheme's investment advisers are expected to integrate ESG considerations into their strategy advice and to highlight any key risks that are included within any potential investment strategy. As part of this work we have carried out scenario analysis, on a qualitative and quantitative basis, at the total Scheme level to assist in the identification and measurement of climate related risks in the Scheme's overall strategy.
- **Valuations and covenant reviews** – We also consider ESG risks as part of the triennial actuarial valuation process ensuring that this analysis considers the funding, covenant and investment risks in a joined up way. The Scheme Actuary will incorporate the consideration of ESG risks in the actuarial assumptions advice and any projections which are considered to evaluate the possible long-term funding outcomes for the Scheme. When assessing the employer's covenant we will take into account the ESG risks to the employer.
- **Considering asset classes** - When assessing new asset classes, potential ESG risks are assessed and discussed as part of the training provided to the Trustee. Key ESG risks are taken into account when comparing alternative options.
- **Selection of investment managers** - When appointing a new investment manager, the Scheme's investment adviser provides information and their view on each manager's ESG policy and capabilities. Each manager is also asked to provide information regarding their own ESG and climate risk management processes as part of the selection process. This information allows us to identify potential risks when comparing potential providers.
- **Individual mandates and investments** – We also undertake risk analysis at the individual asset level. In this instance, the Scheme's investment managers are responsible for the identification and assessment of ESG, including climate related risks and opportunities and will be expected to identify and disclose these risks to the Trustee in the following ways:
    - As part of their regular reporting.
    - During their presentations when meeting with the Trustee.
    - As part of their more in-depth RI meetings with the RI Sub-Committee
    - By providing climate metric data in line with the TCFD requirements.
    - By providing any relevant scenario analysis.

At all meetings with the Scheme's managers, each manager is asked to identify their view of the largest ESG related risks facing their mandate at that time, which will include consideration of key climate related risks. This assessment may be qualitative or quantitative depending on the type of mandate and data available. As an example, the RI Sub-Committee have discussed the risks and opportunities associated with completing any development work within the Scheme's property development to a 'net zero' standard and have agreed an approach with the Scheme's property manager to achieve this.

The RI Sub-Committee have met with each of the Scheme's current investment managers to gain a more in-depth understanding of each manager's process and the risks inherent in each of the current mandates.

Any key risks identified are discussed by the PIC and are listed on the Scheme's Climate Risk Dashboard to be monitored on an ongoing basis. Regular updates are also included as a standing item on PIC and Trustee meeting agendas which will include details and recommendations on any key issues identified.

We note that evaluation of ESG related risks and opportunities is based on relevant information and tools being available, as well as the quantification of ESG and climate-related risks and opportunities being a developing area based on continuously emerging information. The Sub-Committee actively engage with all managers to promote improvement in this area.

The processes we use to manage climate-related risks

Prioritising risks and agreeing actions

Once risks are identified and added to the Climate Risk Dashboard, they are evaluated and prioritised based on the overall threat posed to the Scheme. We prioritise risks with input from our advisers and investment managers. This helps us to build up a picture of the Scheme's risks more widely and where ESG risks sit in the overall risk management framework.

We prioritise risks based on the size, scope and materiality of the risk event. This includes rating the likelihood and impact of the risk event, reflecting the threat that the risk event poses to the Scheme's funding position, then making a decision on the appropriate action (mitigation, control or acceptance) based on this assessment and available courses of action. Assessing the risk's likelihood and impact may be informed by scenario analysis and calculated metrics where relevant.

Once the risks facing the Scheme have been considered and prioritised, mitigation strategies will be established and monitored to ensure that they remain effective. We will delegate the management of certain risks to other parties, as set out in the Governance section. An action in the context of risk management will aim to either introduce an additional control to mitigate the likelihood of a risk occurring or reduce the impact of a risk should it occur. This discussion will also consider whether additional Trustee training is required.

An example of our approach to risk mitigation is our work with our property manager to agree an approach for completing any development works to a 'net zero' standard. As part of this approach, we agreed to allow the use of a small allocation to carbon offsets where required. A key risk identified here was the risk that the price paid for offsets is either too low to adequately compensate for the emissions to be offset, or too high, reducing the benefit of completing the net zero development. We have put in a place a process with Savills IM to monitor these risks on an ongoing basis and to assess the effectiveness of the offsetting strategy as a whole as far as we are able. Savills IM also intend to appoint a 3rd party adviser who will focus on the selection and purchase of high-quality offsets when required.

Expectations of investment managers

Our expectations of the Scheme's investment managers with regard to the integration of ESG risks are set out in the Scheme's Statement of Investment Principles (SIP) and RI Policy. In addition, we have developed an RI Exclusions Policy which sets out specific types of investment which the Trustee feels are at odds with the

Scheme's RI Policy and intentions. These documents are shared with the Scheme's investment managers who are asked to report regularly on how their strategy is aligned with the Trustee's intentions and to discuss with us any investments which do not comply with these policies. We monitor the ESG activities of all managers through regular reporting and meetings, as set out above.

Through the PIC and RI Sub-Committee, we engage with current investment managers where risks have been identified to agree a plan of action. This may include setting specific targets for certain mandates and more regular monitoring of mandates at higher risk. In some circumstances, this could include instructing managers to disinvest from certain investments or by disinvesting from specific investment mandates. For example, during the past year, we discussed and agreed with Western, our absolute return bond manager, to disinvest from a number of holdings that did not comply with our exclusions policy.

As the case study in the Strategy section highlights, we worked with Insight to design guidelines for the new investment grade credit mandate. This process was iterative and involved the manager modelling a large number of portfolio options with various RI objectives. This helped us understand the impact of different objectives and constraints on portfolio diversification, risk and return. Ultimately, the exercise allowed us to narrow down the final guidelines to a portfolio that should be ahead of the wider market in terms of RI objectives.

We have also made further progress in agreeing specific ESG metrics and emissions-based targets with each of our managers as appropriate. Emissions data is requested from the Scheme's managers regularly based on each manager's timetable for gathering updated data on their holdings and targets have been set for each manager to improve the coverage and quality of this data. We include details and description of our progress in the Metrics and Targets section of this report including the emissions based targets set to date for our property mandate and our bond mandate with Western.

The RI-Sub Committee maintain a record which is updated based on information provided by and discussions held with the investment managers. This document records the Sub-Committee and investment adviser's views on each manager's RI Policy and integration of ESG considerations into the investment process and sets out the approach and actions the Sub-Committee and PIC plan to take to address any risks identified. This is shared with the Trustee regularly.

In addition, with the assistance of our investment advisers, we prepare an annual Implementation Statement which assesses the engagement and voting activities of investment managers and is used to monitor managers' activities in this area.

How our processes for identifying, assessing and managing climate-related risks are integrated into overall risk management

The management of ESG, including climate related risks is integrated into the Scheme's risk management processes in the following ways, with all risks considered in the context of the overall risks inherent in any strategy:

- **Valuations and covenant reviews** – When assessing the employer's covenant we review the employer's plans to manage the ESG risks identified. We consider the extent to which any adjustment is needed to the funding approach or strategy as a result of any ESG risks identified through the "identifying" stage described above. This will be considered in the context of the investment and covenant risks faced by the Scheme, and may consider the appropriateness of actuarial assumptions and of overall security provided to the Scheme.
- **Adjusting strategy and choosing asset classes** - Determining whether exposure to any asset class should be reduced, increased or avoided in light of the ESG risks identified. As set out in the Strategy section of this report, as we continue on our de-risking journey, some of the asset classes for which data and potential ESG influence are currently strongest are no longer appropriate for the Scheme, which can

limit our options in this area. However, our focus remains on ensuring positive ESG integration and taking opportunities to enhance the ESG characteristics of our existing investments where possible.

When setting overall strategy and making changes, we take into consideration our RI Policy and the ability to implement this policy within the mandates we hold. Our overarching aim for the Scheme to reach net zero emissions by 2050 also helps to guide our strategy and asset class choices. As a result of the 2021 strategy review we agreed to implement an investment grade credit mandate as part of our long term strategy. A key consideration in choosing this mandate was the ability to implement RI and climate related constraints and we have worked closely with the chosen investment manager to agree the full set of parameters for this mandate.

- **Selection of investment managers** – We consider whether or not to invest with managers whose mandates are expected to introduce an unacceptable level of risk or who do not have adequate processes for the identification and management of ESG risks.
- **Monitoring current investment managers** / **Individual mandates and investments** - We expect our investment managers to manage the ESG risks identified within their own mandates by:
  - Integrating the analysis of these risks into the overall assessment of any potential investment.
  - Engaging with investee companies where risks have been identified, to understand and encourage their management of ESG and in particular climate related risks.

Metrics and Targets

The metrics we use to assess climate-related risks and opportunities

We believe it is important to consider a variety of metrics on a holistic basis, covering both forward and backward-looking metrics. We want the metrics and targets set for the Scheme's assets to be meaningful and to provide the information we need to understand the risks faced and to make informed decisions about the resulting actions to be taken.

This report focusses on the following mandatory metrics which all schemes are asked to monitor and report. Over the last year, we have reviewed the metrics we gather and assess for the Scheme and we are comfortable that they remain fit for purpose. In line with the new reporting requirements, we have also agreed to include a binary target measure (as defined in the table below) as the additional portfolio alignment metric.

Type	Metric	Measurement
Absolute Emissions Metric	Total Greenhouse Gas (GHG) emissions	The volume of GHG emissions from the Scheme's assets – Measured in tons of CO_2e.
Emissions Intensity Based Metric	Carbon footprint	The volume of scope GHG emissions per unit of capital invested from the Scheme's assets – Measured in tons CO_2e per £m or $m invested.
	Weighted Average Carbon Intensity (WACI)	The volume of GHG emissions per unit of sales for each portfolio company, weighted by the size of allocation to each company within the Scheme's assets – Measured in tons CO_2e per £m or $m invested
Additional climate change metric (non-emissions based)	Data quality – A measure of the level of actual and estimated data available from the Scheme's managers.	Measured per mandate - % of mandate for which we have actual, estimated or no data.
Portfolio Alignment Metrics	Binary target measure	Measured per mandate - % of a mandate's underlying holdings which have a net zero target by 2050 or earlier in place.

Note: GHG emissions cover scope 1 and 2 and where available, also scope 3. See appendix A for detailed breakdown of coverage by mandate.

Many climate related metrics are based on the level of Greenhouse Gas (GHG) emissions that are related to a particular asset or investment. Greenhouse Gas emissions are categorised into 3 scopes:

- **Scope 1** - All direct GHG emissions from sources owned or controlled by the company (e.g., emissions from factory operations).
- **Scope 2** - Indirect GHG emissions that occur from the generation of purchased energy consumed by the company.
- **Scope 3** - Indirect emissions that arise as a consequence of the activities of the company e.g. supply chains and the use and disposal of their products. These are sometimes the greatest share of a carbon footprint, covering emissions associated with business travel, procurement, production of inputs, use of outputs, waste and water.

We have also reviewed our current data scoring system and concluded that it remains appropriate for the Scheme although we have added a separate score of “0” to differentiate between the managers with no data and the ones that can provide some metrics but where the coverage remains poor. The following system now applies for the data quality metric – it has been used when reassessing the managers and setting new data quality targets.

Score	Emissions data requirements
4 – Excellent	At least 90% of actual data available OR >95% overall coverage including at least 75% actual data
3 – Good	At least 65% actual data available OR >75% overall coverage including at least 50% actual data
2 – Adequate	At least 45% of actual data available OR >75% overall coverage using estimates
1 – Poor	Less than 45% of actual data available OR <75% overall coverage using estimates
0 – No data	No data on any of the metrics provided for the mandate

Wider Environmental Social and Governance (ESG) considerations

Although this report focuses on management of climate-related risks and opportunities, we acknowledge that there are a number of wider ESG factors which are relevant for the Scheme and its investments. As such, we have been engaging with the Scheme’s investment managers to gain more insights into the relevant considerations. The aim with each manager has been to agree regular reporting and monitoring of the most appropriate ESG metrics to assist us in assessing each mandate and the managers efforts within all areas of ESG. We have also considered whether setting explicit targets for parts/all of a portfolio might be appropriate at this time.

Included in our RI policy is our policy on ESG related exclusions. This policy asks that managers assess their portfolio regularly and flag any holdings that are on our list of exclusions, this includes investments in companies or governments subject to legal sanctions, controversial weapons, violators of the UN Global Compact Principles and in companies that derive a meaningful proportion of revenue or power production from thermal coal.

In addition to adherence to the Scheme’s RI and ESG exclusions policy (applicable to all managers), to date the following ESG metrics and targets have been agreed by managers:

Asset Class	Manager	Metric	Target
ABS	**M&G**	M&G provide a quarterly summary of M&G assigned ESG scores and % coverage for underlying assets.	From 14 June 2023 all future M&G ABS holdings are restricted to those which score >45 in M&G’s ESG ratings. Current holdings which breach this requirement are retained until these positions mature.
Multi-Asset Bonds	**Western**	Western provide a quarterly summary of ESG ratings assigned by Western/MSCI.	No targets to be set initially but to be set over time once understanding of the data provided has built up. Focus on holdings that are not currently ESG rated and Western’s work to improve this.

LDI	Insight	Biannual reporting on counterparty ESG ratings and summarising engagement position with all counterparties.	No engagement targets set at the current time, but counterparty engagement information to be monitored going forward and potential targets reassessed based on progress over time.
Direct lending	**HPS**	HPS provide quarterly updates on any holdings flagged as high ESG risk and annual summary of ESG ratings for all portfolio holdings.	No targets to be set at this time given portfolio is in run-off.

Emissions data we have gathered for the Scheme

The table below sets out a summary of the greenhouse gas emissions data provided by our investment managers at each manager's most recent data gathering point and the measurement of each metric using this data. Data is not all as at the same date.

Asset Class	Manager	GHG Emissions – Data Provided for portion of portfolio covered		Metrics Measured using emissions data available		Emissions – Data availability score	Portfolio alignment metric
		Scope 1+2 emissions (tonnes of CO2)	Scope 3 emissions (tonnes of CO2)	WACI	Carbon Footprint		
Property (Core)[1]	**Savills IM**	179	9,576 [2]	N/A	-	3	-
Property (Supercore)[1]	**Savills IM**	-	2,391	N/A	-	2	-
Private Equity & Real Assets	**Pantheon**	31,532	93,934	66 (scope 1 &2), 178 (scope 3)	57 (scope 1&2), 174 (scope 3)	1	-
Multi-Asset Bonds	**Western**	7,661	77,739	213	107	3	3.65%
Direct Lending	**HPS**	30,487	56,145	63 (scope 1 & 2), 202 (scope 1,2 & 3)	-	2	-
Leveraged Loans	**M&G**	26,151	-	78	66	3	-
Real Estate Debt	**M&G**	-	-	-	-	0	-
Asset Backed Securities (CLOs)[3]	**M&G**	-	-	42	-	2	-
Asset Backed Securities (Auto ABS)[3]	**M&G**	4,343	-	-	276	2	-
Asset Backed Securities (RMBS)[3]	**M&G**		-	-	20	2	-
Asset Backed Securities (Others)[3]	**M&G**	-	-	-	-	2	-

Asset Class	Manager	GHG Emissions – Data Provided for portion of portfolio covered		Metrics Measured using emissions data available		Emissions – Data availability score	Portfolio alignment metric
CLO	**Insight**	-	-	-	-	-	-
Secured Finance	**Insight**	-	-	-	-	0	-
Cash funds	**Insight**	73	9,327	3 (scope 1&2), 565 (scope 3)	c.0 (scope 1 & 2), 62 (scope 3)	3	-
LDI Portfolio (gilts)	**Insight**	593,791	-	111	175	4	117.7% of NAV, 100% of exposure
LDI Portfolio (Network Rail bonds)	**Insight**	1,566	-	17	3	4	100%
LDI Portfolio (derivatives)	**Insight**	-	-	-	-	0	-

Notes: [1]Data includes contributions from the assets sold over the year 2022, as such no carbon footprint was calculated (the metric would be overstated if using the end of December fund valuations as denominators) [2]Includes embodied carbon emissions associated with the development of Bourn Quarter (6,410 tCO_2e) scheduled to be offset in due course. [3]Data scores for M&G ABS are shown for the whole fund, not the individual components.

Additional information regarding the proportions of estimated and actual data provided by each manager, along with the methods used by the managers to provide the metrics above are included in Appendix A.

Understanding our data – Acknowledging the difficulties

Data collection is necessary to fulfil our overall net zero ambition for the Scheme's investments, as well as now being a mandatory requirement. However, this is a complex area and trends in data are not always what they seem. As data coverage and quality develops over time, comparing data between portfolios, or comparing data for a portfolio from one year to the next can be difficult due to several moving parts. Factors that will impact the overall emissions figure we can report for each portfolio include:

Changes to the way data is measured:

- The proportion of a portfolio for which data is available – This will change over time, ideally increasing each year as more companies are able to provide or estimate data.
- The methods used to estimate emissions – As methods develop and improve, estimated figures may move up or down.
- Whether emissions data is based on scope 1 and 2 only or also includes scope 3 – This will also change over time as more managers develop methods to measure scope 3.

Changes to the portfolio based on strategic decisions:

- Emissions for a portfolio may fall, simply due to a strategic decision to redeem a portion of the mandate, rather than positive actions to reduce emissions.

Actions taken by manager to improve emissions figures:

- Actions taken by a manager or by the companies that a manger invests in, to reduce emissions. This may be the result of engagement efforts by the manager or by the manager deciding to disinvest from particularly high emitting companies with no transition plan in favour of lower emitting companies or those with clear plans to reduce their emissions.

Despite the many factors impacting on reported figures, we have seen some changes where we know ESG informed decision making contributed to positive results. We believe that these will become more frequent as the culture and habit of ESG measuring and reporting to inform decision making becomes even more established amongst managers and as regulations and expectations of underlying companies increase. We firmly believe that by being leaders amongst similar boards, we can encourage and drive our managers to embed this practice, and support the overall ESG agenda in doing so.

The case study on page 33 uses the Western Multi-Asset Bond mandate as an example and considers the key reasons for the large fall in this mandate's WACI figure since our last report.

Our assessment vs the targets set to manage climate-related risks and opportunities

Data quality

As the table above shows, whilst there has been some progress in terms of emissions data availability across the Scheme's investment mandates, not all managers have been able to provide emissions data for their holdings at this stage.

We recognise the challenges associated with data collection (which to a large extent are driven by the nature of the assets in which the Scheme is invested) and last year set data quality targets for our investment managers. For all mandates, we were targeting an increase from the current score to at least the next level up by the end of the Scheme year covered by this report.

For the data quality targets, many of the challenges identified last year remain and as such we believe we should continue to set targets for our managers and engage with them on climate data improvements. While we would like to see positive developments across all the Scheme's mandates, we recognise that in some instances the existing limitations will be very difficult to overcome over the short term -this view has been reflected when updating each manager's target.

The table below summarises our assessment of the managers' progress against these targets over the past year alongside our revised data quality targets, to be assessed over the next Scheme year.

<table>
<tr><th>Mandate</th><th>Manager</th><th>Initial score</th><th>Target</th><th>Current score</th><th>New Target</th><th>Comments</th></tr>
<tr><td>Property – Core</td><td>Savills IM</td><td>2</td><td>3</td><td>3</td><td rowspan="2">4</td><td rowspan="2">Significant progress made, in relation to the actual and the overall data coverage for core properties.

Due to the upcoming merger between the two portfolios, a single target has been set for the combined fund. Based on the assets still remaining in the Savills IM portfolios in January 2023, the single combined score would be 3. As Savills IM are in the process of appointing 3rd party ESG advisers, we expect to see further improvements in data quality.</td></tr>
<tr><td>Property – Supercore</td><td>Savills IM</td><td>2</td><td>3</td><td>2</td></tr>
<tr><td>Private Equity & Real Assets</td><td>Pantheon</td><td>1 (no data)</td><td>2</td><td>1</td><td>2</td><td>Progress made as some actual and estimated data was provided this year. However, portfolio coverage is below the level required for a higher score.

We have set a target to continue this improvement.</td></tr>
<tr><td>Multi-Asset Bonds</td><td>Western</td><td>3</td><td>4</td><td>3</td><td>4</td><td>Data quality and availability has improved, however overall data coverage still falls below 95% so score of 3 was maintained. Western currently do not obtain or estimate data for the cash and derivative holdings and therefore data coverage will to some extent depend on allocation to these assets.</td></tr>
</table>

Mandate	Manager	Initial score	Target	Current score	New Target	Comments
						Data quality target of 4 retained as we believe further improvements possible.
Direct Lending	HPS	2	**3**	2	3	Progress made with actual emissions data available for around a third of the portfolio, having only provided estimated data last year. However, remain behind the 45% threshold to increase to a score of 3. We expect to see further developments in the private debt space and so have maintained a target score of 3 for the mandate.
Leveraged Loans	M&G	3	**4**	3	-	Slight improvement in data quality and availability until instruction to fully liquidate mandate (October 2022). Given the sale and run off of this mandate is well progressed, we decided not to set any data quality target as obtaining any meaningful data will be very challenging.
Real Estate Debt	M&G	1 (no data)	**2**	0	1	Still no available data, due to wider asset class limitations. M&G expect reporting to improve as measurement standards become more accepted across the real estate debt industry, but challenges in respect of the existing loans may remain as such standards had not been implemented at the outset of the deals. Given this, we are targeting a score of 1 (i.e. any improvement from no data), as the most realistic target for the mandate.
Asset Backed Securities	M&G	1	**2**	2	3	Score increased in line with the target as the manager is providing estimated data for the RMBS assets (note, we

Mandate	Manager	Initial score	Target	Current score	New Target	Comments
						are considering ABS on a whole fund level to assess their data quality score).
CLO	Insight	1 (no data)	**2**	-	-	Mandate sold down during the year therefore the score is no longer relevant.
Secured Finance	Insight	1 (no data)	**2**	0	1	Still no data available, due to wider asset class limitations within structured credit. Given this and that the Secured Finance mandate is currently being wound up, we expect obtaining any meaningful climate data will continue to be challenging. As such, we are targeting a score of 1 (i.e. any improvement from no data), as the most realistic target for this mandate.
Cash funds	Insight	3	**4**	3	4	Progress made but remain below the threshold to reach a score of 4. We decided to maintain the current target score of 4 as we expect to see improvements as reporting for cash funds evolves.
LDI Portfolio (gilts)	Insight	4	-	4	4	Maintained highest score of 4. The target is to maintain this score.
LDI Portfolio (Network Rail bonds)	Insight	-	-	4	4	Insight now able to separately provide data for Network Rail bonds – as the whole allocation is covered, it was assigned the highest score of 4. The target is to retain this score.

Mandate	Manager	Initial score	Target	Current score	New Target	Comments
LDI Portfolio (derivatives)	Insight	1 (no data)	**2**	0	1	Still no data available, due to wider asset class limitations although Insight are working on in-house solutions for estimating climate data for derivatives. As such, we are targeting a score of 1, as the most realistic target for next year. We note that Insight have set up an internal working group to help devise an in-house approach for reporting on derivatives therefore some improvements may be expected over the longer term.

Emissions data

Last year we also agreed emissions reductions targets for two of our mandates where there was enough good quality data to allow us to set such targets and perform monitoring – these are outlined below.

- We have agreed with **Savills IM** to reduce the total emissions of our **property mandate** by 50% by 2030 and to strive to reach net zero carbon emissions for the total mandate by 2040. This target uses a baseline position as at December 2019 and includes scope 1,2 and 3 emissions.
- We have agreed with **Western** to achieve a 50% scope 1 and 2 WACI reduction in our bond mandate by the end of 2030 (using average WACI over the period 31 December 2018 – 31 December 2021 as a baseline) with discretion given to the manager as to how progression towards this target should be actioned over time. We have also agreed interim milestones with the manager which will be used to monitor progress against this target.

The table below summarises our assessment of the managers vs the emissions targets we have in place.

Mandate	Base line	Current measurement	Expected measurement	Comments
Savills IM Property [1]	100%	132%	73%	The comparison here only considers the properties that have been in the portfolio since 2019, i.e. excludes the impact of sales and purchases on total emissions to allow like-for-like comparison. In particular, the manager is now actively selling some assets within the portfolio as part of the wider de-risking - impact of these actions is not accounted for in our assessment. Savills IM have also changed their data gathering and estimation methodology which will feed into changes observed. We will continue to engage with Savills IM on their progress towards the emissions reduction target.
Western Absolute Return Bond [2]	289	213	274 [3]	Western are well ahead of their target however, they noted that this change has been partially driven by sales of some particularly high emission holdings and the pace of improvement is expected to slow down from here. See further information in example below.

[1] Total carbon emissions covering scope 1, 2 and 3. All relative to the 2019 base line. Assessment for the combined Savills IM portfolio. [2] All metrics show are WACI (tons per USD millions of revenue). [3] Based on the agreed target we would expect to see this reduction by the end of 2023.

Case study - Assessing performance vs targets – Western Muti-Asset Bond portfolio

The various factors covered in the 'understanding our data' box above also impact on the assessment of performance against the targets we set for some mandates. It is important to understand the key drivers of progress over each period to help engagement with our asset managers and to ensure managers are taking positive steps which align with our net zero intent – to create real world change, rather than taking actions which are focussed on simply reporting a lower emissions figure.

In the example of the Western mandate, we have discussed with the manager the large (and ahead of target) falls they have achieved over this period. The key contributors to this early reduction have been:

- Sales of high emitters:
  - As mentioned above, we have reduced the Western mandate over this period as part of strategic de-risking actions required, making total sales of c£185m. Western have used these recent trades to focus on removing, where appropriate, the biggest contributors to their WACI score.
  - Nearly half of reduction so far has come from sales from Western's top 5 emissions contributors.
  - The remaining holdings in the top 5 contributors all mature before 2030 and so Western expect this to contribute to further reductions over time.
- There has been little change in emissions measurements from the government bond holdings which form part of this mandate.
- Going forward, several holdings are also expected to improve via their own decarbonising actions.
  - Western believe that many of the holdings they continue to have exposure to are on an improving path and will continue to consider companies with high emissions today but with robust plans to bring these emissions down.
  - We may therefore see some volatility in Western's emissions figures as some companies emissions increase, or data coverage increases, before these reduction plans take effect.

Our review of the emission targets

In addition to reviewing the managers' progress against their targets, we have also reviewed the targets themselves to ensure these remain appropriate under the Scheme's current circumstances. We are satisfied that this is the case for the emissions reduction targets although we note that the ongoing de-risking activities mean monitoring and assessment of Savills IM against their total emissions-based target will be challenging (compared to Western whose target is based on the WACI measurement). We will review the target again once de-risking trades have been completed.

Appendix A – Climate Data and Metrics

The table below provides **updated climate metrics collected from the Scheme's investment managers for this year's report**.

Asset Class	Manager	Date of data	GHG Emissions – Data Availability[1]			GHG Emissions – Data Provided for portion of portfolio covered[2]		Metrics Measured using emissions data available[2]		Data availability score	Binary metric
			% of portfolio with actual data	% of portfolio with estimated data	% of portfolio with no data	Scope 1+2 emissions (tonnes of CO2)	Scope 3 emissions (tonnes of CO2)	WACI	Carbon Footprint		
Property - Core	**Savills IM**	**31/12/22**	65%	35%	0%	179	9,576	-	-	3	-
Property - Supercore	**Savills IM**	**31/12/22**	32%	68%	0%	0	2,391	-	-	2	-
Private Equity & Real Assets[3]	**Pantheon**	**31/12/22**	5%	57%	37%	31,532	93,934	66 (scope 1 &2), 178 (scope 3)	57 (scope 1&2), 174 (scope 3)	1	-
Multi-Asset Bonds	**Western**	**31/03/23**	78%	14%	8%	7,661	77,739	213	107	3	3.65% of portfolio
Direct Lending	**HPS**	**31/12/22**	34%	66%	0%	30,487	56,145	63 (scope 1&2), 202 (scope 1,2,3)	-	2	-
Leveraged Loans	**M&G**	**30/09/22**	44%	49%	7%	26,151	-	78	66	3	-
Real Estate Debt	**M&G**	**N/A**	0%	0%	100%	-	-	-	-	0	-
Asset Backed Securities (CLOs, c40% of fund)[4]	**M&G**	**30/04/23**	0%	100%	0%	-	-	42	-	2	-
Asset Backed Securities (Auto ABS, c5% of fund)[4]	**M&G**	**30/04/23**	0%	100%	0%	4,343	-	-	276	2	-
Asset Backed Securities (RMBS, c31% of fund)[4]	**M&G**	**30/04/23**	0%	97%	3%		-	-	20	2	-

Asset Class	Manager	Date of data	GHG Emissions – Data Availability[1]			GHG Emissions – Data Provided for portion of portfolio covered[2]		Metrics Measured using emissions data available[2]		Data availability score	Binary metric
Asset Backed Securities (Others, c24% of fund)[4]	**M&G**	**30/04/23**	0%	0%	100%	-	-	-	-	2	-
CLO	**Insight**	**N/A**	0%	0%	100%	-	-	-	-	-	-
Secured Finance	**Insight**	**N/A**	0%	0%	100%	-	-	-	-	0	-
Cash funds	**Insight**	**31/03/23**	80%	7%	13%	73	9,327	3 (scope 1&2), 565 (scope 3)	~0 (scope 1&2), 62 (scope 3)	3	-
LDI Portfolio (gilts)	**Insight**	**31/03/23**	117.7% of portfolio NAV (100% of exposure)	0%	0%	593,791	-	111	175	4	117.7% of portfolio (by NAV; 100% by exposure)
LDI portfolio (Network Rail bonds)	**Insight**	**31/03/23**	100%	0%	0%	1,566	-	17	3	4	100% of portfolio
LDI Portfolio (derivatives)	**Insight**	**31/03/23**	0%	0%	100%	-	-	-	-	0	-

Notes: [1]Data coverage based on % of asset valuations as at the effective date of the metrics provided (apart from Savills IM – based on floor area). [2]Metrics calculated for the proportion of the portfolio for which actual or estimated data is available (i.e. not scaled up to account for the missing data). [3]Data covarege, WACI and carbon footprint are based on scope 1 & 2 emissions only. Data coverage proportions don't add up due to rounding. [4]Data scores for M&G ABS are shown for the whole fund, not the individual components.

The table below set out further details of the climate data provided by each of the Scheme's managers, **which was included in last year's TCFD report.**

Asset Class	Manager	Date of data	Frequency of update	GHG Emissions – Data Availability[1]			GHG Emissions – Data Provided for portion of portfolio covered[2]		Metrics Measured using emissions data available[2]		Data availability score
				% of portfolio with actual data	% of portfolio with estimated data	% of portfolio with no data	Scope 1+2 emissions (tonnes of CO_2)	Scope 3 emissions (tonnes of CO_2)	WACI	Carbon Footprint	
Property - Core	Savills IM	31/12/21	Biannually	24%	59%	16%	705	2,258	N/A	9	2
Property - Supercore	Savills IM	31/12/21	Biannually	23%	77%	0%	-	2,316	N/A	12	2
Private Equity & Real Assets	Pantheon	N/A	N/A	0%	0%	100%	-	-	-	-	1
Multi-Asset Bonds	Western	31/05/22	Annually	74%	21%	5%	84	690	280	-	3
Direct Lending	HPS	31/12/21	Annually	0%	96%	4%	66,390	76,852	249	-	2
Leveraged Loans	M&G	31/03/22	Annually	43%	51%	6%	22,678	-	68	50	3
Real Estate Debt	M&G	N/A	N/A	0%	0%	100%	-	-	-	-	1
Asset Backed Securities (CLOs, 38% of fund)3	M&G	10/06/22	Annually	22%	38%	39%	-	-	47	-	1
Asset Backed Securities (Auto ABS, 6% of fund)3	M&G	10/06/22	Annually	0%	100%	0%	6,428	-	-	-	1
Asset Backed Securities (Others, 56% of fund)3	M&G	10/06/22	Annually	0%	0%	100%	-	-	-	-	1
CLO	Insight	N/A	N/A	0%	0%	100%	-	-	-	-	1
Secured Finance	Insight	N/A	N/A	0%	0%	100%	-	-	-	-	1
Cash funds	Insight	30/06/22	Monthly	74%	0%	26%	10,513	-	2	c.0	3
LDI Portfolio (gilts)	Insight	31/03/22	Annually	100%	0%	0%	804,765	-	130	165	4
LDI Portfolio (derivatives)	Insight	N/A	N/A	0%	0%	100%	-	-	-	-	1

Notes: [1]Data coverage based on % of asset valuations as at the effective date of the metrics provided. For HPS, an average across the Scheme's 5 funds has been calculated based on total fund commitments. [2]Metrics calculated for the proportion of the portfolio for which actual or estimated data is available (i.e. not scaled up to account for the missing data). [3]Data scores for M&G ABS are shown for the whole fund, not the individual components.

Metrics and formulae used:

Metric[1]	Detail	Formula
Total GHG emissions	This measures the absolute GHG emissions associated with a portfolio, expressed in terms of tons CO_{2e}. It is calculated by summing the Scheme's 'share' of the total GHG emissions for each investment and is measured using Scope 1, 2 & 3 emissions.	$\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{total\ issuer\ equity\ and\ debt_i} * issuer's\ Scope\ 1, 2\ \&\ 3\ GHG\ emissions_i\right)$
Weighted average carbon intensity (WACI)	This is a measure of the average carbon intensity of a portfolio. Carbon intensity per investment is measured as the level of GHG emissions relative to GDP for sovereigns and revenue for corporates, and then weighted by the relative size of that investment in the portfolio. This is measured using Scope 1, 2 & 3 emissions and expressed in terms of tons CO_{2e}.	$\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{current\ portfolio\ value} * \frac{issuer\ scope\ 1, 2\ \&\ 3\ GHG\ emissions}{GDP/company\ revenue_i}\right)$
Carbon footprint	This measures the total GHG emissions per £m invested, expressed in terms of tons CO_{2e}. It is an intensity measure of emissions that takes the Total GHG Emissions figure and weights it to take account of the size of the investment made and is measured using Scope 1, 2 & 3 emissions. It differs to Total GHG Emissions as it provides a measure of exposure.	$\frac{\sum \frac{current\ value\ of\ investment}{(total\ issuer\ equity\ and\ debt)} * issuer's\ scope\ 1, 2\ \&\ 3\ GHG\ emissions}{current\ portfolio\ value\ (£m)}$
Binary target measurement	This measures the % of each mandate's underlying holdings which have a net zero target by 2050 or earlier in place.	-
Data quality & availability	This measures the proportion of the portfolio for which trustees have high quality data. Trustees should calculate the proportion of the portfolio for which each of scope 1-2 emissions and scope 3 emissions are verified, reported, estimated or unavailable.	-

Note: [1]Please refer to notes on the next page for details regarding the exact approaches used by the individual managers (including any changes to the standard metric formulae outlined above and scope coverage for the individual managers).

Notes on calculation methods:

<table>
<tr><th>Asset Class</th><th>Manager</th><th>Scopes included</th><th>Additional notes on data sources and calculation methods</th></tr>
<tr><td>Property (Core)</td><td>Savills IM</td><td>1, 2, 3</td><td rowspan="2">• Source of data: actual data provided by Savills' property management team through direct interactions with tenants and invoices for consumption purchased by landlords.
• Data has been externally verified as part of the mandates' 2023 GRESB submission.
• Scope 1 emissions cover gas and oil consumption produced by the landlord, Scope 2 emissions cover electricity, heating and cooling consumption produced by the landlord and Scope 3 emissions cover any energy consumption by the tenant.
• No carbon emissions are calculated for water consumption and waste generation.
• EVORA (Savills IM third party data provider) has developed a multi-stage approach to estimate missing data, which considers the length of gaps in reporting and utilises available data. The approach fills gaps for time-based completeness (days missing) and area-based coverage (where asset floor area is not covered/reported). The method is applied at the month/meter level to ensure the most accurate estimates when aggregated up to the asset and fund level.
• % actual / estimated calculated by Hymans based on floor area (m2).
• Following completion of Bourn Quarter, embodied carbon emissions associated with this development are included in Scope 3 emissions. The full 6,410 tCO_2e will be offset in due course through the purchase of high quality, independently verified carbon offsets.</td></tr>
<tr><td>Property (Supercore)</td><td>Savills IM</td><td>1, 2, 3</td></tr>
<tr><td>Private Equity & Real Assets</td><td>Pantheon</td><td>1, 2, 3</td><td>• Figures are based on estimated emissions data from a third party provider and actual data reported by the GPs.
• Analysis is subject to change as the process is refined and additional data becomes available from third party providers or underlying investment managers.
• Carbon footprint is emissions per dollar of NAV.
• WACI is emissions per dollar of revenue, presented as weighted average (by NAV).</td></tr>
</table>

			• The reported figures for WACI and carbon footprint include metrics for Scope 1 and 2 emissions and separately for scope 3 emissions. • Emissions reported cover scopes 1, 2 and 3. • Currently do not measure % of mandate with NZ target by 2050, however are developing tools to describe the relative alignment of different funds.
Multi-Asset Bonds	**Western**	1, 2	• All metrics provided by Western. • Over the year, the manager has made some changes to their processes in relation to gathering climate data – most notably they are now using MSCI for both actual and estimated emissions, while previously they relied on ISS database for actual emissions and MSCI for estimates only. This change together with improvements in data quality provided by the individual issuers resulted in a significant increase in absolute GHG emissions since last year. Western acknowledge that data providers' methodologies and capabilities of the individual issuers in terms of measuring carbon emissions continue to evolve and so data comparison year-on-year is likely to be challenging, at least over the short term. • Weighted Average Carbon Intensity (WACI) includes Scope 1+2 CO2 emissions, in line with TCFD recommendations, and are measured as metric tons per USD millions of revenue per ISS. Sovereign intensities are measured as metric tons of CO2 per PPP$ million GDP per World Bank. • Currently for Corporates, data is available for 76%. For Sovereigns data is available for 100%. Data is not published for securitised products as there is currently no industry standard. Where data is unavailable for Corporates, Western apply the sub sector average to the issuer in question. For securitised products which do not have data available, Western apply a weighted average of the Sovereigns and Corporates components within the portfolio to the securitised part of the portfolio. • Carbon footprint is now provided (as at 31 March 2023) however, there are some limitations when using this metric for fixed income assets, namely: carbon footprint doesn't consider the carbon efficiencies of companies (doesn't account for their sizes) and incorporates market cap calculations which are not relevant to this mandate. • Western are able to provide binary target measure, benchmark divergence metric and implied temperature rise however, the 3 forward looking metrics only consider the credit component of the portfolio, which is 58% of the total portfolio.

Direct Lending	**HPS**	1, 2, 3	• HPS Carbon Reports (as at 31 December 2022) utilize a combination of reported and estimated data. HPS is reporting on the Partnership for Carbon Accounting Financials (PCAF) Scope 1, 2, and 3 emissions in CO2e tons of the Scheme's commitments. The PCAF methodology used by HPS uses a scoring system to classify the quality of data from 1-5, where 1-2 are actual data and 3-5 are varying levels of estimated data. • Where estimations are used, the actual carbon emissions of the applicable portfolio companies may be higher than the approximation derived using the estimation methodology. • Estimated data is calculated based on: industry/sector classifications, country of risk, publicly listed or unlisted status, financials for 2022 and holding value (note where 2022 financials were not available, the most recent 12 months were used). • Financed emissions are defined as company emissions x % attributable; the attribution factor generally refers to the share of emissions of a portfolio company allocable to the fund based on the holdings of the fund relative to the portfolio company's total value. • WACI represents a portfolio's exposure to carbon-intensive companies, expressed in tons CO2e/$M revenue. HPS, through a third party, follows the TCFD guidance in providing WACI metrics. • Scheme's commitments used to estimate emissions relating to the Scheme's investment, total metrics are weighted averages of metrics for individual funds (by NAV).
Leveraged Loans	**M&G**	1, 2	• Proportions actual / estimated etc based on market value of the assets (excluding cash) • Only report scope 1 and 2 emissions for loans portfolio. • In house estimation tool is used where data is unavailable with view to monitor and encourage reduction in direct and indirect carbon emissions. • WACI calculated based on actual and estimated data = % position size / % of available data, multiplied by Carbon Intensity.
Real Estate Debt	**M&G**	n/a	• M&G expect reporting consistency to improve as measurement standards become more accepted across the real estate debt industry. However, this is expected to mainly affect any new loans being originated from now on; for existing loans M&G don't expect to see much improvement in terms of data availability. • Have seen rapid progress in attempts to harmonise measurement and benchmarking of carbon emissions for real estate over the past eighteen months, both in respect to actual data and regarding methodologies for estimating emissions

			• The Partnership for Carbon Accounting Financials (PCAF) launched its European building emission factor database in February 2022, which provides GHG emissions estimates for commercial real estate for all countries in the European Union, as well as Norway, Switzerland and the United Kingdom based on building type and EPCs, depending on data availability. • The PCAF database provides resources to calculate a proxy to estimate carbon emissions and M&G have been exploring the possibility of using these resources to produce carbon estimates for real estate debt. • Following some initial analysis, on a select number of assets across the portfolio, M&G have identified concerns with the quality of data given subjectivity of inputs and variability of emissions outcomes.
Asset Backed Securities (CLOs)	**M&G**	1, 2	• Scope 1&2 WACI available based on reported and internal estimations which in turn are based on industry and underlying companies' financial data. • Total GHG Emissions and Carbon Footprint is not available. Vendors with better access to company data from private equity owned businesses are beginning to offer estimations so M&G are exploring using this new solution. • M&G are exploring the ability to measure the % of assets with net zero targets and/or are net zero aligned (binary target measurement). • WACI calculated by dividing absolute scope 1&2 emissions by yearly revenue in millions ($)
Asset Backed Securities (Auto ABS)	**M&G**	1, 2	• Scope 1&2 Total GHG Emissions and Carbon Footprint is available, based on estimations. • Some inputs of M&G's estimation tool are car manufactured and fuel type. • WACI is not applicable
Asset Backed Securities (RMBS)	**M&G**	1, 2	• M&G are engaging with mortgage originators to refine their carbon estimate calculations. • M&G's internal methodology is based on publicly available data of average carbon emissions per postcode. However, given the lack of individual mortgage data they believe this methodology has notable limitations and it shouldn't be used yet for reporting or benchmarking purposes but rather to help analysts engage with mortgage originators for better disclosure.
Asset Backed Securities (Others)	**M&G**	n/a	• EPC certificates and corresponding ratings are available for some deals. • CMBS data not yet available, but M&G are engaging with issuers on this topic.

CLO	**Insight**	n/a	• Data for CLOs is limited by the same challenges that are applicable to asset backed securities in general.
Secured Finance	**Insight**	n/a	• No data provided, as there are no reporting standards for structured credit assets.
Cash funds	**Insight**	1, 2	• Evolving reporting for cash funds within client specific reports, however data is also expected to be available in factsheets going forward. • Scope 1 and 2 - actual data, scope 3 – estimated. • Carbon footprint = total emissions divided by EVIC • WACI = total emissions divided by sales • Absolute emissions = total emissions for the fund / total fund NAV * client holding in ILF • Carbon footprint figure is not actually 0, but rather due to rounding (emissions are so small in comparison to the total fund value) • Figures for WACI, carbon footprint and total emissions only cover data available and not re-weighted to estimate the whole fund. • While total emissions data available (actual and estimated) for 87% of the fund, carbon footprint covers only 73% of the assets.
LDI Portfolio (gilts)	**Insight**	1, 2	• Absolute emissions are for all gilts (funded and gilts on repo and/or TRS); absolute emissions = carbon footprint multiplied by the gilt holdings of the fund. • All metrics based on scope 1 and 2 emissions only. • Carbon footprint – total UK emissions divided by market value of total gilts in issue (approximation for total UK debt) • WACI = total UK emissions divided by purchasing power parity-adjusted GDP. PPP-adjusted GDP used in line with PCAF guidance; it removes the exchange rate effect and allows for better comparison with other sovereigns. PPP-adjusted GDP is denominated in international dollars (GK$). • Metrics are based on reported (but not verified by a third party) emissions data sourced from the UK government, DMO and IMF.

			• IRT model based on analysis by Germanwatch and the Climate Action Tracker. As the UK is a signatory of the Paris Agreement, so is committed to limiting contribution to global temperature rise to 1.5 - 2 degrees and the Net Zero target.
LDI Portfolio (Network Rail bonds)	**Insight**	1, 2	• Network Rail bonds backed by the UK government so assuming the same emissions reduction targets apply as above. • All metrics based on scope 1 and 2 emissions only • Reported emissions data sourced from Network Rail and MSCI • Carbon footprint = total emissions divided by EVIC • WACI = total emissions divided by sales • Absolute emissions = carbon footprint multiplied by the holdings of the fund (converted to USD as at 31 March 2023)
LDI Portfolio (derivatives)	**Insight**	n/a	• Currently no market standard for reporting climate information, however Insight have set up an internal working group to devise an in-house approach

Appendix B – Strategy and scenario analysis

The Scheme's current and target strategy

The table below outlines details of the Scheme's current strategy and the longer-term strategy we are targeting as part of the Scheme's de-risking journey.

	Current strategy	Terminal strategy
Growth:		
• *UK Property*	9.6%	5.0%
• *Private Equity*	12.5%	0.0%
Income:		
• *Absolute return bond*	2.8%	5.0%
• *Asset-backed securities*	4.7%	5.0%
• *Conservative European Loans*	1.0%	0.0%
• *Private debt*	5.2%	0.0%
• *Commercial property debt*	5.6%	0.0%
• *Secured Finance*	5.2%	0.0%
• *Investment grade corporate bonds*	0.0%	20.0%
Protection	53.4%	65.0%

Scenario analysis – Description of scenarios

The scenarios are defined in terms of the pace and extent of the world's response to climate risks, as set out in the table below. The description is divided into different time periods of five years, corresponding roughly to the five-year framework of the Paris Agreement 'ratchet mechanism' under which signatory counties are supposed to review (and reduce) national greenhouse gas emissions. The five-year periods are rolling rather than fixed to Paris Agreement ratchet dates, but given that climate action and reaction will not take place neatly according to a timetable our advisers believe this approach is reasonable.

The three main scenarios all involve periods of higher volatility, corresponding to periods when the response to transition and/or physical risks leads to uncertainty, frequent repricing, changes in government borrowing and inflation, etc.

Qualitative scenario descriptions

<table>
<tr><th>Scenario</th><th>Years 1-5</th><th>Years 6-10</th><th>Years 11-15</th><th>Years 16-20</th></tr>
<tr><td>Green revolution

2100 temperature pathway at or below 2 degrees</td><td colspan="2">• Short term concerted policy action and investment in new technology
• Immediate introduction and ramping up of carbon pricing
• Policy actions to reduce reliance on fossil fuels for electricity generation and transportation
• Government/corporate spending on “green solutions” and favourable tax position for sustainable strategies
• Significantly improved climate disclosures help market prices adjust to reflect expectation of “new normal”
• Market repricing in response to companies reaction and preparedness</td><td>• Further policy action to maintain policy intent and acceleration of timeframes for change
• Continued ramp up of policy actions sees carbon emissions fall rapidly
• Expectations of the reliance on technological solutions for negative carbon emissions in future fall
• Markets weed out poor performers on climate, fast adapters do well</td><td>• Policies have forced companies to pursue more sustainable agendas and take account of externalities through explicit pricing mechanisms
• Innovation is rewarded and expectations of physical impact from climate change are therefore expected to be more limited.
• Expectations of meeting 2 degree targets are high
• Modest physical impacts are seen such as reduced crop yields and increased precipitation.
• Renewable energy now represents a significant proportion of energy usage and is continuing to trend upwards.</td></tr>
<tr><td>Delayed transition

2100 temperature pathway at or below 2 degrees</td><td>• Limited investment and policy measures are introduced, perhaps inconsistently across the globe.
• Modest government spending on adaptation
• No significant market repricing or physical risks</td><td colspan="2">• Concerted policy action as Paris commitments are reviewed and enforced. Action is more extreme and disruptive than may otherwise have been needed
• Carbon pricing is implemented with prices rising higher and faster than under the Green Revolution scenario
• Government spending is redirected as climate priorities take hold
• Pricing adjusts in face of growing policy action
• Some businesses respond quickly, leading to divergence between them and climate laggards</td><td>• Outcomes similar to Green Revolution, with high expectations of meeting 2 degree targets</td></tr>
<tr><td>Head in the sand

2100 temperature pathway above 2 degrees</td><td>• No material policy action
• Governments pursue own agendas and societal pressure for change is resisted
• No significant market repricing or physical risks</td><td>• Low effort at climate adaptation with policy failure and adherence to current ways of thinking
• Little concerted effort, countries pursue their own interests</td><td colspan="2">• Growing fear that world is on track for more than 2 degrees temperature increase creates market uncertainty and price adjustments
• Increased likelihood of acute physical impacts on businesses
• Increased government spending in response to immediate environmental damage, concentrated on short-term mitigation measures
• Attempts to respond by governments and businesses are generally piecemeal and ineffective</td></tr>
</table>

Appendix C – Industry Collaborations

During the 2021/2022 Scheme year we joined two collaborations, Accounting for Sustainability (A4S) and the Occupational Pensions Stewardship Council which aim to bring investors together to discuss and share ideas around the management of climate change.

Accounting 4 sustainability (“A4S”) asset owners network

Asset Owners Network (accountingforsustainability.org)

Description & Objectives

The group aims to drive a shift from short term financial outcomes to a longer term sustainable global economy through inspiring financial professionals, investors and policy makers. At the centre of its ethos, the group target three core aims:

- Inspire financial leaders to adopt a sustainable business model
- Provide an approach to financial decision making, incorporating opportunities and risks posed by ESG factors
- Mobilising the global finance and accounting community

Specifically, the A4S’s Asset Owners Network, formed in early 2018, consists of a number of assets owners such as Chairs of pension funds, pooling partners and investment committees across private and public sectors. Currently, the assets under management by the group represents c$450 billion of assets. As a member of this group, it is expected that asset owners will collectively discuss key climate change and ESG considerations in a confidential setting. These discussions will be used to help shape measurable actions which are coupled with helping deliver a sustainable financial system and support work to the Paris Agreement and broader UN Sustainable Development Goals.

Requirements

- Sign up to statement of support that includes making net zero commitment, being an active shareholder across all relevant assets and collaboration with peers.
- Attend and contribute to Network meetings, sharing the Trustee’s experiences, knowledge, ideas and best practice examples.
- Support the transition from dialogue to action by contributing to the formation and delivery of the Network’s priority focus areas and project plan.
- Make an individual commitment to take action in one or more of the Network’s priority focus areas.
- Report back to the Network on action taken and outcomes achieved.

Benefits of joining

- Learning from other trustee boards and participants in the pension industry.
- Influence change on a larger scale
- Contribution to the delivery of a sustainable financial system

Occupational Pensions Stewardship Council

Occupational Pensions Stewardship Council - GOV.UK (www.gov.uk)

Description & Objectives

The Council aims to promote and facilitate high standards of stewardship of pensions assets. It provides schemes with a forum for sharing experience, best practice and research, and providing practical support.

Participating members can opt-in to various work streams on the Council's annual Work Plan. This includes areas like collaboration with regulators and reporting bodies, targeted engagement with asset managers, engagement with the UK Stewardship Code, improvements in regulatory stewardship reporting and sharing good practice to improve policies.

Appendix D – Glossary and definitions

Asset Backed Securities

A financial instrument that is collateralised by a pool of underlying assets. The underlying assets are usually income-generating such as auto loans, mortgage loans, etc.

Asset Class

An asset class is a group of investments that typically share a lot of the same characteristics, which may be subject to the same rules and regulations. For example, equities, bonds and property are three well-known asset classes.

AUM

Assets Under Management – i.e. the amount of money invested and being managed.

Auto ABS

A type of asset backed security, where the underlying collateral is made up of auto loans.

Carbon pricing

Carbon pricing assesses and quantifies the external costs of greenhouse gas emissions – for example, damage to crops or loss of property from flooding and sea level rises – and relays these costs back to the source of the emissions through a price, usually in the form of a price on the carbon dioxide (CO_2) emitted.

CLO

Collateralised loan obligations – a type of asset backed security, where underlying collateral is made up of bank loans.

Covenant

If the Scheme were to have a funding shortfall, i.e. if the Scheme's assets were lower than the value of the liabilities on the technical provisions basis, the Trustee would look to the Company to make the necessary additional contributions to restore full funding.

The legal obligation on the Company to provide these contributions and remove the shortfall, and its ability to satisfy these obligations, is known as the Company covenant.

Engagement

Engagement with respect to assets of the Scheme means communication with a person or organisation, typically via investment managers, with the aim of driving change.

ESG

ESG refers to Environmental, Social and Governance issues, collectively a series of risk factors that could impact the value or future performance of an investment. Particular issues covered by ESG factors include:

- Environment: resource use, pollution, waste
- Social: human rights, workforce diversity and employee welfare
- Governance: management structure, business ethics and executive compensation

Fiduciary responsibilities

The responsibilities of the committee to act in the best interests of the Scheme's beneficiaries (i.e. Scheme members).

Greenhouse Gases (GHG)
Greenhouse gases are gases in the Earth's atmosphere that are capable of absorbing infrared radiation and thereby trap and hold heat in the atmosphere. The main greenhouse gases are:

- water vapour
- carbon dioxide (CO_2)
- methane (CH_4)
- nitrous oxide (N_2O)

Macroeconomic
The area of economics concerning with large-scale (e.g. national or international) or general economic factors, such as interest rates and inflation.

Mandate
An instruction to an asset manager about how the Scheme's money may be invested.

Net Zero
Net zero refers to the amount of all GHG (which includes but is not limited to carbon dioxide) being emitted being equal to those removed. It typically also includes reduction of total emissions as much as possible, with only the remaining unavoidable emissions being offset.

Paris Agreement
The Paris Agreement on climate change is a 2015 global accord seeking to keep the rise in global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the increase to 1.5°C.

Responsible Investment
The integration of ESG factors into investment decision-making and asset stewardship practices.

RMBS
Residential mortgage-backed securities – a type of asset backed security

Scope 1 Emissions
All Direct Emissions from the activities of an organisation or under their control. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.

Scope 2 Emissions
Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.

Scope 3 Emissions
All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement, waste and water.

Stewardship
Stewardship of assets is a tool that can shape corporate behaviour using methods including engagement and voting.

Systemic risk

Refers to a risk that impacts the entire market, not just a particular stock or industry.

Voting

When investors are shareholders in a company via the investments they hold, this typically provides them the opportunity to vote on company matters at meetings such as an Annual General Meeting (AGM). Issues that can be voted on include climate change plans, executive pay, the election of board directors, and much more. However, this opportunity only arises with certain types of assets, such as equities. Additionally, a lot of voting is undertaken on behalf of pension schemes by investment managers, due to pension schemes typically being one of many investors in a fund which then invests in companies.