Reed Elsevier Pension Scheme – Disclosures in respect of Taskforce on Climate-related Financial Disclosures for the Scheme year 2022/23

Introduction

This report sets out our approach as the Trustee of the Reed Elsevier Pension Scheme ("the Scheme") to assessing, monitoring and mitigating climate-related risks in the context of the Trustees' broader regulatory and fiduciary responsibilities to its members.

We, the Trustee, aspire to take a leading approach to all aspects of responsible investment including climate change. RELX PLC's ("the Sponsor") commitment to environmental, social and governance issues and specifically climate change is a key driver to this approach.

Climate Change

We recognise that climate change is a significant systemic risk and it may have a material adverse impact on the Scheme. The risks posed by climate change are embedded into our overall risk assessment, management and investment strategy processes as well as in day-to-day implementation of the investment strategy. The Scheme's investment strategy demonstrated good resilience to climate scenarios over various time horizons, mainly due to downside risk protection from the low allocation to more volatile assets such as equities and high levels of inflation and interest rate hedging. Due to a company's capital structure, equities are expected to be more exposed to volatility than debt that may be encountered through climate-change, for example due to shortage of materials. In addition, the Scheme has a high allocation to UK government bonds and hence policy changes through the Scheme's hedging assets, and whilst this may cause volatility, ultimately we expect the UK government to work towards net zero targets and make positive changes towards tackling climate change. We do, however, recognise the limitations of climate scenario modelling today and will revisit this periodically as well as look to enhance this risk assessment approach through more refined analysis of the investments and explore more extreme scenarios.

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 an important part of the mitigation of climate risk will be reducing the greenhouse gas emissions of the Scheme's assets over time. During the year we set our aspiration for the Scheme to have Net Zero emissions with regard to the investment strategy. The focus of the 2023/2024 Scheme year will be to establish a Net Zero journey plan and define interim objectives and timescales. We recognise that a commitment to Net Zero for the investment strategy will rely on the concerted efforts of governments and regulators globally.

With a global transition to a low carbon economy, we also recognise the potential investment opportunities that will arise. As important as assessing the risks posed by climate change, we will equally assess investment opportunities where appropriate for the Scheme's objectives.

An essential part of mitigating climate change risk, setting a Net Zero target and assessing investment opportunities is improved transparency on climate-related data and reporting and this leading to improved investment decisions.

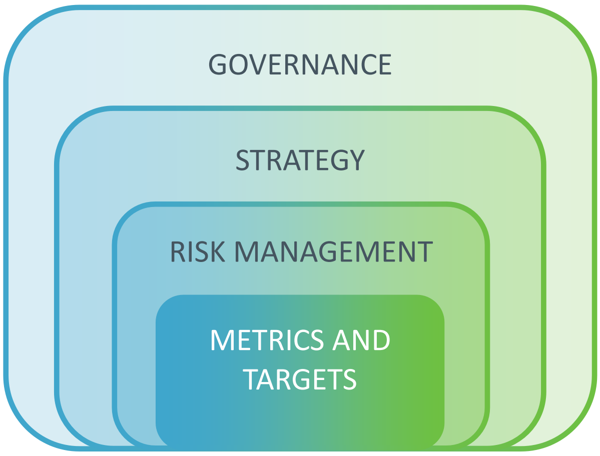
The Taskforce on Climate-related Financial Disclosures

We are, therefore, supportive of any initiative that helps improve disclosures and enhances transparency. The Taskforce on Climate-related Financial Disclosures ("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.

This is our first disclosure to the Taskforce on Climate-related Financial Disclosures ("TCFD") and this statement is expected 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 our approach against the four pillars set out by the TCFD:



1. **Governance**: The Scheme's governance around climate-related risks and opportunities.
2. **Strategy**: The actual and potential impacts of climate-related risks and opportunities on the Scheme's investment strategy, and financial planning.
3. **Risk management**: The processes used by the Trustee to identify, assess, and manage climate-related risks for the Scheme.
4. **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 expect our underlying investment managers to be aligned with TCFD. We will continue to monitor this through the regular reporting we receive.

We appreciate that the subject matter included within this report is complex and there are a number of technical terms and concepts that members may be reading about for the first time within this report. As such, we have included a Glossary as an appendix I to this report which provides further explanation and detail on these terms.

Summary of this year's report

Over the past year we have been working hard to understand and, where possible, measure the climate risks within the Scheme's investments and have begun 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. During the year we set our aspiration for the Scheme to have Net Zero emissions with regard to the investment strategy. The focus of the 2023/2024 Scheme year will be to establish a Net Zero journey plan, define interim objectives and timescales.

To progress our collaborative engagement journey and build our knowledge and expertise we have also started our application process to the Institutional Investors Group on Climate Change (IIGCC) and look forward to participating in this leadership group, More information on this can be found [here]

The key highlights and findings of this TCFD report, which covers the Scheme year to 31 March 2023, are set out below.

Governance

We (the Trustee) have the 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 RELX Pensions Investment Office (RPIO), our Responsible Investment Sub-Group (RIS-G), Scheme Investment and Funding Committee (SIFC), 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.

As set out in the following section, the RIS-G, RPIO and a subset of the SIFC have met regularly with the Scheme's investment managers over the past year and are using these regular meetings to carry out ongoing reviews of each manager's progress with reference to the Scheme's RI policy. We consider climate change to be a key risk to the Scheme and so have embedded climate-related issues across our strategic decision-making and other governance processes. There are several parties that feed into our approach to climate change by way of advice, supporting implementation, training, and other means. In particular, our Investment Advisers provide an in-depth review of our investment managers' responsible investment capabilities annually (in the first half of each Scheme year). As part of this report there is a particular focus on climate change and Net Zero and this will continue as a key area of focus in each review going forward. This review informed the core of our discussions with managers over the year.

To enhance our stewardship activity, we have finalised a formal engagement policy for the Scheme which will inform our engagement priorities and processes with investment managers in the future.

Strategy and risk management

During the year, we have worked to understand the climate risks and opportunities within the Scheme at two levels:

1. **Assessing each investment mandate in turn -** Our focus has been to work closely with our investment managers to understand the climate risks within our investment mandates. With support from our Investment Advisers, we have worked with each of our managers to understand the processes they use to identify and manage climate risks. A summary of the risks identified to date is set out on page 11 in this report. A key issue that we are currently focussing on is the low levels of climate-specific data across some of our investment mandates, which is vital for assessing and quantifying climate risks.
2. **Assessing climate risk within the overall investment and funding strategy** – We have carried out scenario analysis, to test the resilience of the Scheme's funding strategy under a range of possible climate scenarios. This analysis provided us with comfort that our current strategy has a high degree of

resilience to climate change. In addition, we have worked with the Scheme's Sponsor to understand the Sponsor's own climate targets and actions. This has provided us with further comfort regarding the resilience of the Scheme's sponsor covenant to climate change risk, and any impact that climate change could have on the Sponsor's ability support the Scheme.

During the year we have incorporated climate risks into our decision-making alongside the other risks factors we consider when assessing our strategy. We have concluded that at present, there is uncertainty on which climate scenario will materialise and the extent of the impact on asset class returns and volatilities. This analysis has illustrated that the appropriateness of the Scheme's journey plan is not expected to be undermined under alternative climate scenarios. To that end, this suggests a degree of resilience in the overall strategy to climate change risk.

However, we also recognise the limitations of climate scenario modelling. Our approach will be to develop the resilience of the investment strategy through a range of measures including capital allocation and engagement activity. Data availability and quality will also need to improve for a significant proportion of the assets in order to fully understand the position. Supplementing this will be further consideration of more extreme climate scenarios which we aim to incorporate during 2023/24.

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. We have selected a number of climate metrics by which to measure the Scheme's position and exposure to climate risks and opportunities. We are required under TCFD to select at least four metrics across a number of metric categories. We have selected five metrics to measure, which are Total GHG emissions, Weighted Average Carbon Intensity (WACI), carbon footprint, data quality and availability, and portfolio alignment. This is more than the requirements, and it enables us to build up a clearer picture of the Scheme's position with respect to climate-related issues.

As data availability and quality is essential in order to fully assess resilience of the investment strategy, we have set data quality improvement as the metric against which we have set a formal target.

Next steps:

Over 2023 and 2024 we will carry out an in-depth investment strategy review including Net Zero journey planning.

Longer term, we will regularly review our approach to climate change and thus the policies and processes we have in place to embed climate-related issues across the Scheme's management. We will continue to develop our risk management approach to climate-related risks and opportunities and include further detail on specific climate-related risks within our risk register. We will undertake annual climate metric reporting against the chosen metrics for the Scheme and use this to both monitor performance against our targets as well as to aid in our investment decision-making as appropriate.

We will provide an update on these steps within our next report. The following pages provide detail on our climate risk disclosures for the Scheme year ended March 2023.

Governance

Describe the board's oversight of climate-related risks and opportunities.

We are aware of climate-change and its potential impact not just on the environment but on pension schemes and member outcomes. We have acknowledged this by building climate risk and opportunities, as well as other climate-related issues such as policy directions, into our ongoing training, beliefs and wider governance policies and processes.

Trustee training

We have undertaken relevant training on climate change and broader Responsible Investment topics both prior to and during the Scheme year to 31 March 2023. Notably, we received training on an Overview of TCFD requirements and Climate Metrics and Targets.

Further training will be undertaken as required in order to maintain our knowledge and understanding of the topic and how it applies to the Scheme. The training schedule can be found in the Appendix.

Responsible Investment Policy

We maintain a Responsible Investment (RI) Policy which sets out the Trustee's RI beliefs and the approach which will be taken within the Scheme management to implement those beliefs. This policy specifically outlines our approach to climate-related issues. We receive regular training, guided by the RIS-G, to ensure climate risks and opportunities are understood. A full schedule of the training activity carried out over the year is set out in Appendix IV. Along with a detailed training schedule, we have made available a comprehensive training pack for all Trustees, RIS-G and SIFC members which provides easily accessible training resources on climate-related investment topics.

Further actions taken

We have also in the process of becoming members of to the Institutional Investors Group on Climate Change (IIGCC). Participating in this leadership group will help build our knowledge and expertise with regard to climate change risk and opportunities and help shape our Net Zero ambition. Further detail on the benefits of joining this industry group is set out in Appendix III.

In addition, we have finalised an engagement policy to more clearly define our stewardship priorities and actions, which will enhance our current approach.

Discussion of climate risks and opportunities

Climate-related risks and opportunities are discussed on an ongoing basis by the RIS-G. Governance around opportunities is limited to the Scheme's active managers. Whilst there are no managers with specific objectives to seek climate-related opportunities, we understand that our active managers are seeking to exploit mispricing/growth opportunities which will also likely cover climate-related opportunities. Climate risk, with the potential impact, likelihood and mitigations, is on the Scheme's risk register. The RIS-G has individual members with experience in the Task Force on Climate-Related Financial Disclosures (TCFD) and has developed a detailed TCFD project plan. Input from the Sponsor is considered along with an experienced in-house investment team. Climate-related risks and opportunities were incorporated into the 2021 investment strategy review via climate scenario modelling and analysis alongside the 2021 Actuarial Valuation.

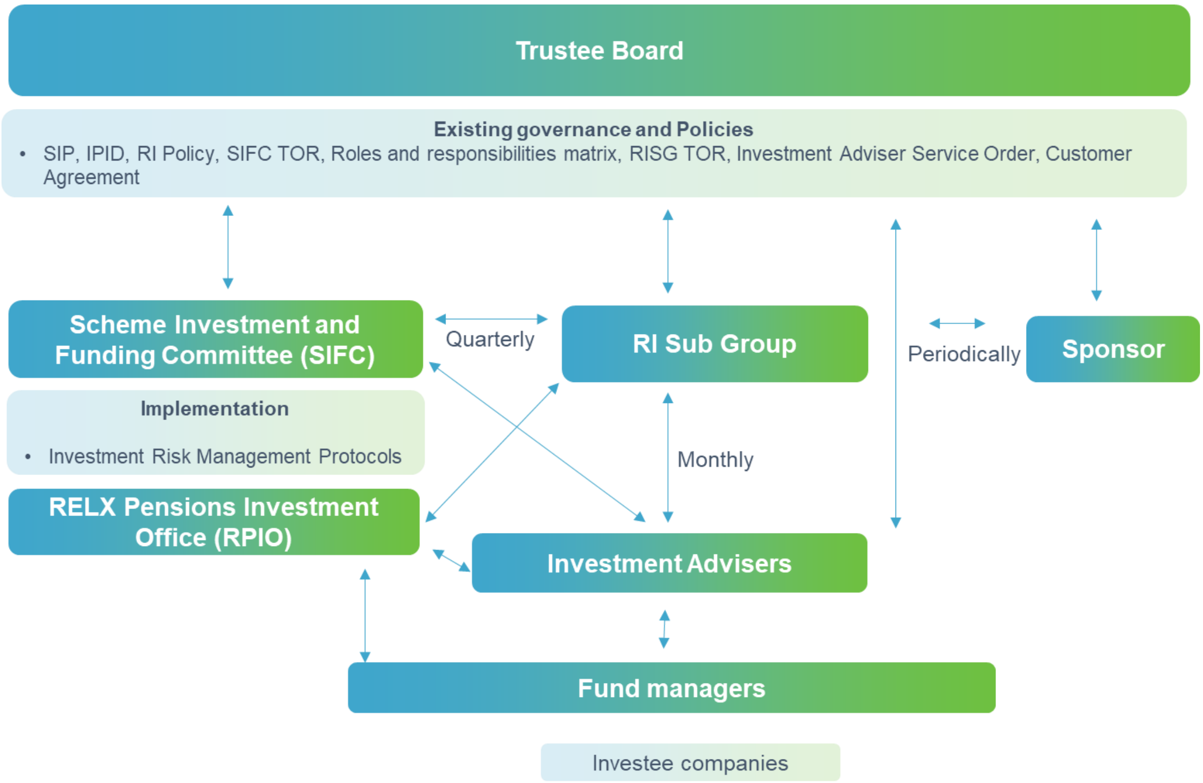
Delegation of responsibilities

In fulfilling our duties, we delegate certain responsibilities and activities relating to the assessment and management of climate-related risks and opportunities to various parties and rely on our Advisers to provide advice and education on the areas to be considered. The Scheme's Sponsor, RELX PLC, has its own corporate RI Policy and we maintain 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 Scheme and Sponsor's approach to climate-related issues where possible.

We oversee the Scheme Advisers and managers by challenging and reviewing advice and reporting at SIFC and Trustee Board meetings. Investment Advisers also have set objectives in place, and we undertake an annual review of performance against these objectives.

Governance structure

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

Trustee

The Trustee is accountable for the investment strategy and implementation of the Schemes' assets, including the integration of responsible investment considerations.

The Trustee also has responsibility to ensure appropriate levels of resource to complete all RI associated requirements, including TCFD reporting. To support with TCFD reporting, the Trustee has agreed to deliver TCFD compliance through the RIS-G to ensure robust compliance in this area. We annually review our own role and responsibilities as well as those of the service providers to the Scheme.

Scheme Investment and Funding Committee

The SIFC is responsible for proposing an investment strategy to the Trustee that takes into consideration prevailing risks, including risks associated with responsible investment, such as ESG factors and climate risk. The Trustee has delegated implementation of the Scheme's investment policies, including its RI policy, to the SIFC. The details of that delegation are set out in the terms of reference for the SIFC.

RELX Pensions Investment Office

The RPIO meets with investment managers at least once annually, creating a link between the investment managers and the SIFC, liaising with and monitoring managers to ensure the Trustee's investment policies and strategic decisions are effectively implemented. The RPIO is responsible for implementing the investment strategy set by the Trustee and SIFC, including consideration of any responsible investment implications arising within the implementation with help from the Scheme's Investment Advisers.

Over the year the RPIO met 16 managers and the Scheme's RI policy as well as the Investment Adviser's in-depth RI review of the managers formed part of these discussions.

Responsible Investment Sub-Group

The RIS-G was established to support the SIFC and the Trustee with:

1. Responsible investment matters, in particular climate change
2. Ensuring TCFD requirements are met.

The RIS-G has no delegated authority from the SIFC or the Trustee. One key responsibility of the RIS-G is to report quarterly, or as appropriate, to the SIFC/Trustee on activities undertaken. The RIS-G will also facilitate training as required for the SIFC and the Trustee.

Over the year, the RIS-G and the Investment Adviser met on a monthly basis primarily focussing on TCFD preparation.

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 Advisers

The Scheme's Investment Advisers are responsible for assisting the RIS-G, SIFC and Trustee to ensure climate-related risks and opportunities are embedded into all investment decisions and implementation of these decisions. They provide advice and training to the RIS-G, the SIFC 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, analysis of investment mandates 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.

Investment Managers

The Scheme's investment managers are expected to integrate ESG considerations, including climate change into their management of each of the Scheme's mandates. The investment managers identify climate-related risks through analysis of their individual holdings and where appropriate, through carrying out scenario analysis for their portfolios. There are a number of responsibilities delegated to the investment managers of the Scheme's assets. The investment managers are responsible for managing the assets of the Scheme against objectives and constraints agreed for each mandate. The investment managers are expected to monitor and regularly report on their own RI policies and how these policies have been implemented within each mandate. The Scheme's RI policy is communicated to the investment managers. Although certain actions are delegated to the investment managers, overall responsibility for setting RI policy remains with the Trustee.

During the appointment of any new manager, the SIFC assesses each manager's RI capabilities, with assistance from their Investment Advisers, to ensure that the manager's approach is aligned with our RI Policy. Once appointed, the SIFC monitors the strategy and performance of all managers regularly. The SIFC focuses on assessing each manager's RI processes and policy and challenges managers on any issues identified on an annual basis. The SIFC maintains a record which is updated based on information provided by and discussions held with the investment managers. This document records the SIFC's and Investment Adviser's views on each manager's RI Policy and integration of ESG considerations, with a particular focus now on climate change, into the investment process and sets out the approach and actions the SIFC plan to take to address any risks identified. This is shared with the Trustee and is updated annually.

Any issues identified and the outcome of the Scheme's monitoring is fed back to us at regular Board meetings.

Sponsor

The Scheme's Sponsor, RELX PLC, is responsible for the ongoing funding of the Scheme. We consult RELX PLC in the development of our strategy, including any high-level commitments made by the Trustee that could have a direct or indirect impact on the funding of the Scheme or the reputation of the Sponsor. As a start, we consider the Sponsor's policy on ESG when setting the Scheme's RI policy and will aim to align our RI ambitions with those of the Company where possible and appropriate.

In June 2022 RELX PLC presented to the RIS-G to explain how RELX PLC approaches responsible investment with a particular focus on climate change.

Strategy

Describe the climate-related risks and opportunities the Trustees have identified over the short, medium, and long- term.

When considering the impact on the Scheme, climate risk can be defined as the potential impact on future financial returns that may arise from climate change. Climate risk is typically split into two parts – transition risk and physical risk. These risks may vary in likelihood and intensity over different time horizons and will depend on how quickly and well the world transitions to a low-carbon economy. This is set out in the diagram below:

Aggressive mitigation — Business as usual

Transition to a low carbon economy - transition risks dominate.

- Policy changes, e.g., *carbon pricing*, seek to create the changes needed in society.
- Technology development, e.g., renewable energy, and adoption enable the changes to be adopted.
- Corporate litigation risk

Physical risks and impacts dominate.

- Chronic changes, e.g., sea level rise, agricultural systems impact economic and social systems.
- Acute changes, e.g., storms, wildfires create damage and give rise to costs of adaptation and reconstruction.

Scheme time horizons

The Scheme is a long-term investor. Given the nature of climate change and the time-horizons over which impacts of climate change may be felt, it can be expected that climate risk will impact the Scheme in various ways. However, it is important first to define the different time-horizons which we may consider in order to clarify whether the different risks and opportunities arising from climate change may impact the Scheme in the short-, medium- or long- term.

We have defined what these time-horizons mean in more detail as set out below:

Time Horizon	Definition
Short term	Rolling five-year periods, this covers the next two Actuarial Valuation cycles (i.e., to 2027). The Trustee will take actions to understand and manage climate-related risks and opportunities over this period, recognising this is a fast-developing area and there may be a need to respond to new data or changes to regulation.
Medium term	2032 (10 years), in line with the Scheme's journey plan to low dependency in which time it is expected that the Scheme will be able to materially de-risk the investment portfolio. There is evidence that significant changes in the global economy are needed in this time-period to limit global warming to 1.5 degrees celsius above pre-industrial levels
Long term	2042 (20 years), beyond achieving low dependency, the Scheme will continue to have a low-risk investment strategy broadly similar to what an insurer might use to back an annuity book. 20 years broadly aligns with the duration of the Scheme's liabilities*. This time-period recognises the Sponsor's greenhouse gas emissions pledge to become net-zero no later than 2040.

** Note that Duration varies depending on funding basis being used. LDI benchmark analysis as at 30 September 2021, duration was calculated at 21.6 years on a gilts+0% p.a. discount rate basis.*

The suitable time horizons for the Scheme may change and we will review the appropriate time horizons alongside a material review of the investment strategy. The Trustee believes more focus on the short to medium term is warranted.

Climate-related risks over the Scheme's time horizons

We believe that transition risks are expected to feature more prominently over shorter-time periods. This view is predominately 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 – however, the balance between the transition risks and physical risks experienced will depend on the approach taken to climate change and the speed with which the world transitions to a low-carbon economy. Both transition and physical climate risks will impact the Scheme during its lifetime.

Climate risks may be identified, assessed, and monitored in a number of different ways. These approaches include looking at climate risks and opportunities in detail for each asset in which the Scheme invests. We consider climate risks at both an overall strategy level as well as with respect to each asset in which the Scheme is invested. We then engage with the individual managers on these assets and improvements that can be made. We maintain a climate risk dashboard which records the risks and opportunities identified through these processes that have an effect on its funding strategy 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. We note that climate-related risks and opportunities will evolve over time as more information and new investment products come to the fore.

Investment Mandates

With respect to the Scheme's investments, we typically refer to investment mandates. An investment mandate is an instruction to an asset manager on how the Scheme's money may be invested. An individual mandate is set for each investment fund that the Scheme has across the Scheme's investment managers. Investment mandates that the Scheme holds can be characterised in a number of ways, one way being between 'passive' and 'active' mandates.

Passive mandates are funds that typically track an index (or benchmark), both in terms of stock selection as well as expected return. In passive mandates, we recognise that the choice of benchmark dictates the assets held by the investment manager and that the manager has minimal discretion to take account of factors that may be deemed to be financially material. We accept that the role of the passive manager is to deliver returns in line with the market and believe this approach is in line with the basis on which their current strategy has been set.

Active mandates have a more 'hands-on' approach, whereby a portfolio manager makes choices on the stock selection of the fund in order to try and exceed the market return. In active mandates, we recognise that the manager has freedom to exercise discretion as to the choice of assets held. We expect managers of active mandates to take into account all financially material factors in the selection of assets within their portfolios and to be able to demonstrate their approach when challenged.

Climate-related risks and opportunities across the Scheme's mandates

The table below sets out a summary of the key risks we currently identified and monitor, for each of the asset classes in which the Scheme invests.

Climate Risks by Asset class

Mandate	Key Risk Identified	Impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
Growth					
Equity	• Passive market cap, risks and opportunities will be very broad ranging as well as sector and region-specific. • Transition risk in the form of exposure to carbon price, policy change etc will be high. • Physical risk from broad geographic exposure likely high but diversified.				Passive market cap, risks and opportunities will be very broad ranging as well as sector and region specific.
Real					
Property	• Some properties are exposed to high climate risk - exposures to precipitation changes, sea level rise and heat stress, as well as acute issues like flood risks, extreme weather events and wildfires. • Potential new regulations on minimum efficiency levels. Introduction of UK sustainable disclosure regulation 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. A combination of resource efficiency, reduced consumption, market and resilience factors will collectively lead to higher rents, higher valuations and higher resilience going forward through the cycle.
Infrastructure	• Limitations on the availability and quality of emissions data. However, this is being collected directly on their assets and improving each year.				Renewable investment opportunities.

Mandate	Key Risk Identified	Impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
	• Exposure to sectors which typically have climate risk and opportunities exposures including, upstream energy, transportation, power and utilities, renewables and energy efficiency, timber and metals & mining.				Invest and undertake in trials to demonstrate the feasibility of technologies.
Ground Leases	• Exposure to climate risks include extreme weather events and wildfires. • Not all managers are able to assess the climate risks sufficiently over all time periods.				Improvements to portfolio assets. Engagement with tenants.
Nominal					
Multi-Asset Credit	• Manager has modelled 52% of assets in its portfolio. • Significant and immediate policy changes to ensure Paris Agreement Alignment by 2050. • Business as usual continues until c2030-2035 followed by a widespread rapid implementation of policy changes to achieve Paris Agreement Alignment by 2050, resulting in widespread systemic economic impacts to GDP. • Risk that sovereign assets do not meet their climate targets.				Potential capital allocation changes towards renewable energy, and away from fossil fuel transport solutions. Allocations to Green bonds.
Buy & Maintain Credit (to be funded)	• Limited risk in shorter term. • Medium-term companies will need to adapt to technological change. • Ensure emissions stay within global budgets for limiting global warming to well-below 2°C, carbon prices will need to continue rising over the long term.				Thematic focus on constraints will be required to protect returns: focusing on three areas to evaluate opportunities and produce targeted investment strategies: geological scarcity, technological innovation, and regulatory change.

Mandate	Key Risk Identified	Impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
Direct Lending	• Extreme weather events may impact some industrial production companies given locations. • 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.				Mechanisms to reduce interest on payments if certain climate metrics improve. Investments in renewable energy.
Protection					
ABS	• Limited data due to lack of transparency and complexity in measuring. • Some drivers of transition and physical risk are qualitatively assessed.				Investment opportunities include collateral pools backed by solar panels or efficient autos or more energy-efficient homes. Engaging with issuers to better understand and to map carbon output for underlying collateral pools. Engage with regulators, asset managers and originators to agree standardisation of data metrics.
LDI Portfolio	• Climate change impact on government borrowing and expenditures. • Likely to be limited risk in shorter term.				

Mandate	Key Risk Identified	Impact (RAG)			Key opportunities identified
		Short Term	Medium Term	Long Term	
	• Longer term the fallout of climate change and impact to governments would need to be considered.				

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

Climate Risks – Scheme Strategy

	Identified Risks	Impact (RAG)		
		Short Term	Medium Term	Long Term
Investment Strategy	Overall strategy identified as resilient to climate risks as part of scenario analysis. A key risk is the currently low levels of climate data provided by our investment managers.			
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 Sponsor not meeting climate risk targets which may impact profitability and strength of covenant.			

At the total Scheme and funding strategy level, initial focus has been on identifying and minimising risks. Opportunities will also be considered as we review each investment mandate and as we implement the agreed changes to reduce overall risk within the Scheme's investment strategy.

Describe the impact of climate-related risks and opportunities on the investment and funding strategy

The systemic nature of climate change risk has the potential to reduce returns across all asset classes and will have a macro-economic impact that could affect the entire Scheme. Equally, however, the need to transition to a low carbon economy and the innovation which that will require presents several potential investment opportunities.

Over the past two years we have dedicated considerable time and resource to ensuring that climate risk and opportunities are appropriately embedded within our investment processes. This has largely been in the form of engaging with the Scheme's investment managers with input from our Investment Advisers and when setting investment strategy, considering the resilience of our strategy to climate change risks. For example:

1. The RPIO has held meetings with each of the Scheme's investment managers to understand how that manager integrates ESG into their investment process in line with the expectations set out in the Scheme's RI policy.
2. As set out in the Summary section of this report, we have agreed an overarching aim for the Scheme's assets to achieve Net Zero greenhouse gas emissions for all Scheme assets. Our 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. This aim will act as a guide as we set targets and take action in relation to each of our underlying investment mandates.
3. When assessing de-risking actions to be taken for the Scheme, we have considered the climate risks and ESG characteristics when selecting which investment portfolios to increase/reduce exposure to. For example, as part of a recent exercise to enhance the Scheme's Protection portfolio, the Trustees agreed to invest in a climate-focussed buy and maintain corporate bond mandate in order to more directly address climate risks and opportunities with the investment strategy.
4. We also considered climate scenario analysis in our review of investment strategy following the most recent Actuarial Valuation (covered further in the section below).

By including specific references to ESG and climate-related risks within the objectives of our Investment Advisers, we receive frequent training on the management of climate related risks and opportunities.

Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, include a 2°C or lower scenario.

To test the resilience of the Scheme's investment strategy to climate risk, we carried out climate scenario analysis in conjunction with the 2021 Actuarial Valuation. Detail on this is set out below. The investment strategy was then reviewed following the market volatility in late 2022 and we agreed, with advice from the Investment Advisers, that the climate implications for the investment strategy would not be fundamentally different to those established during the 2021 review. A more in-depth investment strategy review is planned for 2023 and will include Net Zero strategy planning.

The scenario analysis was carried out using a model produced by the Scheme's Investment Advisers. The scenario analysis considered the impact on the Scheme's funding position under three scenarios, which differ by how quickly and decisively the world responds (or fails to respond) to climate change. 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 table below we summarise these scenarios. 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.

Climate Scenarios Considered

Green Revolution	Delayed Transition	Failed Transition
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

Climate Scenarios – Conclusions

The future path of the Scheme's probability of success and downside risk will depend on how climate change and the transition to a low carbon economy plays out in practice, as well as the pace of the Scheme's de-risking program. Currently, there is a great deal of uncertainty on which broad climate scenario will materialise and the extent of the impact on asset class returns and volatilities. This analysis affirms that the appropriateness of the Scheme's journey plan is not expected to be undermined under alternative climate scenarios. To that end, this suggests a degree of resilience in the overall strategy to climate change risk.

However, this analysis is ‘top down’ rather than ‘bottom up’ and does not consider the positioning of the Scheme’s investment strategy beyond broad asset allocation. A degree of dispersion across the performance of funds and individual assets might be expected within asset classes during a period of climate transition induced market stress. In that light, a complementary lens to further consider resilience to climate risk would be to perform a bottom-up analysis to look at the carbon exposure and other metrics of particular funds and individual assets held. We will investigate this further in 2023.

How resilient is the Scheme’s covenant to climate-change risks

The Scheme's covenant advisers have performed an exercise to assess the impact of climate change on the contributions that will be paid by the Sponsor to meet the Scheme’s funding requirements and to assess the resilience of the employer covenant under climate-related scenarios. This was based on publicly available information as well as data provided by management, including a review of the RELX PLC’s 2022 TCFD statement and Corporate Responsibility report and holding a meeting with RELX PLC's Global Head of ESG and Corporate Responsibility.

RELX PLC has a low exposure to climate-related risks. Although energy and associated carbon costs may increase substantially, the impact on financial results is likely to remain limited, with energy only representing c.1% of the RELX PLC’s current cost base. Based on this exercise, the Scheme's covenant advisers have assessed the physical and transition risks and opportunities assessed by the RELX PLC in its own TCFD statements as having low impact on the sponsor covenant provided to the Scheme. The additional cost of meeting the relevant transition and physical risks are not expected to have a material financial impact on the business.

The Scheme's covenant advisers have not been provided with any quantification of the impact of RELX PLC's modelled climate change scenarios upon the RELX PLC’s financials, but given the nature of RELX PLC’s operations and its limited exposure to climate change and associated risks, have not seen anything to suggest that these would have a material impact on the RELX PLC’s financials and therefore upon the Scheme's employer covenant.

Risk management

Describe the processes for *identifying and assessing* climate-related risks.

As part of our responsibility for the setting and implementation of the Scheme's investment strategy, we must ensure that ESG-related risks, including climate change, are identified, assessed, and effectively managed. Therefore, it is crucial that the 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 previously in the Governance section of this report. Below, where we have referred to ESG risks more broadly, this will include particular consideration of climate change risks which we consider to be a paramount risk to the Scheme in terms of both likelihood and impact.

ESG and climate-related risks can be identified by various parties including the RIS-G, SIFC, Trustee, Investment Advisers or the Scheme's investment managers as part of the ongoing management of the Scheme. ESG risks are identified as part of the following processes:

1. **Investment strategy–** ESG risks are considered 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. These reviews cover the extent to which social, environmental and governance considerations are considered in the selection, retention and realisation of investments. The Scheme's Investment Advisers are expected to integrate ESG considerations into their strategy advice and to highlight any risks that are included within any potential investment strategy. Climate scenario analysis now forms a key element of our investment strategy reviews and we will look to build this approach through time.
2. **Valuations and covenant reviews –** We will 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 Sponsor covenant, we will take into account the ESG risks to the Sponsor.
3. **Considering asset classes –** When assessing new asset classes, potential ESG risks are assessed and discussed as part of the training provided to us. Key ESG risks are taken into account when comparing alternative options. Climate change risk and opportunity has been a particular area of focus when considering asset class and mandate decisions during the year.
4. **Selection of investment managers –** When appointing a new investment manager, the Scheme's Investment Adviser provides information and its view on each manager's ESG policy and capabilities with a specific assessment of their capabilities with respect to climate change risk and opportunity. Each manager is also asked to provide information regarding their own ESG risk management processes as part of the selection process along with their assessment of exposure to climate risk and opportunity within the mandate. This information allows us to identify potential risks when comparing potential providers. The Scheme's RI policy also requires Investment Managers to engage on ESG issues, rather than divest. We have recently set out a more detailed engagement policy and will share this with each of our investment managers.
5. **Individual mandates and investments –** We also undertake risk analysis at the individual asset level and have adopted enhanced management of ESG issues and climate change, including new potential investment products. In this instance, the Scheme's investment managers are responsible for the identification and assessment of ESG, including climate-related risks and opportunities should be identified and disclosed to us in the following ways:
    1. As part of their regular reporting
    2. During their presentations when meeting with the Trustee and/or SIFC.

3. As part of their more in-depth responsible investment meetings with the RPIO.
4. By providing climate metric data in line with the TCFD requirements; and
5. By providing any relevant scenario analysis.

We are communicating with 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 RIS-G, SIFC or Trustee and are listed on the Scheme's climate risk dashboard to be monitored on an ongoing basis.

We note that evaluation of ESG, including climate-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. We actively engage with all managers to promote improvement in this area.

Describe the processes for *managing* climate-related risks.

Prioritising risks and agreeing actions

We maintain a comprehensive risk register covering investment, funding and covenant risks to the Scheme. A separate climate risk dashboard has also been created to provide a more detailed record of climate-specific risks and opportunities within each of the Scheme's investments and is used to prioritise climate risks for the broader risk register. A summary of this was shown under the Strategy section of this report.

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

Risks are prioritised based on the size, scope and materiality of the risk event. This includes rating the likelihood and impact of the risk event to produce a score reflecting the threat that the risk event poses to the Scheme, then making a decision on the appropriate action (mitigation, control or acceptance) based on this score and available courses of action. Rating 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. Risks that are deemed to be high in likelihood, impact, or both after allowing for mitigating controls are deemed to take priority for future action.

We recognise climate change risk as a paramount risk for the Scheme both in terms of likelihood and impact.

Expectations of investment managers

Expectations of the 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. These documents are shared with the Scheme's investment managers that are asked to report regularly on how their strategy is aligned with the Trustee's intentions and to discuss with the Trustee and SIFC any investments which do not comply with these policies. ESG activities of all managers are monitored through regular reporting and meetings, as set out above. This will be enhanced in 2023 with our new engagement policy.

In summary, all investment managers are expected to:

- be aware of the investment risks and opportunities associated with climate change.
- incorporate climate considerations into the investment decision-making practices and processes.

- monitor and review companies and assets in relation to their approach to climate change.

More recently we have developed an engagement policy which sets out more detail on our approach to engagement and our expectations of our investment managers. This will be shared with all our investment managers once finalised.

Stewardship, engagement and voting

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

As part of the annual implementation statement, we receive a summary report from the Investment Adviser on engagement and voting activities of the Scheme's investment managers. We use the annual report to inform our monitoring of investment manager stewardship practices. Where investment managers are not acting in line with expectations, we engage further with the manager to understand why and work to improve the stewardship practices and/or performance, further to which we undertake a formal review if this does not occur.

The Scheme's approach to stewardship is also a key aspect of the management of climate-related risk. We expect our investment managers to consider and take appropriate steps to manage climate-related risks within our funds, including engagement with underlying investee companies on their management of climate risks.

We have processes in place by which investee companies are engaged with on climate-related issues. This is done through delegated engagement via the investment managers and ongoing monitoring of this engagement activity undertaken by us and our Investment Adviser. This includes understanding the investment managers' approach to voting in relation to climate-related issues and engaging with those investment managers where we feel that the manager's approach is not aligned with our agreed objectives for the Scheme.

Describe how processes for identifying, assessing and managing climate-related risks *are integrated* into overall risk management.

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

1. **Valuations and covenant reviews –** When assessing the sponsors covenant, we will review the Sponsor'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.

2. **Setting 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. 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.

   In our recent review of the Scheme's assets, a climate transition-aligned credit strategy was considered the most appropriate approach for mandates that will form a long-term role in the Scheme's investment strategy.

3. **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.

4. **Monitoring current investment managers / individual mandates and investments –** We expect our investment managers to manage the ESG risks identified within their own mandates by:

   i. Integrating the analysis of these risks into the overall assessment of any potential investment.

ii. Engaging with investee companies where risks have been identified, to understand and encourage their management of ESG and climate-related risks.

Metrics and targets

Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management processes.

We believe it is important to consider a variety of metrics on a holistic basis, covering both a forward and backward-looking perspective. 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.

Given the nature of the assets and availability of data, we consider targets on a mandate-by-mandate basis in order to appropriately reflect the action that can be taken and the key priorities for that mandate. For example, for some mandates our current priority is to improve data quality in the first instance to enable us to set more meaningful targets, whereas for other mandates, agreeing a path towards Net Zero for all holdings is our key priority.

This report focusses on the mandatory metrics which all pension schemes are asked to monitor and report against for TCFD purposes. We also include the WACI emissions measure as an additional metric to those that are mandatory. A forward looking, 'portfolio alignment' metric is also required, and we include the binary target metric of proportion of assets with clear targets. For the non-emissions metric we have set a data quality measure.

Carbon equivalent risk metrics will expect to form an important part of the Scheme's investment decision-making process to measure, manage and disclose climate risk. The selected metrics will also aid us in identifying opportunities for further engagement with investment managers and underlying investee companies.

The following metrics are included in this report in line with the above requirements (all references to ' CO_2' include the equivalent emissions from other greenhouse gas emissions as well as carbon dioxide).

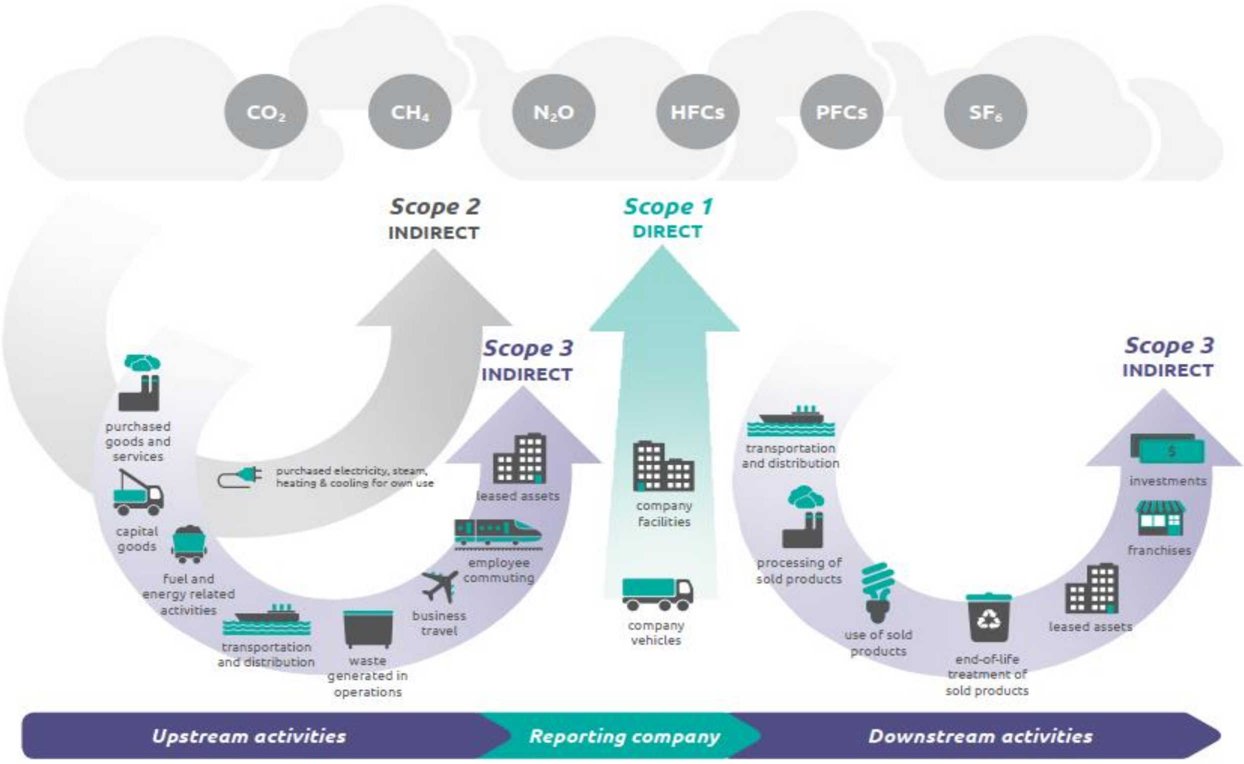
Type	Metric	Measurement
Absolute Emissions Metric	Total Greenhouse Gas (GHG) emissions	The volume of Scope 1 and Scope 2 emissions from the Scheme's assets – Measured in tons of CO_2.
Emissions Intensity-Based Metric	Carbon footprint	The volume of Scope 1 and Scope 2 emissions per unit of capital invested from the Scheme's assets – Measured in tons CO_2 per £m or $m invested.
	Weighted Average Carbon Intensity (WACI)	The volume of Scope 1 and Scope 2 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_2 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 metric	Binary target metric on the proportion of assets with clear targets.	Proportion of companies/assets within materially affected sectors that have Science Based Targets, or other clearly aligned transition goals in place.

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 three scopes:

1. **Scope 1 -** All direct GHG emissions from sources owned or controlled by the company (e.g. emissions from factory operations).
2. **Scope 2 -** Indirect GHG emissions that occur from the generation of purchased energy consumed by the company.
3. **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.

There is overlap on emissions data between different companies and between companies and governments on some measures. As a result, aggregate total greenhouse gas emissions reported across all investments may include some double counting in relation to the actual level of greenhouse gas emissions, especially as the coverage continues to expand and Scope 3 is fully included. For example, fossil fuels sold by a producer to a utility to generate electricity would be Scope 3 for the producer, Scope 2 for the electricity consumer and Scope 1 for the utility. In addition, if the basis for attributing emissions to government bonds was total country emissions, they are also included in the government bond emissions for the relevant country.

The different scopes of emissions are also demonstrated by the diagram below:



(Source: Greenhouse Gas Protocol)

Although we are currently gathering Scope 3 data for the Scheme's investments where available, this is currently not well reported on. We have split out the Scope 3 data in this year's report in order to be clearer as to where data gaps lie and whether this is due to lack of information received by managers or due to lack of reported data. As noted in disclosure 2 below, we would look at ways to improve the data gaps in future TCFD reporting.

The table below sets out our data quality scoring which forms the base for our target to improve data quality annually.

We will seek to obtain information, where it is currently missing, for future assessments. In the meantime, the results of the above metrics have been understood to be reflective of the portfolio, but the limitations of data availability are noted when using the metrics for decision-making purposes.

For the data quality metric, we have adopted the following scoring system for the Scheme's investment mandates:

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

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 and the measurement of each metric using this data.

Asset Class	GHG Emissions – data provided for portion of portfolio covered		Metrics measured using emissions data available		Emissions - data quality score	Portfolio alignment metric
	Scope 1+2 emissions (tonnes of CO_2)	Scope 3 emissions (tonnes of CO_2)	WACI (tonnes CO_2 per $m of revenue)	Carbon Footprint (tonnes CO2 per $m invested – using EVIC[4])		
Real Estate	391	Not provided	113	4.2	4	No clear target stated but committed to supporting Net Zero.
Real Estate	171	Not provided	91	Not provided	4	100% of assets are included in the strategies' 2050 Net Zero Carbon commitment aligned with Paris 1.5C 31% (by value) of underlying assets (buildings) currently have asset level decarbonisation pathways in place consistent with Paris 1.5C Of 31% of underlying assets with decarbonisation pathways in place: 81% reported / 19% estimated
Infrastructure	43,000	-	51*	TBC	4	No Net Zero target, many portfolio companies have set Net Zero and carbon reduction goals but figures for this were not provided.
Infrastructure	21,000	Not provided	305	130	4	67% of fund NAV as at 31 December 2021 have Net Zero targets confirmed (announced, SBTi not tracked).
Infrastructure	18,000	Not provided	144	36	4	0%
Infrastructure	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide
Ground leases	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide

Asset Class	GHG Emissions – data provided for portion of portfolio covered		Metrics measured using emissions data available		Emissions - data quality score	Portfolio alignment metric
	Scope 1+2 emissions (tonnes of CO_2)	Scope 3 emissions (tonnes of CO_2)	WACI (tonnes CO_2 per $m of revenue)	Carbon Footprint (tonnes CO2 per $m invested – using EVIC[4])		
Ground leases	1,034	Not able to provide	Annual per square metre of land carbon intensity at. 2 tonnes CO2 per m2.		4	Not able to provide
Direct lending	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide
Direct lending	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide
Direct lending	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide
Direct lending	Not able to provide	Not able to provide	Scope 1 and 2 emissions on 18% of funded capital are now being measured.		1	Not able to provide
Real Estate Debt	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide
Multi-Asset Credit	15,000	Not provided	125	69	2	Net Zero - Target Set: 10.11% Net Zero - Target Committed: 10.32%
Asset-Backed Securities	Not able to provide	Not able to provide	Not able to provide		1	Not able to provide

Asset Class	GHG Emissions – data provided for portion of portfolio covered		Metrics measured using emissions data available		Emissions - data quality score	Portfolio alignment metric
	Scope 1+2 emissions (tonnes of CO_2)	Scope 3 emissions (tonnes of CO_2)	WACI (tonnes CO_2 per \$m of revenue)	Carbon Footprint (tonnes CO2 per \$m invested – using EVIC[4])		
Liability Driven Investment	80,000	TBC	123	64	3**	Not applicable, implied temperature rise provided.
Equities	14,000	TBC	142	44	3	45% with SBTi approved or committed target***

** Two methods of calculating capital deployed — first, assuming all emissions are allocated to equity (the NAV basis); and second, assuming emissions are allocated to both debt and equity (the GAV basis). NAV basis: 51, GAV basis: 24. Note they do not use emissions relative to revenue as an intensity metric for investors because they say it lacks relevance to invested capital, especially in the context of a diversified portfolio. They state the most useful and relevant method of calculating intensity for investors is carbon emissions (tCO2e) per \$1 million of capital invested. Scope 1 & 2 combined and covers 100% portfolio as of Dec 31, 2021.*

***. Derivatives not dealt with yet by Manager so propose a score of 3.*

**** Calculated by Hymans using MSCI data. Based on MSCI World index.*

[4] EVIC is the Enterprise Value Including Cash.

Currently, a proportion of the Scheme's holdings are unable to be measured across the different metrics. This is in part due to the nature of some investments and the difficulties in measuring climate metrics across these types of investments. As part of ongoing dialogue with managers, we will strive to improve this over time to ensure we receive a fuller picture of the Scheme's position.

In future reports, we will monitor the metrics annually and identify whether performance in line with climate-related targets has improved or deteriorated over time. Where performance has deteriorated, we will engage further to understand the reasoning and undertake any appropriate remedial actions.

As the table shows, whilst we have been able to gather emissions data for some of the Scheme's investment mandates, not all managers have been able to provide emissions data for their holdings at this stage.

The data coverage for the Scheme's investments is mainly limited by the nature of the assets.

1. For unlisted assets (such as direct lending or real estate debt), there are limited industry standards regarding monitoring and reporting climate data (as is the case in the listed markets space). Having said that, the Scheme's managers are involved in developing such standards – both in-house and industry-wide. They are also working on creating and improving methods for estimating metrics based on the data available for other assets.
2. For structured credit (such as Asset-Backed Securities (ABS) or Secured Finance assets), securitisation of large pools of the underlying assets makes data collection particularly challenging. Again, the managers are working on methods for estimation here, in particular in the auto ABS, CLO and Residential Mortgage-Backed Securities (RMBS) areas).
3. Similar challenges are faced when it comes to derivative products whose value is based on different underlying assets. This is particularly difficult for derivatives based on "intangible" assets (e.g. FX forwards, interest rates swaps).
4. Finally, not all metrics are equally relevant across all asset classes. For example, given there is no revenue (in a sense of revenue generated by a company's operations) associated with property assets, the "standard definition" of WACI is not an appropriate metric. On the other hand, this metric is very useful when we consider corporate and sovereign credit. Asset class-specific intensity metrics are then more useful such as emissions per square metre of floor space.

Given the currently low levels of coverage for some of the Scheme's mandates, we have decided **not to aggregate data** across asset classes at this time. We are therefore not reporting overall emissions data for the total Scheme assets in this report.

The targets set to manage climate-related risks and opportunities

Given the nature of the assets and availability of data, we consider targets on a mandate-by-mandate basis in order to appropriately reflect the action that can be taken and the key priorities for that mandate.

Our current priority is to improve data in the first instance to enable us to set more meaningful targets.

Once we have established our Net Zero transition plan and associated targets, we will build that into manager specific targets.

Data Quality Target

Given the currently low levels of data available from some of our investment managers and our focus on engagement with managers to improve this data, we have set a data quality target for each of the Scheme's mandates. For all mandates, we are targeting an increase from the current score to at least the next level up by the end of the next Scheme year.

We have informed all managers of their targets and ask that they report on the data available within their regular reports and in presentations. We will continue to work with our investment managers and report on any additional targets that have been agreed for the Scheme's mandates within next year's report.

Appendix I: Glossary and definitions

Asset Class

An asset class is a group of investments that typically share a lot of the same characteristic, 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.

Carbon neutral

Carbon neutrality is the state where the amount of carbon emissions being emitted is balanced out by the removal of the same amount of emissions. It can be achieved through carbon offsetting.

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 (CO2) emitted.

Covenant

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

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

Engagement

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

ESG

Environmental, social and governance.

Fiduciary responsibilities

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

Financial Stability Board

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

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").

IIGCC

Institutional Investor Group on Climate Change: membership body for investor collaboration on climate change, comprising 330+ members, mainly pension funds and asset managers responsible for €39+ trillion in assets under management.

Low carbon economy

An economy based on energy sources that produce low levels of greenhouse gas (GHG) emissions.

Macro-economic

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 on how the Scheme's money may be invested.

Net Zero

Net Zero refers to the amount of all greenhouse gases (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. As of 2021 the Paris Agreement has been signed by 191 countries and ratified by 186 countries.

Responsible Investment

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

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 that include engagement and voting.

Systemic risk

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

TCFD

Taskforce on Climate-Related Financial Disclosures.

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 within companies.

Metrics and formulae used

Metric	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.	$\sum_{n}^{i}(\frac{current\ value\ of\ investment_i}{total\ issuer\ equity\ and\ debt_i} * issuer's\ Scope\ 1, 2\ \&\ 3\ GHG\ emissions_i)$
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}.	$\sum_{n}^{i}(\frac{current\ value\ of\ investment_i}{current\ portfolio\ value} * \frac{issuer\ scope\ 1, 2\ \&\ 3\ GHG\ emissions}{GDP/company\ revenue_i})$
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.	$\frac{\sum \frac{current\ value\ of\ investment}{(total\ issuer\ equity\ and\ debt)} * issuer'sscope\ 1, 2\ \&\ 3\ GHG\ emissi}{current\ portfolio\ value\ (£m)}$
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.	-

Appendix II: Reliances and limitations

The Asset Liability Model (ALM) combines the scheme's cashflows, an investment strategy including any hedging, contributions into the scheme and stochastic economic scenarios from Hymans economic model (ESS) to create stochastic projections of the scheme's funding positions.

Cashflows: We have used cash flows provided by the Scheme Actuary, along with summarised details about the membership, benefits and valuation assumptions in order to create a set up for the Scheme. The level of detail and accuracy in the model of the Scheme is therefore lower than if full individual membership data had been used. The materiality of the approximations used depend on the type of analysis undertaken and the context of that analysis. No allowance is made in the modelling for any deviations away from the demographic assumptions implicit in the cashflows.

ESS: The distributions of outcomes depend significantly on the Economic Scenario Service (ESS), our (proprietary) stochastic asset model. This type of model is known as an economic scenario generator and uses probability distributions to project a range of possible outcomes for the future behaviour of asset returns and economic variables. Some of the parameters of the model are dependent on the current state of financial markets and are updated each month (for example, the current level of equity market volatility) while other more subjective parameters do not change with different calibrations of the model.

Key assumptions include:

1. The average excess equity returns over the risk-free asset and its volatility which affects growth asset returns.
2. The level and volatility of yields, credit spreads, inflation and expected (breakeven) inflation, which affect the projected value placed on the liabilities and bond returns.
3. The gap between CPI and RPI. The market for CPI-linked instruments is not well developed and this is based on our judgement. Target rates for CPI (inflation and inflation expectations) are RPI – 1% p.a. pre-2030, and RPI – 0% p.a. post 2030, which trends towards a long-term CPI assumption of 2% p.a.
4. The output of the model is also affected by other more subtle effects, such as the correlations between economic and financial variables.
5. We expect that long-term real interest rates will gradually rise from their current low levels. This is based on a selection of yield normalisation levels (which can be interpreted as representing low, medium, and high economic growth scenarios) reflecting the fundamental uncertainty around long term average yield levels. Higher long-term yields would mean a lower value placed on liabilities and hence an improvement in the current funding position unless the scheme is fully hedged.

While the model allows for the possibility of scenarios that would be extreme by historical standards, including very significant downturns in equity markets, large systemic and structural dislocations are not captured by the model. Such events are unknowable in effect, magnitude and nature, meaning that the most extreme possibilities are not necessarily captured within the distributions of results. Investment strategy is likely to change with significant changes in funding level, but unless stated otherwise we have not considered the impact of this in order to focus on the high-level investment strategy decision.

The returns that could be achieved by investing in any of the asset classes will depend on the exact timing of any investment/disinvestment, the costs associated with buying or selling these assets and liquidity of the asset classes. The model implicitly assumes that all returns are net of fees and ignores these other factors. Unless stated otherwise, we have assumed that all contributions are made and not varied throughout the period of projection irrespective of the funding position.

Technical Actuarial Standards: The Technical Actuarial Standard (TAS) 100 is applicable in relation to this material and the content complies with it to the extent relevant.

Appendix III – Industry Collaborations

The Scheme is in the process of joining the Institutional Investors Group on Climate Change which aims to bring investors together to discuss and share ideas around the management of climate change.

Institutional Investors Group on Climate Change

https://www.iigcc.org/

Description & Objectives

The Institutional Investors Group on Climate Change (IIGCC) is a leading global investor membership body and the largest in Europe focusing specifically on climate change. The necessary global response to climate change is redefining the traditional roles and responsibilities of financial actors. The investment process is being reshaped, new policy and regulatory frameworks put in place, and concepts of stewardship and governance transformed. Climate-related risks and opportunities hold direct relevance for all financial institutions.

Benefits of membership

Joining IIGCC offers a range of benefits for member organisations. Through enhanced effectiveness:

- **Understanding and insight** across the issues that count for members.
- **Pioneering best practice** through member led collaboration with experts.
- **Collaboration** in a community of leading senior finance professionals and executives.
- **Competitive advantage** in safeguarding and enhancing long-term investment value, through a deeper investor understanding of climate risk and opportunities to ensure they are addressed in investment and stewardship practices.

Through sector leadership:

- **A global voice**, being included in the collective influence of IIGCC membership and part of an organisation that is the investor voice on climate change. IIGCC develop and advance sector positions on key issues for the investment community.
- **A global network**, with IIGCC at the heart of key global investor initiatives on climate change. This includes Climate Action 100+ and the Investor Agenda. We also work closely with similar investor networks across the globe through the Global Investor Coalition on Climate Change.
- **Reputational** benefit in demonstrating a commitment to responsible investment and fiduciary duty through participation in the IIGCC. Members also benefit from opportunities to raise the profile of their organisation and their professionals.
- **Corporate leadership** by contributing to change across the wider financial community in addressing climate change, creating a sustainable financial system, and building a low carbon economy.

Appendix IV – Training Schedule and Training resource pack

		2022				2023			
Training Schedule	**TCFD pillar**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Effective stewardship - including integration climate and Net Zero (plus wider linked topics like biodiversity loss)	Governance						Any Q2 RISG meeting		
Climate regulation, risks and opportunities	Strategy			August RISG	12 October Trustee meeting				
Targeting Net Zero (including intro to nature-based solutions)	Strategy			November RISG	14 December Trustee meeting				
Impact investing	Strategy							Q3 SIFC	
Scenario analysis recap	Strategy					February Training meeting			

Covenant and funding - climate risk in covenant assessment, how funding assumptions may be affected by climate, impacts on longevity	Risk Management						Q2 SIFC
Metrics - refresh following calculation of first set of metrics	Metrics		TCFD Metrics and Target			February Training meeting	TCFD Metrics and Targets
TCFD reporting recap	Reporting	Overview TCFD requirements					May SIFC meeting

The Scheme’s Investment Adviser provides a training resource pack which includes publicly available training from reputable sources, a glossary of responsible investment terminology, an initiatives tab with links to external sources together with descriptions of the different initiatives to make it easier to navigate. The RIS-G, with guidance from the Investment Adviser, direct the SIFC and the Trustees on which training to prioritise.