Hanson Industrial
Pension Scheme

Climate Change report

Scheme year to 31 December 2023

A foreword from the Chair of the Trustee

On behalf of the Trustee, I am pleased to present our second climate change report in line with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"). It highlights the Scheme's efforts over 2023 to assess and address climate-related risks and to explore potential opportunities arising from the global transition to a low carbon economy. We have continued to work with our advisers and investment managers to understand and manage these risks and opportunities, building on the work outlined in last year's report.

During the year we reviewed the investment strategy for the DC section, using the output from last year's climate scenario analysis to help drive decisions on the default strategy and self-select options. We are pleased to announce the introduction of a new low carbon equity option within the self-select range, which has been made available to our members in 2024. This will allow members who wish to express a climate view in their investments to do so with their pension pots.

We have continued to make good progress towards our climate target, which aims to ensure that the companies we invest in have appropriate plans in place to transition to a low carbon economy. For the DB section, a key driver of this improvement has been from our infrastructure fund, where over 90% of the holdings now have credible carbon reduction plans in place.

This year we have been able to report Scope 3 emissions for most of our assets, in addition to the Scope 1 and 2 emissions reported on last year. Scope 3 emissions relate to the indirect greenhouse gas emissions from an entity's value chain, and we believe they are an important factor to help understand the full impact of a company's operations. We are working with our managers to fill any gaps in their data.

We hope that our work in this area, alongside the work undertaken by other investors, companies, governments and the wider public will help to achieve real world results in addressing climate change.

Finally, I note that in this year's report we have moved some details relating to our governance structure and historic scenario analysis to the Appendix, to ensure the main body focuses on the actions undertaken by the Trustee during the year.

Sincerely,

Mike Smaje
Chair of the Trustee of the Hanson Industrial Pension Scheme

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About the Hanson Industrial Pension Scheme

The Hanson Industrial Pension Scheme (the "Scheme") is a long-standing UK pension scheme with both Defined Benefit ("DB") and Defined Contribution ("DC") sections. The DB section closed to new entrants in 2002 with the formation of the DC section.

As at 31 December 2023 the DB section had invested assets of around £1,573m, plus an insurance policy valued at around £6m, which pays the benefits of a small portion of retired members. The DC section had assets of around £309m as at the same date.

In Appendix 5 we have included a glossary of relevant terms. To aid with the reading of the report, we have defined some Scheme specific abbreviations below:

Employer relates to Hanson Holdings (1) Limited, and any other sponsoring employers of the Scheme, as the context requires.

Group relates to the wider Heidelberg Materials Group, with which the Employer is associated.

Trustee relates to HIPS (Trustees) Limited who act as Trustee to the Scheme.

JISC relates to the Joint Investment Sub-Committee who have investment related responsibilities for three UK pension schemes associated with the Group, including the Scheme.

Executive Summary

This report describes the activities and approach taken by the Trustee to understand and reduce the risks to the Scheme related to climate change and take advantage of any opportunities as part of the transition to a lower carbon economy. It is the Scheme's second climate change report in line with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"), as required by the 2021 Climate Change Governance and Reporting Regulations.

The following points are a summary of the detailed report that follows:

Governance

- The Trustee has put in place a "Trustee Statement on Governance of Climate Change Risks and Opportunities", which defines the roles of the Trustee and its advisers to ensure appropriate oversight of climate risks and opportunities facing the Scheme.

- Over 2023, the Trustee reviewed its climate governance processes and concluded they remain fit for purpose. Climate has remained a regular agenda item for the JISC, ensuring it maintains the appropriate knowledge to make informed decisions and recommendations for the Scheme.

Strategy

- In 2022, the Trustee carried out a process called 'climate scenario analysis' to help assess how climate risks and opportunities might impact the Scheme's funding and investment strategies and the Employer's ability to provide financial support to the Scheme in the future. The Trustee used this analysis in 2023 when undertaking the DC Strategy review.

- The Trustee agreed to make some adjustments to the default DC option and the self-select fund range during the year. This included introducing a low carbon global equity fund, noting the risks and opportunities associated with climate change. The Trustee plans to re-run the scenario analysis for the DC section in 2024, to allow for the agreed strategy changes.

- Overall, the Trustee believes that the DB section remains well positioned to be resilient to climate-related risks over the long-term, due to its well-diversified, low risk investment strategy and strong funding position.

Risk Management

- With the help of its investment adviser, the JISC reviewed its investment managers' approaches to managing climate risks and was pleased to see some improvements since last year.

- The Trustee considered its use of passive managers, noting the limited scope for climate considerations in the process. It was satisfied that its passive managers have strong stewardship practices in place, which is important to help engage with portfolio companies on climate.

- The Trustee has continued to challenge its managers on their approaches to managing climate risks and opportunities, reviewing various climate engagement examples to better understand how managers are acting on the Scheme's behalf.

Metrics and Targets

- The Trustee has set four climate metrics to help it understand and monitor climate risks for the Scheme. The chosen metrics are total carbon emissions, carbon footprint, portfolio alignment with a Net Zero pathway, and data quality.

- The Trustee is pleased to report a reduction in the carbon footprint across its investments, as well as an increase in portfolio alignment. Whilst data coverage has improved, the Trustee notes that some gaps remain, and it has instructed its investment adviser to liaise with its managers on an ongoing basis to improve the quality of data reporting for future reports.

- The Trustee has set a target to increase the proportion of the Scheme's infrastructure, equity and bond assets that are aligned with a Net Zero pathway over time. By increasing the proportion of the portfolio aligned to Net Zero the Trustee aims to reduce the impact of climate risks on the Scheme's assets.

- Over the last year the Scheme has made good progress against this target, with a 12% increase in alignment for the DB section and a 6% increase for the DC section. In monitoring the target, the Trustee has highlighted priorities for engagement with its managers.

1. Governance

How the Trustee maintains oversight of climate-related risks and opportunities relevant to the Scheme

The Trustee has ultimate responsibility for ensuring effective governance of climate change risks and opportunities relating to the Scheme. Identifying, assessing and managing these risks and opportunities is a strategic priority for the Scheme and is therefore done by the Trustee Board. To leverage off their expertise, the Trustee delegates certain investment-related responsibilities for both the DB and DC sections of the Scheme to the JISC, with support from the Trustee's advisers.

Roles and responsibilities

In March 2022, the Trustee agreed a "Trustee Statement on Governance of Climate Change Risks and Opportunities" ("Governance Statement"), which outlines the division of responsibilities between the Trustee and JISC, as well as their advisers and investment managers. The Governance Statement also sets out the nature and frequency of monitoring of climate-related risks and opportunities that is to be undertaken on behalf of the Scheme.

The purpose of the Governance Statement is to ensure appropriate oversight of the climate-related risks and opportunities relevant to the Scheme and to provide the Trustee with confidence that its statutory and fiduciary obligations are being met. The Governance Statement has been agreed by each party to ensure they have a clear understanding of their roles and responsibilities.

In September 2023, the Trustee reviewed the Governance Statement to determine whether any changes should be made given the position of the Scheme and the Trustee's understanding of climate impacts on pension schemes and financial markets. The Trustee concluded the Governance Statement remained fit for purpose, and the roles and responsibilities outlined within it remained appropriate.

A copy of the Governance Statement can be found in Appendix 1.

Climate beliefs and policies

The Trustee incorporates its beliefs and policies on climate-related risks into its Statement of Investment Principles ("SIP"), which sets out the policies of the Trustee on various matters that govern decisions about the investments of the Scheme. The Trustee reviewed and updated its SIP in July 2023. As part of this review, the Trustee determined that the existing climate policies and beliefs, which were last updated in 2022, remained suitable. A summary of these is shown to the right.

A full copy of the SIP is available online.

The Trustee's climate-related investment beliefs

- Environmental, social and governance (ESG) factors are likely to be one area of market inefficiency and so managers may be able to improve risk-adjusted returns by taking account of ESG factors.
- Climate change is a financially materially systemic issue that presents risks and opportunities over the short, medium and long-term.
- Long-term ESG sustainability is one factor the Trustee should consider when making investment decisions.

The Trustee's climate-related policies

The Trustee has considered how ESG and ethical factors should be taken into account in the selection, retention and realisation of investments, given the time horizon of the Scheme and its members.

The Trustee expects its investment managers to take account of financially material considerations (including climate change and other ESG considerations). The Trustee seeks to appoint managers that have appropriate skills and processes to do this, and from time-to-time reviews how its managers are taking account of these issues in practice.

Consideration of climate-related risks

The Trustee believes that climate change is a source of risk, which could be financially material over both the short and longer-term. This risk relates to the transition to a low carbon economy, and the physical risks associated with climate change. The Trustee seeks to appoint investment managers who will manage this risk appropriately.

1. Governance

Oversight activity

During 2023, the Trustee and JISC allocated regular meeting time to discuss climate-related topics. The key rationale for allocating time and resources to this area is that the Trustee believes that climate change is a financially material consideration for the Scheme.

As delegated in the Governance Statement, many of the climate-related activities were undertaken by the JISC, as summarised below. Where a climate-related topic was on the agenda, the session began with high-level training on the topic to help identify and address any gaps in the JISC's knowledge and ensure it was able to make informed climate-related decisions for the Scheme.

The JISC summarised the climate-related activities it had undertaken at each quarterly Trustee meeting during the year, confirming any key considerations or actions for the Trustee. In addition, the JISC provided the Trustee with updates on the Scheme's investments, including the investment managers' climate policies, and their assessment of relevant climate-related risks and opportunities where relevant.

Climate-related JISC agenda items over the year to 31 December 2023

May 2023

- High level review of managers' approaches to voting and engagement.
- Review of climate-related metrics and targets for the Scheme, including refresher training on the requirements, and comparison of data to previous year.
- Review of the DC investment strategy incorporating previous years' climate scenario modelling.

July 2023*

- Consideration of, and training on, climate-related investments for inclusion in the DC strategy.
- Refresher training on climate governance requirements as they apply to DC schemes.

September 2023

- Refresher on the Scheme's ongoing TCFD requirements, including:
  - Review of the climate Governance Statement;
  - Review of climate risks in the Risk Register; and
  - Consideration of whether to undertake further climate scenario modelling.
- Continuation of DC investment strategy review including consideration of ESG and climate risks and opportunities.

November 2023

- Manager selection for a climate-tilted equity fund to be added to the DC self-select fund range.
- High-level review of investment managers' approaches to climate, including refresher training on how to assess ESG factors, including climate.

**The July meeting was a full Trustee DC day*

1. Governance

Ensuring adequate oversight of climate-related risks and opportunities

The Trustee seeks input from its investment, actuarial and covenant advisers to ensure that it can identify, assess and manage climate risks and opportunities. The Trustee reviews the climate competency of its advisers from time-to-time and will take appropriate actions if any concerns are raised.

In November 2023, as part of its annual "Investment Consultant Objectives" review, the JISC reviewed the competency of its investment adviser, LCP, against the objective to: "Help the Trustee identify, assess and manage climate-related risks and opportunities in relation to the Scheme's investments".

As part of its assessment the JISC considered:

- How LCP had met its roles and responsibilities as set out in the Governance Statement.
- Consideration of climate in the DC section investment strategy review.
- Clarity of advice and whether suitable training had been provided for the JISC to make informed climate-related decisions.
- The expertise and resources of LCP to provide climate advice.
- Prioritisation of climate-related risk in advice.

The JISC concluded that LCP had demonstrated added value as expected over the year, that climate change had been considered where appropriate, and that the JISC had been provided with suitable training and advice to make informed decisions and recommendations for the Scheme.

The Trustee and JISC were satisfied that their other advisers had also taken adequate steps to identify and assess climate-related risks and opportunities and had the relevant credentials to provide climate advice. This was based on the same criteria above, where relevant to the matters on which they had advised.

With appropriate advisers in place, the Trustee ensures that climate-related risks and opportunities are considered as part of any relevant advice and included in agenda items. During 2023, this included the review of the DC section's investment strategy.

Where appropriate, the Trustee has questioned information provided by its advisers and investment managers to ensure they have a clear understanding of the risks facing their Scheme and the actions they can take.

Challenging advisors

As part of the DC investment strategy review in 2023, LCP proposed introducing a climate focussed equity fund.

The Trustee queried the financial case for such funds, and whether climate risks have already been priced in by markets. LCP noted that whilst some elements of climate risk were likely to have been priced in, evidence suggested that it was unlikely they were fully priced in due to difficulties in calculating climate policy risk, a view that physical risks are typically underestimated by climate models and inconsistencies in climate data.

Challenging managers

When the Scheme's bond manager, Insight, presented to the JISC in November 2023, the Chair queried what actions it was taking to improve data quality and collection.

Insight advised that it was working in a collaborative way with portfolio companies and had seen a significant improvement over the last year, with data coverage up to around 80% from 62%. The JISC noted this increase was mainly through an increase in estimated data and it would be keen to see an increase in reported data next year.

The Trustee, in conjunction with its actuarial and covenant advisers have agreed to ensure that climate-related risk and opportunities are considered during the process for the upcoming 31 December 2024 triennial actuarial valuation and accompanying assessment of the Employer's covenant.

The Trustee ensures that the JISC and JGSC have suitable experience in considering climate risk through relevant training, to ensure that the risks are suitability considered, documented, reviewed and kept up-to-date.

When appointing new advisers in the future, the Trustee and JISC will consider whether the advisers have suitable climate credentials.

2. Strategy

Identification and assessment of climate-related risks and opportunities relevant to the Scheme

The Trustee has considered climate-related risks and opportunities over various time periods which it believes are most relevant to the Scheme.

The JISC selected short-term, medium-term and long-term time horizons over which to formally consider the impact of climate-related risks and opportunities for both the DB and DC sections in March 2022. The JISC agreed to different time horizons for each section reflecting differences in the membership profile and investment strategy.

The JISC reviewed the appropriateness of its chosen time horizons in September 2023. For both sections, the JISC agreed that the “target dates” and the rationales for selecting these remained appropriate, and subsequently reduced the “time horizons” by one year each to reflect a year passing since they were originally set.

The different time horizons are outlined in the tables below, along with the JISC’s rationale for each.

DB section

	Time horizon	Rationale
Short-term	2 years *(to 2025)*	This is in line with the next actuarial valuation cycle
Medium-term	7 years *(to 2030)*	This is the period in which climate transition risks will be heightened
Long-term	15 years *(to 2038)*	This is the approximate duration of the aggregate DB section liabilities

DC section

	Time horizon	Rationale
Short-term	4 years *(to 2027)*	Major improvements in climate data quality are expected over this period
Medium-term	9 years *(to 2032)*	Key period over which policy action will determine if Paris Agreement goals are met
Long-term	29 years *(to 2052)*	Many economies are targeting to be Net Zero by this point

The Scheme faces risks and opportunities from both the physical effects of climate change (physical risks) – for example, rising temperatures and more extreme weather events – and from the effect of transitioning to a lower carbon economy to help mitigate the impacts of climate change (transition risks) – for example, government policies to reduce the use of fossil fuels, technological advances in renewable energy, and a rise in consumer demand for “greener” products.

Many of these climate-related risks and opportunities could affect the Scheme’s funding position directly through impacts on the assets and liabilities. Climate-related risks and opportunities could also impact the financial strength of the Group and its ability to provide support to the Scheme.

2. Strategy (continued)

Climate Scenario Analysis

Scenario analysis is a tool for examining and evaluating different ways in which the future may unfold. At its March 2022 JISC meeting, the JISC used scenario analysis to consider how climate change might affect the Scheme's investment and funding strategies. In addition, the Trustee undertook climate scenario analysis in relation to the Employer covenant in December 2022.

At the September 2023 JISC meeting, the JISC agreed not to carry out further scenario analysis for the 2023 TCFD report. For the DB section, it noted that the Scheme was invested in a similar investment strategy to that as at the date of the previous analysis, and it remained in a strong funding position. As such it determined there would be limited benefit to additional analysis at this stage.

In forming this view, the JISC also considered whether any new climate scenarios should be considered for the Scheme and whether any changes should be made to the assumptions for their selected scenarios (eg due to changing market conditions or climate policies). The JISC agreed that if further changes to the Scheme's funding or investment strategies were made, then it would reconsider whether additional scenario analysis would be warranted.

For the DC section, it was decided that the results of the ongoing DC investment strategy review may warrant additional climate scenario analysis but that due to the timings of the implementation of these strategy changes, it was agreed to postpone the modelling until the following year.

The JISC and Trustee considered the previous scenario analysis in discussions and decisions for the DC section strategy review in 2023. The Trustee considered both the default investment option and other member options as appropriate. The Trustee decided to make some adjustments to the default investment option and the self-select fund range, including introducing a low carbon global equity fund, keeping in view the risks and opportunities associated with climate change and transition to a low carbon economy.

The Trustee agreed to a high-level update to the covenant analysis in 2024.

A summary of the conclusions from last year's scenario analysis is outlined to the right. Further details on the scenarios selected and the outcome of the scenario analysis modelling is provided in Appendix 2.

Conclusions from the 2022 scenario analysis

Although financial markets and the Group itself are likely to face significant climate risks over the coming decades, the DB section's strong funding position and investment strategy are expected to provide a good degree of protection through both transitional risks in the short-term and physical risks in the long-term. The JISC determined that the existing DB investment strategy remained fit for purpose, considering the climate risk and opportunities facing the Scheme.

For the DC section there could be significant impacts on the size of retirement pots, particularly for younger members. The JISC and Trustee agreed to use the output of the scenario analysis in discussions and decisions for the 2023 DC section strategy review.

The Trustee agreed that it was important to manage these climate risks and fed the results of the analysis into its risk management framework for both sections through specific investment, funding and covenant focused considerations. Further details of the risk management process in place are include in the "Risk Management" section of this report. It also used the results to help determine the key risks and opportunities facing each section, as outlined on the next two pages.

Limitations of climate scenario modelling

When considering further climate scenario analysis, the JISC discussed the difficulties in modelling the impacts of climate factors on the Scheme's asset and liabilities driven by the intricacies of climate systems. It noted this to be particularly true of the Failed Transition scenario, where over 4°C of warming is observed. Due to the unprecedented nature of such warming, it is challenging to encompass all potential consequences within the modelling process. Simplifications in the modelling, such as not allowing for tipping points, mean the actual impact on the Scheme is likely to be more significant than has been modelled. The JISC is comfortable that, as long as these limitations are understood, the scenarios still provide valuable insights to inform climate risk assessment and management.

2. Strategy (continued)

Key climate risks and opportunities facing the DB section

The Trustee has identified and assessed climate risks and opportunities for the DB section within each of the time horizons mentioned, as follows:

	Key risks	*Key opportunities*
Short-term (2 years)	The Scheme has exposure to climate-related investment risks through its equity and alternatives investments. Transition risks are expected to be larger in the short term due to the cost of investment to meet changes in government policy. The Trustee has already taken steps to de-risk the Scheme and is in a strong funding position, which should help to mitigate the impact of these risks.	Climate-aware funds are available for the Trustee to consider, although the Scheme's growth assets are a relatively small part of the portfolio. The Trustee has reviewed its managers' approaches to managing climate risks and opportunities and believes that are taking these into account in a sensible manner. The DB section's investment in renewables via its infrastructure mandate, which are expected to benefit from the climate transition as they are essential to the transition to a low carbon economy.
Medium-term (7 years)	Financial market volatility might increase over the medium term as the physical and transition impacts of climate change unfold, particularly if this happens in an unpredictable manner. This could impact the value of the Scheme's assets and liabilities, however the Scheme is estimated to be fully funded on a buy-out basis and is hedging a large portion of the interest rate and inflation risk of its liabilities.	Buy-out is expected to provide greater protection from climate risks for members' benefits and there may be pricing opportunities along the journey.
Long-term (15 years)	Physical risks could have significant impacts on financial markets in the long-term if climate change continues. This may increase the cost of buy-out as insurers allow for climate-related risks in their pricing and reserving bases.	

2. Strategy (continued)

Key climate risks and opportunities facing the DC section

The Trustee has identified and assessed climate risks and opportunities for the DC section within each of the time horizons mentioned, as follows:

	Key risks	***Key opportunities***
Short-term (4 years)	Older members within 10 years of retirement will be most exposed to transition risks in the short term in the event of a Paris disorderly pathway.	Low carbon investments can mitigate the impact of market shocks due to a market repricing event.
Medium-term (9 years)	Transition risks may still be heightened over the medium-term, creating volatility. Market returns may be lower if disorderly transition harms economic performance.	Impact investments can take advantage of the shift to a low carbon economy and may provide an enhanced source of return over this period.
Long-term (29 years)	Physical risks are most prevalent in the failed transition pathway, impacting those members 20 years or more from retirement.	Engagement with investment managers to ensure they are exercising stewardship in support of Net Zero pathways is key to avoiding a failed transition.

The Trustee considered the above risks and opportunities when reviewing the DC section's investment strategy in 2023.

3. Risk Management

Processes and tools for identifying and assessing climate-related risks

The Trustee has implemented a number of processes and tools for identifying, assessing and managing climate-related risks and opportunities for the Scheme, including:

- Attending climate-related training to understand how climate-related risks might affect pension schemes and their investments in general terms.
- Undertaking climate scenario analysis which shows how the Scheme's assets and liabilities might be affected under a range of climate scenarios.
- Receiving advice on how the sponsoring Employer might be impacted by climate-related factors.
- Reviewing its investment adviser's assessments of the Scheme's current and prospective investment managers' climate practices, including how they incorporate climate-related factors into their investment processes and how effectively they manage climate-related risks.
- Ensuring good stewardship practices are in place.
- Putting in place monitoring to highlight any changes in the impact of climate change on the sponsoring Employer.
- Monitoring a range of climate-related metrics in relation to the Scheme's assets.

In addition, the Trustee expects its investment managers to identify, assess and manage climate-related risks to the Scheme's assets on a day-to-day basis. The above processes are integrated into the overall risk management of the Scheme through the business plan, the risk register and regular support from its advisers.

Investment Manager assessments

Review of managers' approaches to climate risks and opportunities

LCP presented its review of the Scheme's investment managers' climate approaches at the November 2023 JISC meeting. The review covered all of the DB section's managers and the DC section managers that manage part of the default strategy.

The assessment for each manager included:

- LCP's assessment of the climate capabilities of each manager, based on their climate specific responses to LCP's 2022 Responsible Investment ("RI") Survey, considering:
  - Use of climate tools to assess climate risks and opportunities (eg scenario modelling, metrics).
  - Commitments to climate goals (eg TCFD reporting, Net Zero targets).
  - Quality and coverage of climate data provided.
  - Evidence of stewardship and engagement on climate change.
- Fund specific ratings, based on the specialist asset class and climate knowledge of LCP's manager research teams, including:
  - RI scores formulated during LCP's regular due diligence meetings with the Scheme's managers. Each fund is rated on a 1 (weak) to 4 (strong) scale.
  - Climate risk management scores based on how well climate factors are integrated into the funds' investment processes. Funds are given "strong", "moderate" or "weak" ratings.
  - Net Zero alignment scores, which consider how aligned the portfolios are to a Net Zero transition. Funds are given "strong", "moderate" or "weak" ratings.
- Case studies from each of the Scheme's managers providing examples of how they have engaged with portfolio companies on climate matters.

The JISC remained satisfied that most of their managers had embedded climate considerations into their philosophy and management processes and a firm level, noting manager scores remained the same as last year's review as LCP's RI Survey is biennial. The JISC noted it was keen to see how the reported improvements by its managers would impact their climate scores in the upcoming 2024 RI Survey.

3. Risk Management (continued)

Climate scores for the Scheme's investments remained broadly stable over the year, with improvements for the LaSalle property fund (DB) and Ruffer DGF (DC). As at the date of the analysis, the only funds with "weak" climate scores were the passive mandates. As these funds track indices, there is limited scope to manage climate risk outside of stewardship, and therefore higher climate scores are not achievable for these types of mandate. The JISC was comfortable that despite this limitation, these funds remained suitable for the Scheme, noting the managers have good stewardship processes in place.

The Net Zero alignment score is a new metric this year. Most of the Scheme's investments achieved "moderate" Net Zero ratings due to managers signing up to the Net Zero Investment Managers Initiative ("NZAMI") and having firm-wide Net Zero targets. The two funds that were awarded "strong" Net Zero alignment scores (Ruffer DGF and IFM infrastructure), have fund level Net Zero and interim targets. None of the funds were rated as "weak".

The Trustee reviewed climate case studies from all their managers, which included direct engagements on climate with issuers of debt, incorporating green clauses into property leases and equity managers co-filling shareholder proposals on climate. Case studies from the Scheme's infrastructure and LDI mandates are provided to the right.

The JISC used the output of the review to drive climate-related conversations with their investment managers over the year. In addition, the Scheme's investment adviser conducts engagement with the managers, encouraging them to improve their practices further, reporting back to the JISC periodically.

Engagement and other stewardship activities

The Trustee expects its investment managers to engage with investee companies on climate-related (and other) matters. The Trustee generally believes that engaging with companies is more effective at encouraging change than selling its investments in those companies. When reviewing the managers' climate approaches, the JISC also considered their approaches to stewardship and engagement. This review showed that all the Scheme's managers frequently engaged with portfolio companies on climate change.

More information on the Trustee's stewardship activities can be found in its Implementation Statement.

Engagement case study – IFM Infrastructure

Decarbonisation at Vienna Airport

Vienna Airport was one of the first airports in Europe to aim to operate in a carbon-neutral manner by the end of 2023. IFM has taken significant action to meet this target, including:

- The competition of Austria's largest solar plant in May 2022 to help provide renewable energy to the airport.
- Converting the airport vehicle fleet to electromobility.
- Building an onsite office complex which has won awards as Austria's most sustainable office, using geothermal energy to lower emissions.
- Interim carbon offsets.

IFM own a number of airports and are using lessons learnt from Vienna Airport to enhance the de-carbonising plans of their other assets.

Engagement case study – CTI government bonds

The Scheme's largest asset holding is a portfolio of bonds issued by the UK government. As such, the Trustee expects CTI to engage with the UK government on climate.

CTI does this primarily through its climate membership groups. It chairs the Climate Change Working Group within the Investment Association ("IA") and is part of the UK Sustainable Investment Forum. Key actions include:

- Drafting the IA's position on climate and the need for the UK to make clear and actionable signals on the nature and speed of the transition.
- Devising criteria to align financing vehicles with a Just Transition.
- Engagement on green gilts and the UK's climate finance credentials.
- Challenging the impact of the rollback of the UK's net zero policies.

3. Risk Management (continued)

Changes to investment mandates

If the JISC identifies any concerns with the way one of its managers addresses climate-related risks and opportunities, it will initially engage with the manager to raise concerns and seek improvements. If the manager does not sufficiently improve, the JISC may switch to a different manager. Over 2023, no manager changes were made due to concerns over their climate approaches.

DB section

In January 2023, the Trustee appointed CTI to manage the Scheme's LDI mandate. Whilst climate factors were not a driver of the change, the JISC did consider how CTI manages ESG risks, including climate in their process. This included use of green gilts, incorporating ESG risks into their assessment of counterparties and engagement with the UK government on climate.

DC section

As part of the DC investment strategy review, the Trustee decided to invest in the L&G All Stocks Index Linked Gilts Index Fund and the L&G All Stocks Gilts Index Fund within the Passive Diversified Fund to help manage duration risk.

The Trustee also agreed to invest in the Nordea Diversified Return Fund within the Active Diversified Fund in place of Baillie Gifford due to concerns around performance. Both the Passive Diversified Fund and the Active Diversified Fund form part of the default investment option.

As part of the investment strategy training and advice in respect of the DC section over the year, the JISC considered the risks and opportunities associated with a shift towards a low carbon and sustainable economy. As part of this it considered the use of a low carbon equity fund to provide some protection against adverse losses if tail risks materialise.

The JISC considered the climate-related credentials of a climate-tilted equity fund relative to a standard market-capitalisation equity index fund and agreed to incorporate a climate-tilted equity fund within the self-select fund range. This change will enable members wishing to express climate views to do so within their pension scheme investments. The Trustee agreed to revisit the decision on whether to incorporate this fund within the default strategy in the future.

The manager selection exercise was undertaken in November 2023 and considered various areas including the investment process and portfolio construction, and ESG and climate change credentials.

HIPS Low Carbon Global Equity Fund – Key Features

The Trustee has agreed to introduce a new self-select fund called the HIPS Low Carbon Global Equity Fund. The key features of the fund will be as follows:

- A global equity mandate with a low tracking error relative to a market capitalisation equivalent index.
- That aims to reduce carbon exposure by tilting away from companies with the highest carbon exposure.
- Currency hedging of 50% of the overseas exposure in the fund.
- An aim to reach Net Zero by 2050 through:
  - A carbon emissions intensity reduction of 70% vs the benchmark.
  - Total carbon emissions constrained by a decarbonisation pathway, starting at a 50% reduction in October 2020, reducing by a further 7% each year and reaching net zero by 2050.

Additionally, the Trustee decided to add an Islamic Global Equity Index Fund within the self-select range to provide more options to their members.

As at year end the Trustee was in the process of appointing the new managers for the DC section. Before investing in the funds, the Trustee has requested formal written advice from LCP, which will include information on the managers' investment processes and philosophies, including how climate-related risks and opportunities are accounted for.

3. Risk Management (continued)

Monitoring climate-related risks to the Scheme

Climate change is integrated into the Scheme's risk management processes, including the Risk Register, covenant monitoring and investment monitoring.

Risk Register

The Trustee maintains a Risk Register which covers all aspects of the Scheme's activities. It is reviewed in detail by the JGSC, and at a high level by the Trustee Board and other committees such as the JISC. Each risk is rated in terms of its impact and likelihood, both on a scale of 1 – 5, and these figures are multiplied together to give an overall risk score out of 25. For the avoidance of doubt, the lower the number, the lower the risk.

The key climate-related risk in the Register is that "Climate-related risks and opportunities are not considered". The JGSC has set out several mitigation steps for the Trustee, including compliance with TCFD reporting regulations. Over 2023, the JGSC scored the risk of 2 for impact and 1 for likelihood, noting the Trustee's commitment to assessing climate risks over the year.

The Trustee updated its Risk Register in 2022 to include more explicit references to climate risk within the "Trustee knowledge and understanding" and "setting an appropriate investment strategy" risks, and to outline the tools to mitigate against these risks. The JISC reviewed the investment specific risks in September 2023 and concluded that the risks remain fit for purpose. Following advice from the Covenant adviser, Cardano, the Trustee added a new climate-related covenant risk during the year.

New Covenant risks in the Scheme's Risk Register

Risk: The Group fails to meet stated GHG emission reduction targets causing reputational damage and increasing costs of offsetting any residual emissions; faces increasing costs from increasingly stringent regulations; or faces higher costs connected to its operations from extreme weather events.

Risk Mitigation: covenant monitoring will include a review of ESG/ sustainability metrics, for example performance against GHG emission reduction targets and review of the ESG regulatory landscape.

Covenant monitoring

Climate-related exposures could have a positive or negative impact on the strength of the sponsoring Employer's covenant. As a result, the Scheme's Covenant adviser, Cardano, includes climate-related matters in the covenant advice provided to the Trustee.

Cardano carried out a high-level assessment of the potential exposure of the Scheme's Employer covenant to climate-related risks in 2022, recommending climate risk metrics that the Trustee now monitors in covenant related advice.

Investment monitoring

In addition to the annual review of managers' climate approaches, the Trustee reviews LCP's RI scores for the Scheme's managers and funds, which consider climate factors, on a quarterly basis. The information is included in LCP's quarterly monitoring report, as well as details of any due-diligence meetings LCP have conducted with the Scheme's managers over the quarter, including discussions on climate change.

The JISC noted that the RI fund scores for a few of their funds had fallen during the year and queried the rationale for these changes. LCP noted that it had updated its approach to grading funds to reflect changing best practice in RI. This included a move to an approach where scores are based on an absolute basis, rather than relevant to the specific asset class. For example, the downgrade to Scheme's index tracking holdings reflected the limitations of integrating RI into investment decisions for these types of mandate outside of Stewardship. Despite these changes, the majority of the Scheme's managers received high fund specific RI scores.

The JISC aims to meet at least one of its managers at each quarterly JISC meetings. During these meetings, the JISC discusses climate change with the managers to increase its understanding of the Scheme's climate-related risks and challenge the adequacy of the steps being taken to manage them. Insight, Baillie Gifford and CTI were invited to present to the JISC during the year. The JISC used the additional JISC meeting in 2023 to consider which managers to select for the newly agreed DC funds, following the DC strategy review.

4. Metrics and Targets

Selecting climate metrics for the Scheme

The Trustee has chosen four climate-related metrics to help monitor climate-related risks facing the Scheme. These are listed below, alongside the methodology used for calculating the metrics.

Metric	High-level methodology	Reported as	Reason chosen
Absolute emissions: Total greenhouse gas emissions	The sum of each company's (or equivalent) most recently reported or estimated greenhouse gas emissions attributable to the Scheme's investment in the company (or equivalent), where data is available. Emissions are attributed evenly across equity and debt holders.	Reported in tonnes of CO_2 equivalent.	This methodology was chosen as it is in line with the statutory guidance.
Emissions intensity: Carbon footprint	The total greenhouse gas emissions (as described above), divided by the value of the invested portfolio in £m, adjusted for data availability. Emissions are attributed evenly across equity and debt investors.	Reported in tonnes of CO_2 equivalent per £1m invested.	This methodology was chosen as it is the preferred method as per the statutory guidance.
Portfolio alignment: Emissions reduction targets	The proportion of the portfolio by weight that has set an emissions reduction target that has been accredited by the SBTi ("Science-Based Targets initiative") or equivalent. This measures the extent to which the Scheme's investments are aligned to the Paris Agreement goal of limiting global average temperature rises to 1.5°C.	Reported in percentage terms.	A "binary target" measure was chosen because it is the simplest and most robust of the various portfolio alignment metrics available and a recommended method as per the statutory guidance.
Data quality	The proportion of the portfolio for which the Trustee has access to high quality emissions data. This is reported using three categories: emissions reported by companies, indirectly estimated or modelled emissions, and unavailable data.	Reported in percentage terms.	Data quality was chosen as a fourth metric as it complements the other emissions data and will be useful to track the progress of mandates where data coverage is currently low.

In May 2023, the JISC reviewed the Scheme's choice of climate-related metrics and was comfortable that they continued to be appropriate for the Scheme. In particular, the JISC considered whether "data quality" remained an appropriate fourth metric. Given the remaining gaps in data for the Scheme's property, bond and diversified growth funds (as reported in the Scheme's 2022 TCFD report), the JISC agreed it was important to continue monitoring this metric to keep track of how managers were increasing data coverage in their portfolios and to ensure the quality of data is maintained as coverages increases.

In compiling this report the Trustee has collected metrics data for both the DB and DC sections as at year end, which is summarised in the next section.

4. Metrics and Targets (continued)

Climate metrics (Scope 1 and 2 emissions) - DB section

The metric data covering Scope 1 and 2 emissions for the Scheme's DB section is shown below, based on the assets held as at 31 December 2023 (unless stated otherwise). For comparison, the equivalent figures as at 31 December 2022 are shown in brackets. Scope 3 emissions are detailed on page 19.

The arrows indicate where the values have increased or decreased compared to last year's report, green for an improvement and red for a deterioration. Where data has been disclosed for the first time this year, a green arrow is shown. Where the metric has stayed the same, this is noted with an amber equals sign.

Portfolio	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)	Data coverage (Total Emissions and Carbon Footprint, % portfolio)	Portfolio alignment (% targets set)	Data quality *(reported/ estimated/ unavailable)*
CTI - LDI[2]	**£1,224m / 78%** *(£1,225m / 78%)*	**204,246** *(212,764)* ↓[3]	**170** *(181)* ↓[3]	**100%** *(100%)* =	**100%** *(100%)* =	**100 / 0 / 0** *(100 / 0 / 0)* =
Insight – Buy & maintain credit	**£106m / 7%** *(£97m / 6%)*	**3,675** *(3,229)* ↑	**41** *(54)* ↓	**84%** *(62%)* ↑	**40.6%** *(39.8%)* ↑	**66 / 18 / 16** *(59 / 3 / 38)* ↑
LaSalle – Property[4]	**£93m / 6%** *(£96m / 6%)*	**150** *(177)* ↓	**2** *(2)* =	**86%**[5] *(87%)* ↓	**29.5%**[4] *(13.9%)* ↑	**86 / 0 / 14** *(87 / 0 / 13)* =
IFM – Infrastructure[4]	**£97m / 6%** *(£93m / 6%)*	**11,257** *(16,305)* ↓	**122** *(176)* ↓	**100%** *(100%)* =	**94.0%**[5] *(67.0%)* ↑	**100 / 0 / 0** *(100 / 0 / 0)* =
L&G - Listed equities	**£46m / 3%** *(£68m / 4%)*	**3,118** *(5,828)* ↓	**69** *(87)* ↓	**98%** *(98%)* =	**55.1%** *(51.2%)* ↑	**95 / 3 / 2** *(Not available)* ↑

Source: Investment managers, LCP. Metrics data is shown at fund level. Due to differences in calculation methodologies the Trustee has decided not to aggregate figures. Figures may not sum due to rounding.

[1] Total emissions relate to Scheme assets, where data is available.
[2] LDI metrics are calculated by LCP. Please see the commentary on page 18 and the calculation methodology in Appendix 4 for help interpreting this data. This mandate was previously managed by Insight.
[3] We note that different calculation methodologies have been used for the LDI metrics in 2022 and 2023 so these numbers are not directly comparable.
[4] IFM and LaSalle metrics are as at 31 December 2022 due to availability of data. Carbon footprint for these funds has been calculated with reference to the value of these funds as at this date.
[5] LaSalle data coverage and portfolio alignment metrics are at a fund level and are not representative of the property exposures in the underlying funds.
Further details on obtaining data for metric calculations is provided on page 24.

4. Metrics and Targets (continued)

Changes to the LDI mandate over the year

There have been two changes in relation to the LDI mandate over the year which should be considered when comparing emissions metrics from 2022 and 2023. These have been outlined below.

LCP updated its methodology for calculating emissions attributable to government bonds in 2023, in line with updated guidance from the Partnership for Carbon Account Financials ("PCAF"). Therefore, the figures quoted on the previous page for 2022 and 2023 are not directly comparable.

For comparison purposes only, the JISC requested emissions data for the LDI mandate using the "old" methodology as well as the "new" methodology in its review of metrics. The equivalent old methodology carbon footprint as at 31 December 2023 for the LDI mandate was 163 tonnes of CO2e per £m invested (relative to 181 tonnes in 2022), illustrating a fall in the carbon emissions associated with the LDI mandate.

In 2023, the management of the LDI mandate was moved from Insight to CTI. As the LDI mandate is a segregated portfolio and the underlying assets remained the same at the point at which the move was made, the JISC determined that the Insight and CTI LDI mandates could be classified as the same mandate when comparing year on year metrics (subject to the comments above on methodology changes).

Further commentary on obtaining data for calculating metrics is provided on page 24.

Commentary on Scope 1 and 2 metrics for the DB section

The LDI fund has the highest total emissions, partly due to it accounting for 78% of total Scheme assets. However, it also has the largest carbon footprint. This is due to the calculation method, which takes account of total UK emissions, as the fund largely invests in UK government bonds.

The infrastructure fund remains the mandate with the next largest carbon footprint. This is not surprising given the nature of the assets (such as oil and gas pipelines and airports). To help manage climate risks for this fund the Trustee believes it is important that the underlying portfolio companies have credible long-term carbon reduction plans in place. It is therefore positive to see that the mandate has one of the highest levels of portfolio alignment in the DB section. As at IFM's reporting date, 22 of 23 portfolio companies had Net Zero and interim targets, with plans in place to meet these - an improvement on the 12 of 19 portfolio companies reported the previous year.

When reviewing climate metrics in May 2023, the JISC queried how LCP satisfies itself that IFM's transition plans are credible, noting that IFM does not use SBTi accreditations. LCP confirmed that its specialist manager research team challenges IFM on its plans annually in ESG focused meetings, which include a review of transition plan case studies and examples where IFM required its companies to improve their approaches. The JISC noted that the infrastructure mandate also invests in climate opportunities (eg renewables), which are not reflected in the metrics data.

The increase in total emissions for the buy & maintain credit mandate over the year relates to an increase in the £value of assets invested and improvements in data coverage. Whilst the JISC is glad to see an improvement in data coverage (+22%), most of this increase relates to estimated emissions (+15%). As noted on page 7, The JISC discussed data quality with Insight when they presented to the JISC in November 2023, expressing that it would like to see continued improvements in the future.

The metrics for the property mandate were broadly unchanged over the year. The mandate is a fund of funds, and therefore data coverage is dependent on the availability of data from the underlying managers. LaSalle confirmed that the improvement in portfolio alignment for the portfolio relates to one of the underlying funds implementing a new Net Zero target over the year. The Trustee has submitted a full redemption request from the property mandate, to be completed over a two-year period. The Trustee notes that metrics in future reports may be adversely impacted by the sales process, depending on which of the underlying funds have been sold at the relevant report dates. Whilst the JISC is comfortable with this potential impact, the JISC re-affirmed its expectations with LaSalle for it to continue to engage with the underlying funds to improve climate metrics.

The JISC was pleased to see a reduction in carbon footprint and an increase in portfolio alignment for the equity mandate and was glad that L&G were able to provide data quality information this year.

4. Metrics and Targets (continued)

Climate metrics (Scope 3 emissions) - DB section

This is the first year the Scheme is reporting on Scope 3 emissions. There are a number of complex challenges around Scope 3 emissions that require careful handling, for instance there is no fully developed and agreed methodology, Scope 3 emissions are not within companies' control, existing calculation approaches do not deliver consistent results, and reporting oil and gas industry emissions is fraught with complexity. Therefore, it should be noted that reported data is often poor quality and incomplete. The difference between Scope 1, 2 and 3 emissions is outlined in Appendix 3.

The metric data covering Scope 3 emissions for the DB section is shown below, based on the assets held as at 31 December 2023 (unless stated otherwise).

Portfolio	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)	Data coverage (% portfolio)	Data quality *(reported/ estimated/ unavailable)*
CTI - LDI[2]	£1,224m / 78%	**163,415**	**136**	100%	**100 / 0 / 0**
Insight – Buy & maintain credit	£106m / 7%	**30,177**	**342**	83%	*Not available*
LaSalle – Property[3]	£93m / 6%	**1,486**	**19**	86%[4]	**86 / 0 / 14**
IFM – Infrastructure[3]	£97m / 6%	*Not available*			
L&G - Listed equities	£46m / 3%	**26,983**	**586**	98%	**63 / 35 / 2**

As per the Scope 1 and 2 data, the LDI mandate has the highest total Scope 3 emissions as it makes up the highest proportion of the section's assets. However, the L&G equity mandate has the highest carbon footprint. In reviewing the Scheme's climate metrics, the JISC noted that a higher proportion of L&G's Scope 3 data was estimated than for Scope 1 and 2. L&G highlighted the issues in collecting Scope 3 data, noting that they are working with portfolio companies to encourage greater disclosure, and advocating for improved and standardised Scope 3 disclosure to facilitate comparisons and allow for meaningful insights to be drawn.

Source: Investment managers, LCP. Metrics data is shown at fund level. Figures may not sum due to rounding

[1]Total emissions relate to Scheme assets, where data is available.

[2]LDI metrics are calculated on a different basis to other asset classes, so cannot be compared with and should not be aggregated with them. Further details in Appendix 4.

[3]IFM and LaSalle metrics are as at 31 December 2022 due to availability of data. Carbon Footprint for these funds has therefore been calculated with reference to the value of these funds as at this date, £93m and £96m respectively.

[4]LaSalle data coverage is at a fund level and is not representative of the property exposures in the underlying funds.

4. Metrics and Targets (continued)

Climate metrics - DC section

The majority of the DC section assets are invested in the default strategy, with assets allocated depending on members' expected retirement dates. The other assets are invested in a range of self-select funds or self-select lifestyle strategies.

As at 31 December 2023 97% of the DC section assets were invested in the funds that make up the default strategy. The Trustee has not collected metrics for assets outside the default strategy funds as it did not feel it was proportionate to do so. This is in line with the guidance issued by the Department of Work and Pensions ("DWP").

The metric data covering Scope 1 and 2 emissions for the funds that comprise the default strategy within the Scheme's DC section is shown on the next page, based on the assets held as at 31 December 2023 (unless stated otherwise). For comparison, the equivalent figures as at 31 December 2022 are shown in brackets. Scope 3 emissions are detailed on page 23.

The arrows indicate where the values have increased or decreased compared to last year's report, green for an improvement and red for a deterioration. Where data has been disclosed for the first time this year, a green arrow is shown. Where the metric has stayed the same, this is noted with an amber equals sign.

Changes to gilt fund emissions methodology

LCP updated its methodology for calculating emissions attributable to government bonds in 2023, in line with updated guidance from PCAF. This means the figures quoted on the next page for 2022 and 2023 are not directly comparable with each other.

For comparison purposes only, the JISC requested emissions data for the gilt funds mandate using the "old" methodology as well as the "new" methodology in its review of metrics. The equivalent old methodology carbon footprint as at 31 December 2023 for the gilt funds was 163 tonnes of CO_2e per £m invested (relative to 181 tonnes in 2022, illustrating a fall in the carbon emissions associated with the gilt funds.

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The following notes should be considered with respect to the DC section metric data shown overleaf:

The figures on the next page relate to investments in funds that make up the default strategy only, and therefore will not sum to the total assets held in the DC section.

[1] Figures shown relate only to the assets for which data is available. Total emissions are for HIPS' assets, not the whole pooled fund.

[2] Abrdn GARS was replaced by the Ruffer Diversified Fund in January 2023, as such climate metrics have only been provided for the dates on which the Scheme was invested in each mandate.

[3] The Scheme invests in the L&G Emerging Market Multi Asset Fund, which has an asset allocation of 50% L&G World Emerging Markets Equity Index Fund, 25% L&G Emerging Market Passive Local Currency Government Bond Fund and 25% Emerging Market Passive USD Government Bond Fund. In last years' report, these funds were reported on individually.

[4] Climate metrics for the gilt funds have been calculated by LCP. Further details including the calculation methodology is shown in Appendix 4.

[5] LCP updated their methodology for calculating emissions attributable to government bonds in 2023 and therefore the metrics for 2022 and 2023 are not directly comparable.

[6] This data is for corporates and sovereigns. LGIM define 'Sovereigns' as, Agency, Government, Municipals, Strips and Treasury Bills and is calculated by using: the CO_2e/GDP, Carbon Emissions Footprint uses: CO_2e/Total Capital Stock.

Further details on obtaining data for metric calculations is provided on page 24.

4. Metrics and Targets (continued)

Climate metrics (Scope 1 and 2 emissions) - DC section

Portfolio	Fund	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)	Data coverage (% portfolio)	Portfolio alignment (% targets set)	Data quality *(reported/ estimated/ unavailable)*
Equities	BlackRock MSCI World Equity Index	**£149.3m / 49%** *(£125.6m / 47%)*	**7,960** *(7,439)* ↑	**54** *(59)* ↓	**99%** *(99%)* =	**43%** *(39%)* ↑	**88 / 11 / 1** *(86 / 13 / 1)* ↑
	BlackRock MSCI World Equity Index (hedged)	**£43.6m / 14%** *(£38.1m / 14%)*	**2,325** *(2,255)* ↑	**54** *(59)* ↓	**99%** *(99%)* =	**43%** *(39%)* ↑	**88 / 11 / 1** *(86 / 13 / 1)* ↑
Diversified growth	Abrdn GARS Fund[2]	**-** *(£23.4m / 9%)*	- *(2,307)*	- *(99)*	- *(100%)*	- *(10%)*	- *(43 / 57 / 0)*
	Ruffer Diversified Return Fund[2]	**£26.3m / 9%** *(-)*	**2,918** *(-)*	**111** *(-)*	**89%** *(-)*	**21%** *(-)*	**80 / 20 / 0** *(-)*
	Baillie Gifford Multi-Asset Growth	**£26.7m / 9%** *(£23.2m / 9%)*	**1,562** *(1,065)* ↑	**59** *(118)* ↓	**43%** *(39%)* ↑	**-** *(12%)*	**36 / 7 / 57** *(29 / 10 / 61)* ↑
	L&G Emerging Market Multi Asset Fund[3]	**£4.8m / 2%** *(£4.4m / 2%)*	**1,033** *(not available)* ↑	**216** *(not available)* ↑	**90%** *(not available)* ↑	**14%** *(not available)* ↑	**47 / 43 / 8** *(not available)* ↑
Alternatives	Invesco Global Real Estate Fund	**£6.5m / 2%** *(£6.3m / 2%)*	**-** *(115)* ↓	**-** *(18)* ↓	- (98%) ↓	**-** *(37%)* ↓	- *(not available)* =
	L&G Infrastructure Equity MFG Fund	**£4.6m / 2%** *(£4.5m / 2%)*	**1,330** *(1,187)* ↑	**265** *(266)* ↓	**96%** *(99%)* ↓	**38%** *(35%)* ↑	**94 / 2 / 3** *(-)* ↑
Bonds	BlackRock Over 15 Years Gilt Index Fund[4]	**£8.6m / 3%** *(£8.3m / 2%)*	**1,458** *(1,443)* ↑[5]	**170** *(181)* ↓[5]	**100%** *(100%)* =	**100%** *(100%)* =	**100 / 0 / 0** *(100 / 0 / 0)* =
	BlackRock Over 5 Years Index Linked Gilt Fund[4]	**£8.2m / 3%** *(£7.7m / 2%)*	**1,387** *(1,329)* ↑[5]	**170** *(181)* ↓[5]	**100%** *(100%)* =	**100%** *(100%)* =	**100 / 0 / 0** *(100 / 0 / 0)* =
	BlackRock Corporate Bond Index All Stocks Fund	**£6.5m / 2%** *(£5.6m / 2%)*	**148** *(275)* ↓	**45** *(56)* ↓	**91%** *(88%)* ↑	**27%** *(24%)* ↑	**67 / 24 / 9** *(64 / 24 / 12)* ↑
	L&G Overseas Bond Fund[6]	**£5.9m / 2%** *(£5.7m / 2%)*	**779** *(811)* ↓	**133** *(145)* ↓	**99%** *(98%)* ↑	**0%** *(0%)* =	**99 / 0 / 0** *(-)* ↑
Cash	BlackRock Cash Fund	**£6.8m / 2%** *(£7.1m / 3%)*	**5** *(5)* =	**1** *(1)* =	**85%** *(82%)* ↑	**6%** *(0%)* ↑	**78 / 7 / 15** *(80 / 2 / 18)* ↓

4. Metrics and Targets (continued)

Commentary on Scope 1 and 2 metrics for the DC section

In terms of absolute emissions, the equity funds have the highest total absolute emissions as they represent the largest proportion of the total assets held by members. As these funds are passive index-tracking funds, engagement with portfolio companies is the key tool BlackRock have for reducing emissions in the portfolio. The Trustee has reviewed BlackRock's voting behaviour in respect of these funds and was comforted to see that it had voted on 97.9% of eligible resolutions for these funds over the year to 31 December 2023, including a number of climate-related resolutions. Other funds with high absolute emissions include the DGFs, which invest in a range of asset classes across different sectors with high emission exposure.

Among the funds with the highest carbon footprint are the L&G Emerging Markets Multi Asset Fund and the L&G Infrastructure Equity MFG Fund. For emerging markets, funds that invest in this region usually demonstrate a higher carbon footprint due to high exposure to high-emitting companies. Infrastructure also tends to be a high-emitting asset class given the nature of the underlying assets, albeit important for transition to a low carbon economy. The Trustee has considered the climate risks and opportunities associated with these investments, alongside the other financial risks and opportunities they provide. Overall, the Trustee is satisfied that the investments remain suitable for the DC default strategy.

Data quality is high for equity and listed infrastructure funds, with a large proportion of assets having reported emissions, which provides clarity on risk concentration in the portfolio. Data quality for the corporate bond funds is low, as well as for the DGFs as they allocate to several asset classes where data is currently unavailable. Overall, the Trustee expects the data coverage to improve for these funds over time as investment managers and companies enhance their processes for collecting data. As can be seen from the data shown on the previous page, coverage for most funds has increased in comparison to last year. Data quality for the Baillie Gifford Multi-Asset Fund is the lowest, however, the Scheme no longer invests in this fund after it was replaced with the Nordea Diversified Return Fund after the Scheme Year end.

In terms of portfolio alignment, a considerable proportion of companies in the equity and listed infrastructure funds have committed to reducing emissions in alignment with 1.5°C warming targets. Fewer companies within the emerging markets, DGFs, and corporate bond funds have such targets, indicating higher transition risk. However, it should be noted that lower coverage of these funds means that the percentage of reported assets with SBTi accredited targets or equivalent would be lower. It is also important to note that high-emitting, hard-to-decarbonise industries make up a large share of bond markets, which has so far led to a smaller proportion of companies in the bond markets making these commitments This impacts the Scheme's DGFs alongside the corporate bond fund. The Trustee expects this to increase over time.

As a result of the analysis, the primary action remains for the Trustee and its investment adviser to engage with the investment managers to ensure they are maximising their impact when engaging on climate-related issues and to better understand the treatment of climate factors in the funds used by the Scheme.

Challenging managers on data quality – Baillie Gifford DGF

In March 2023, Baillie Gifford were invited to present to the JISC to provide an update on performance, positioning and ESG. During the presentation, the JISC queried Baillie Gifford on its approach to managing climate risks and opportunities, noting that data coverage for the portfolio was low.

Baillie Gifford noted that it was taking steps to improve data quality through engagement with portfolio companies and carbon data providers. Baillie Gifford confirmed that it had recently had a series of meetings with MSCI to discuss disclosure gaps in carbon reporting and ways Baillie Gifford could make its data more accurate.

Baillie Gifford noted that this engagement helped it increase its knowledge of MSCI systems and processes, allowing it to improve its coverage of assets. Baillie Gifford also highlighted that it was trialling new carbon footprinting software that could help improve data reporting in the future.

4. Metrics and Targets (continued)

Climate metrics (Scope 3 emissions) - DC section

The metric data covering Scope 3 emissions for the funds that comprise the default strategy of the Scheme's DC section is shown below, based on the assets held as at 31 December 2023.

Portfolio	Fund	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)	Data coverage (% portfolio)	Data quality *(reported/ estimated/ unavailable)*
Equities	BlackRock MSCI World Equity Index	£149.3m / 49%	*Not available*			
	BlackRock MSCI World Equity Fund (hedged)	£43.6m / 14%	*Not available*			
	Baillie Gifford Multi-Asset Growth Fund	£26.7m / 9%	3,101	116	43%	0 / 43 / 57
	Ruffer Diversified Return Fund	£26.3m / 9%	14,565	554	*Not available*	
	L&G Emerging Market Multi Asset Fund	£4.8m / 2%	4,934	1,030	47%	*Not available*
Alternatives	Invesco Global Real Estate Fund	£6.5m / 2%	*Not available*			
	L&G Infrastructure Equity MFG Fund	£4.6m / 2%	2,428	525	96%	*Not available*
Bonds	BlackRock Over 15 Years Gilt Index Fund[2]	£8.6m / 3%	1,166	136	100%	100 / 0 / 0
	BlackRock Over 5 Years Index Linked Gilt Fund[2]	£8.2m / 3%	1,110	136	100%	100 / 0 / 0
	BlackRock Corporate Bond Index All Stocks Fund	£6.5m / 2%	*Not available*			
	L&G Overseas Bond Fund[6]	£5.9m / 2%	784	134	99%	*Not available*
Cash	BlackRock Cash Fund	£6.8m / 2%	*Not available*			

Based on the data available, the Ruffer DGF has the highest total absolute Scope 3 emissions. This is due to the fund's diversified nature, investing across various asset classes and aggregating emissions from multiple high-impact areas resulting in higher total emissions. The L&G Emerging Markets Multi Asset Fund has the highest carbon footprint. This is because investments in emerging markets typically have higher carbon intensity due to less stringent environmental regulations and a greater reliance on fossil fuels.

The Trustee has not been able to report Scope 3 emissions for all the metrics for the funds due to limited availability of data for the managers. For example, BlackRock have stated that currently they do not currently provide information on Scope 3 emissions for any funds but will be providing this later in the year. The Trustee will continue to monitor improvements and changes in future reporting.

[1] Figures shown relate only to the assets for which data is available. Total emissions are for HIPS' assets, not the whole pooled fund.

[2] Climate metrics for the gilt funds have been calculated by LCP. Further details including the calculation methodology is shown in Appendix 4.

4. Metrics and Targets (continued)

Obtaining data to calculate metrics

Climate metric data quoted in this report is based on data provided by the Scheme's investment managers, with the exception of the Scheme's LDI mandate and gilt portfolios which have been calculated by LCP.

Metrics for the Scheme's LDI and gilt assets have been calculated on a different basis to the other assets in this report, so cannot be compared with the other mandates for which emissions data has been provided. A summary of the methodology used to calculate these emissions is outlined in Appendix 4. We note there can be issues of double counting across the portfolio where UK country emissions double count UK company emissions already accounted for within the corporate bond portfolio.

IFM and LaSalle were unable to provide data as at 31 December 2023, and therefore the metrics provided have been quoted as at 31 December 2022. The Scheme will need to report on these funds with a one-year lag going forwards, which should be noted when considering improvements year-on-year.

The Trustee was unable to obtain climate metric data from Invesco as at 31 December 2023 at the time of writing. LCP have raised this as an issue with Invesco on behalf of the Trustee. The Trustee has noted that should data as at year end not be available for next years' report, it will look to report Invesco's metrics on a delay in line with the DB section's property and infrastructure mandates.

The Trustee was pleased to see that L&G had started providing data quality metrics this year.

Data coverage and quality metrics for LaSalle represent the proportion of portfolio invested in funds who provide emissions data to GRESB[1]. LaSalle rate all data received from GRESB as "reported". The Trustee notes that this does not represent a true picture of the underlying emissions data collected by the underlying funds on the emissions of their underlying properties. This means that whilst emissions data is available for the property assets, the Trustee does not currently have a full view of the proportion of the underlying assets for which emission data has been reported or how reliable the data is. Whilst the Trustee aims to understand emissions on a look-through basis, it notes that data availability is currently low for many illiquid mandates and LaSalle is reliant on underlying fund managers collecting and reporting data.

The Trustee has defined portfolio alignment as the proportion of the portfolio that with an SBTi accredited emissions reduction target or equivalent. There are a number of instances where "or equivalent" has been used:

- For the LDI and gilt portfolios the Trustee has assumed 100% portfolio alignment due to the UK Government's 2050 Net Zero target, set as part of the Paris Agreement.
- For LaSalle, the Trustee has measured portfolio alignment as the percentage of assets invested in funds with an SBTi target, rather than looking at assets on a look through basis where an equivalent measure would be required. LaSalle confirmed that 2 of the 7 underlying property funds had an SBTi target (an increase from 1 the previous year), and that it had been engaging with all managers on setting Net Zero targets.
- For IFM, portfolio alignment is based on the proportion of assets with clear Net Zero targets and credible plans to reach these.

The Trustee was unable to obtain Scope 3 data for the IFM, BlackRock and Invesco mandates. In addition, data quality metrics for a number of the Scheme's managers was unavailable. The JISC and its investment adviser are working with the managers to encourage disclosure of Scope 3 metrics for future reports. Following its review of emissions data in May 2023, the JISC reaffirmed the requirement to provide Scope 3 emissions to its managers. IFM have noted that it will look to provide Scope 3 emissions in the future.

The Trustee was unable to obtain data for the Scheme's insurance policy in relation to the DB section as this was not readily available from the insurer at the date of publication. At the date of this report, the insurance policy accounted for less than 1% of total Scheme assets.

The Trustee continues to engage with managers on data reporting. To advance disclosures and methodologies, and to improve the range of assets included within TCFD analysis for pension funds, the Scheme's investment adviser also continues to participate in a range of sustainable investment working groups.

[1]GRESB is the Global Real Estate Sustainability Benchmark, which is an independent ESG benchmarking agency for real asset funds

4. Metrics and Targets (continued)

Selecting a climate target for the Scheme

The Trustee has set the following climate target for the Scheme:

Increase the percentage of underlying companies (by portfolio weight) in the Scheme's infrastructure, listed equity and corporate bond holdings that have set a SBTi-accredited target or equivalent by 75% (ie 75% times more) by 31 December 2029, compared to 31 December 2021 levels. Note that, for the DC section, this will be restricted to assets within the default strategy.

The Trustee describes this target as its "portfolio alignment" target.

The Trustee set this target based on its analysis of climate metrics in August 2022. This target was chosen as the metric is forward-looking and focused on the transition that needs to occur in the future to achieve Net Zero aims globally. The Trustee noted that portfolio alignment is particularly important for the infrastructure mandates, which have historically invested in carbon intensive sectors. As such, the Trustee believes it is important for these assets to have robust plans in place to achieve Net Zero with suitable interim targets.

The Trustee felt it was appropriate to extend this target to the Scheme's equity and corporate bond mandates to get a greater understanding of the action taken on a larger proportion of the portfolio and due to the diverse underlying exposures in these funds. This was further supported by the relatively low alignment of the DB section's equity and corporate bond assets (both less than 50%) as at 30 June 2022.

The Trustee felt that the portfolio alignment target was suitable for the DC section as well, given the majority of the section's assets are invested in equities, with bonds taking up a larger proportion of members' portfolios as they reach retirement.

Achieving the above target will improve the Scheme's assets' alignment with a 1.5°C pathway which is expected to help manage climate-related risks to the Scheme by:

1. Reducing exposure to climate transition risks in the shorter-term by keeping up with/slightly ahead of a general market trend; and
2. Supporting collective action to meet the Paris Agreement goals, hence reducing longer-term systemic risks from the physical effects of climate change.

Reviewing the climate target

The JISC reviewed the Scheme's climate target in May 2023, alongside its review of the climate data as at 31 December 2022. The JISC determined that the target remained appropriate given the scope for increased portfolio alignment in the relevant funds and the progress of the Scheme towards meeting the target to date.

The Trustee will continue to review the target annually to ensure it remains fit for purpose.

4. Metrics and Targets (continued)

Progress towards meeting the climate target

To assess the Scheme's progress towards its climate target, the Trustee has collected portfolio alignment data for the Scheme's infrastructure, equity and corporate bonds mandates as at 31 December 2021 (reference date), 31 December 2022 (previous reporting date) and 31 December 2023 (current reporting date).

These are outlined at a portfolio level for the DB and DC sections below, as well as the equivalent target alignment as at 31 December 2029.

Portfolio alignment	Reference date *31 December 2021*	Previous reporting date *31 December 2022*	Current reporting date *31 December 2023*	Target *31 December 2029*
DB section	49%	53%	64%	85%
DC section	-	37%	43%	64%

As at the date of the report, infrastructure, equity and corporate bond portfolios accounted for 16% of total DB assets and 68% of total DC assets.

Over the year under review, both the DB and DC sections made good progress towards their climate targets, with the weighted average portfolio alignment across the underlying mandates increasing by +12% and +6% respectively. Each section saw improvements in the portfolio alignment of all the relevant underlying mandates (with the exception of the DC section's Overseas Bond mandate where the portfolio alignment remained at 0%).

DB section

The DB section's infrastructure mandate saw the largest improvement in portfolio alignment over the year. The Trustee notes that there is now limited scope for further improvements for this portfolio, and therefore it does not expect to see the same rate of progress towards the climate target in future years for the DB section.

Due to the availability of data, the DB section infrastructure information as at both the reference and the previous reporting date is the same. This means the report may be underestimating the Scheme's progress towards its target.

DC Section

As the Trustee was unable to get complete portfolio alignment data as at the reference date (31 December 2021), the Trustee has based the target for the DC section to be a 75% improvement from 31 December 2022.

Portfolio alignment within the DC section is lower than the DB section as:

- The DC section has an allocation to emerging markets. As mentioned previously, emerging market companies are less likely to have accredited carbon reduction plans in place than their developed market counterparts.
- The DC section gains exposure to infrastructure through a listed equity mandate, which means the infrastructure fund is one of many investors in the underlying infrastructure companies. The DB section invests in unlisted infrastructure, where the portfolio manager is a majority owner of the underlying companies with seats on the boards. This gives them more influence on the actions of the companies such as setting Net Zero targets. The Trustee notes that due to the regulatory limitations on the types of investments the DC section can invest, at present the listed approach to infrastructure investment remains the most appropriate approach.

4. Metrics and Targets (continued)

Steps taken to achieve the target

The following steps are being taken to achieve the Scheme's portfolio alignment target:

- The Trustee, with help from its investment adviser, has communicated the Scheme's target to its infrastructure, equity and corporate bond managers. These were reaffirmed to the managers during the Scheme year when collecting data for the Trustee's TCFD report.
- Investment managers are routinely invited to present at JISC meetings as part of the existing monitoring process. When meeting with the Scheme's investment managers, the JISC will ask the managers how they expect the proportion of portfolio companies with SBTi (or equivalent) targets to change over time and encourage the managers to engage with portfolio companies about setting targets.
- To date the Trustee's focus has been on the IFM Infrastructure mandate where a number of portfolio companies have high carbon footprints. In particular, as IFM holds Board seats on all their portfolio companies the Trustee has been keen to hear case studies where low carbon transition plans have been successfully implemented. The Trustee has been pleased to see the increase in the number of underlying companies with Net Zero and interim targets and hopes to see this increase to 100% next year.
- The Trustee's investment adviser, LCP, encourages managers to support the goal of Net Zero by 2050 or earlier and has published its expectations for investment managers in relation to Net Zero. This includes the use of effective voting (where applicable) and engagement with portfolio companies. LCP continues to engage with managers on this topic and will encourage them to use their influence with portfolio companies to increase the use of SBTi targets (or similar).
- The Trustee will review progress towards the target each year and consider whether additional steps are needed to increase their chance of meeting the target. As at the report date, the Scheme was on track to meet its target.

Appendices

Appendix 1: Governance Statement

Trustee Statement on Governance of Climate Change Risks and Opportunities

HIPS (Trustees) Limited (the "Trustee") has ultimate responsibility for ensuring effective governance of climate change risks and opportunities in relation to the Hanson Industrial Pension Scheme (the "Scheme"). This statement documents the governance processes the Trustee has put in place to ensure that it has oversight of the climate-related risks and opportunities relevant to the Scheme so that it can be confident that its statutory and fiduciary obligations are being met.

Overview of approach

Climate change is a financially material factor for the Scheme. It represents a systemic risk to society, the economy and the financial system, although the transition to a low-carbon economy also presents opportunities. These risks and opportunities have the potential to impact the Scheme's investments, sponsoring employers and funding position. Identifying, assessing and managing them is a strategic priority for the Scheme and therefore this is done by the Trustee Board, with certain responsibilities in respect of investment matters for both the defined benefit ("DB") and defined contribution ("DC") sections of the Scheme delegated to the Joint Investment Sub Committee ("JISC") for the Hanson schemes with support from the Trustee's external advisers.

Trustee knowledge and understanding

It is essential that the Trustee Directors have sufficient knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities that are relevant to occupational pension schemes. The Trustee will review its skills and experience in this area when undertaking the Trustee Board's annual skills review and also consider what training is likely to be required over the coming year when setting its annual ESG and climate change business plan, incorporating training sessions as appropriate. These sessions typically include an annual update on recent developments, with interim training on any time-critical developments. They may also include training in support of specific agenda items at Trustee or JISC meetings.

Full details of the training undertaken is documented in the Trustee's training log.

Roles and responsibilities

Trustee Chair

It is the Trustee Chair's responsibility, with support from the Scheme Secretary to ensure that sufficient time is allocated for consideration and discussion of climate matters by the Trustee and its advisers, and all relevant matters are considered with appropriate input from the Trustee's external advisers.

Trustee

In broad terms, the Trustee is responsible for:

- ensuring the Trustee Directors have sufficient knowledge and understanding of climate change to fulfil their statutory and fiduciary obligations and are keeping this knowledge and understanding up to date. This will include knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities for the Scheme.
- putting in place effective governance arrangements to ensure appropriate and effective oversight of climate-related risks and opportunities that are relevant to the Scheme. incorporating climate-related considerations into strategic decisions relating to the Scheme's covenant, investments and funding arrangements. incorporating climate-related considerations into the Scheme's investment beliefs, investment policies, risk register and contingency planning and monitoring framework and ensuring that climate-related risks are integrated into the overall risk management of the Scheme.
- allowing for climate-related considerations when assessing and monitoring the strength of the sponsoring employer's covenant.
- ensuring that the Scheme's actuarial, investment and covenant and legal advisers have clearly defined responsibilities in respect of climate change matters relevant to the Scheme, that they have adequate expertise and resources, including time and staff, to carry these out, that, in the case of the Scheme's actuarial, investment and covenant advisers, they are taking adequate steps to identify and assess any climate-related risks and opportunities which are relevant to the matters on which they are advising, and that they are adequately prioritising climate-related risk.
- considering and documenting the extent to which the advisers' responsibilities are included in any agreements.
- communicating with Scheme members and other stakeholders on climate change where appropriate, including public reporting in accordance with The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational and Personal Pension Schemes (Disclosure of Information) Regulations 2013 (together "TCFD reporting") when required.

The Trustee has delegated consideration of a number of matters to the JISC.

JISC Chair

It is the JISC Chair's responsibility, to ensure that sufficient time is allocated for consideration and discussion of climate matters by the JISC and its advisers and all relevant matters are considered with appropriate input from the Trustee's external advisers.

Appendix 1: Governance Statement *(continued)*

JISC

The purpose of the JISC is to aid the Trustee with any issues relating to the investment of the Scheme's assets, monitoring of the Scheme's liabilities, and taking investment decisions in respect of the DB section on behalf of the Trustee, subject to the Scheme's Statement of Investment Principles. With regards to the DC section, investment decisions relating to the section's assets are reserved to the Trustee Board, but the JISC remains responsible for reviewing investment arrangements and making recommendations to the Trustee Board.

In broad terms the JISC is responsible for, as delegated by the Trustee:

- ensuring the members of the JISC have sufficient knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities that are relevant to occupational pension schemes to perform their roles.
- determining short, medium and long-term time periods to be used when identifying climate-related risks and opportunities relevant to the Scheme's investment strategy and funding strategy, taking into account the Scheme's liabilities and its obligations to pay benefits.
- identifying and assessing the impact of the climate-related risks and opportunities relevant to the Scheme's investment strategy and funding strategy and documenting these.
- selecting, calculating, and regularly reviewing metrics to inform its assessment and management of climate-related risks and opportunities relevant to the Scheme, setting and monitoring performance against a selected climate-related target and considering on an annual basis whether any selected target should be retained or replaced.
- ensuring that the Scheme's investment managers are managing climate-related risks and opportunities in relation to the Scheme's investments, and have appropriate processes, expertise, and resources to do this effectively.
- determining when it is appropriate to undertake scenario analysis that illustrates how the Scheme's assets, liabilities, investment, and funding strategy might be affected under various climate change scenarios, noting that this will be undertaken at a minimum once every three years.
- selecting appropriate scenarios and undertaking and reviewing the results of climate scenario analysis, that illustrates how the Scheme's assets, liabilities, investment, and funding strategy might be affected under various climate change scenarios.
- considering and documenting the extent to which the Scheme's investment advisers' responsibilities are included in any agreements, such as investment consultants' strategic objectives.

Investment adviser

In broad terms, the Scheme's investment adviser is responsible, in respect of investment matters for both the defined benefit and defined contribution sections of the Scheme, as requested by the Trustee, for:

- providing training and other updates to the Trustee on relevant climate-related matters.
- helping the Trustee to formulate its investment beliefs in relation to climate change and reflecting these in the Scheme's investment policies and strategy.
- Identifying and assessing climate-related risks and opportunities relevant to the Scheme's investment strategy including advising how those risks and opportunities might affect the different asset classes in which the Scheme might invest over the short, medium and long-term, and the implications for the Scheme's investment strategy.
- liaising with the scheme actuary (as appropriate) to advise how climate-related risks and opportunities might affect the Scheme's funding position over the short-, medium- and long-term and the implications for the Scheme's funding strategy and long-term objectives.
- advising on the inclusion of climate change in the Scheme's governance arrangements, risk register and contingency planning and risk monitoring framework, in relation to investment matters, working with the Trustee and its other advisers as appropriate.
- advising the Trustee on the appropriateness and effectiveness of the Scheme's investment managers' processes, expertise, and resources for managing climate-related risks and opportunities, given the Trustee's investment objectives and beliefs.
- assisting the Trustee, through the JISC, in identifying, calculating/measuring, and reviewing suitable climate-related metrics and targets in relation to the Scheme's investments, including liaising with the Scheme's investment managers regarding the provision of the data needed to calculate the metrics, calculation of those metrics and measuring performance against selected targets.
- leading on the preparation of the Trustee's TCFD reporting, working with the JISC, the Trustee and its other advisers as appropriate.

Actuarial adviser

In broad terms, the Scheme's actuarial adviser is responsible, as requested by the Trustee, for:

Appendix 1: Governance Statement *(continued)*

- identifying and assessing climate-related risks and opportunities relevant to the funding strategy of the Scheme, including advising how those risks and opportunities might affect the Scheme's funding position over the short, medium and long-term and advising on the implications of those risks and opportunities for the Scheme's strategy and long-term objectives.
- considering climate-related risks and opportunities as part of advice and calculations related to the triennial actuarial valuation.
- advising on the inclusion of climate change in the Scheme's governance arrangements and integrated risk management (IRM) contingency planning and monitoring framework, in relation to funding matters, working with the Trustee and its other advisers as appropriate.
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, IRM contingency planning and monitoring framework and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.

Covenant adviser

In broad terms, the Scheme's covenant adviser is responsible, as requested by the Trustee, for:

- providing training and other updates to the Trustee on relevant climate-related covenant matters.
- identifying and assessing climate-related risks and opportunities relevant to employer covenant supporting the Scheme including advising how climate-related risks and opportunities might affect the Scheme's sponsoring employer over the short, medium and long-term.
- leading on the inclusion of climate change in the Scheme's covenant monitoring, working with the Trustee and its other advisers as appropriate.
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, contingency planning and monitoring framework and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.

Legal adviser

In broad terms, the Scheme's legal adviser is responsible, as requested by the Trustee, for:

- providing training and other updates to the Trustee on relevant climate-related legal matters.
- advising the Trustee in relation to its legal obligations in relation to climate change in the context of the Scheme and working with the Trustee's other advisers as required to help assess and advise on alignment between these obligations and the practical steps the Trustee is taking in relation to the identification and assessment of climate-related risks and opportunities relevant to the Scheme.
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, contingency planning and monitoring framework and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.
- where requested, assisting in the documentation of any contractual requirements to be included in the arrangements with the Scheme's investment managers or other advisers with respect to the governance, management and reporting of climate-related matters.

Investment managers

In broad terms, the Scheme's investment managers are responsible for:

- identifying, assessing and managing climate-related risks and opportunities in relation to the Scheme's investments, in line with the investment management arrangements agreed with the Trustee.
- exercising rights (including voting rights) attaching to the Scheme's investments, and undertaking engagement activities in respect of those investments, in relation to climate-related risks and opportunities in a way that seeks to improve long-term financial outcomes for Scheme members.
- providing information to the Scheme's investment adviser on climate-related metrics in relation to the Scheme's investments, as agreed from time to time, and using its influence with investee companies and other parties to improve the quality and availability of these metrics over time.

Nature and frequency of monitoring

The Trustee considers a range of different information about the climate change risks and opportunities faced by the Scheme to enable it to fulfil its responsibilities set out above.

Annual review

At one or more Board meetings each year, the Trustee will review, revise where appropriate and approve:

- the Scheme's risk register, following review and updates from its advisers;
- its governance arrangements, investment beliefs and investment policies in relation to climate change;

Appendix 1: Governance Statement *(continued)*

- its draft TCFD reporting;
- a draft business plan for the following year in relation to ESG and climate change that outlines the main topics due to be discussed at each Board meeting and the papers expected from advisers in relation to each item.

At one or more JISC meetings each year, the JISC will review:

- an update report on the climate-related metrics in the Scheme's contingency planning and monitoring framework, following review by its advisers;
- updates on the Scheme's investments from the Scheme's investment advisers, including data on environmental, social and governance (ESG) and climate-related metrics and progress against any targets set in relation to these metrics;
- its draft TCFD reporting;
- taking into account the Scheme's performance against its selected climate-related target, whether that target should be retained or replaced;
- a responsible investment update from the Scheme's investment advisers that reviews the Scheme's investment managers in relation to ESG factors and climate change;
- whether it is appropriate to carry out scenario analysis that illustrates how the Scheme's assets, liabilities, investment and funding strategy might be affected under various climate change scenarios, in years when this is not required because it has been carried out within the previous two years;
- the advisers' climate competency and assess how they have performed against their climate responsibilities.

Less frequent reviews

The JISC and Trustee will consider climate-related risks and opportunities whenever the following activities are undertaken:

- actuarial valuation of the Scheme's defined benefit section;
- review of the investment strategy for the Scheme's defined benefit and defined contribution sections;
- assessment of the sponsoring employer's covenant.

The JISC will, at least every three years and following any major changes in the Scheme's position, review:

- its choice of short, medium and long-term time periods to be used when identifying climate-related risks and opportunities relevant to the Scheme's investment strategy and funding strategy;
- the results of scenario analysis that illustrates how the Scheme's assets, liabilities and covenant might be affected under various climate change scenarios;
- its choice of metrics to review regularly to inform its assessment and management of climate-related risks and opportunities.

Whenever it reviews its agreements with external advisers, or appoints new advisers, the Trustee will consider and document the extent to which the advisers' climate-related responsibilities are included in the agreements and/or any adviser objectives set.

Review of this statement

The Trustee approved this statement at its meeting on 2 March 2022. It will review it at least annually.

Appendix 2: Climate Scenario Modelling 2022

Scenarios considered and why the JISC chose them

The JISC carried out climate scenario analysis as at 31 December 2021 with the support of their investment consultants, LCP. The analysis looked at three possible scenarios:

Transition	Description	Why the JISC chose it
Failed Transition	Under this scenario it is assumed that the Paris Agreement Goals[1] are not met; only existing climate policies are implemented, and global temperatures rise significantly.	The JISC chose to consider this scenario to explore what might happen to the Scheme's finances if carbon emissions continue at current levels, resulting in significant physical risks from changes in the global climate that disrupt economic activity.
Orderly Net Zero by 2050	Under this scenario it is assumed that the Paris Agreement Goals are met through rapid and effective climate action, with a smooth market reaction to the changes implemented.	The JISC chose to consider this scenario to see how the Scheme's finances could play out if carbon emission reduction targets are met in line with the Paris Agreement, meaning that the economy makes a material shift towards a low carbon economy by 2030.
Disorderly Net Zero by 2050	Under this scenario the same policy, climate and emissions outcomes are assumed as the Paris Orderly Transition, but financial markets are initially slow to react and then overreact subsequently.	The JISC chose to consider this scenario to look at the potential impact on the Scheme if carbon emission reduction targets are met in line with the Paris Agreement, but financial markets are volatile as they adjust to a low carbon economy.

The key features of the scenarios are as follows:

	Failed Transition	Paris Orderly Transition	Paris Disorderly Transition
Low carbon policies	Continuation of current low carbon policies and technological trends	Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel	
Paris Agreement outcome	Goals not met	Goals met	Goals met
Global warming	Average global warming is about 2°C by 2050 and 4°C by 2100, compared to pre-industrial levels	Average global warming stabilises at around 1.5°C above pre-industrial levels	
Physical impacts	Severe	Moderate	Moderate
Impact on GDP	Global GDP is significantly lower than the climate-uninformed scenario in 2100	Global GDP is lower than the climate-uninformed scenario in 2100 For example, UK GDP in 2100 predicted to be about 10% lower	In the long-term, global GDP is slightly worse than the Paris Orderly scenario due to the impacts of financial market volatility
Financial market impacts	Physical risks priced in over period 2025-2030 A second repricing occurs in the period 2035-2040 as investors factor in the severe physical risks	Transition and physical risks priced in smoothly over the period of 2021-2025	Abrupt repricing of assets causes financial market volatility in 2025

Source: Ortec Finance. Figures quoted are medians.

The scenarios showed that equity markets could be significantly impacted by climate change with lesser but still noticeable impacts in bond markets. All three scenarios envisaged, on average, lower investment returns and resulted in a worse DB funding position and lower retirement outcomes for DC members.

Appendix 2: Climate Scenario Modelling 2022 *(continued)*

DB section: Potential impacts on the assets and liabilities identified by the scenario analysis

The intricacies of climate systems present considerable difficulties in modelling the impacts on pension schemes' assets and liabilities. This is particularly true in the Failed Transition scenario where over 4°C of warming is observed. Due to the unprecedented nature of such warming, it is challenging to encompass all potential consequences within the modelling process. Simplifications in the modelling, such as not allowing for tipping points, mean the actual impact on pension schemes is likely to be more significant than is currently being modelled. The JISC has considered the potential impact of such limitations in the modelling. The JISC is comfortable that, as long as these limitations are understood, the scenarios still provide valuable insights to inform climate risk assessment and management.

To provide further insight, the JISC also compared the outputs under each scenario to a "climate uninformed base case", that makes no allowance for either changing physical or transition risks in future.

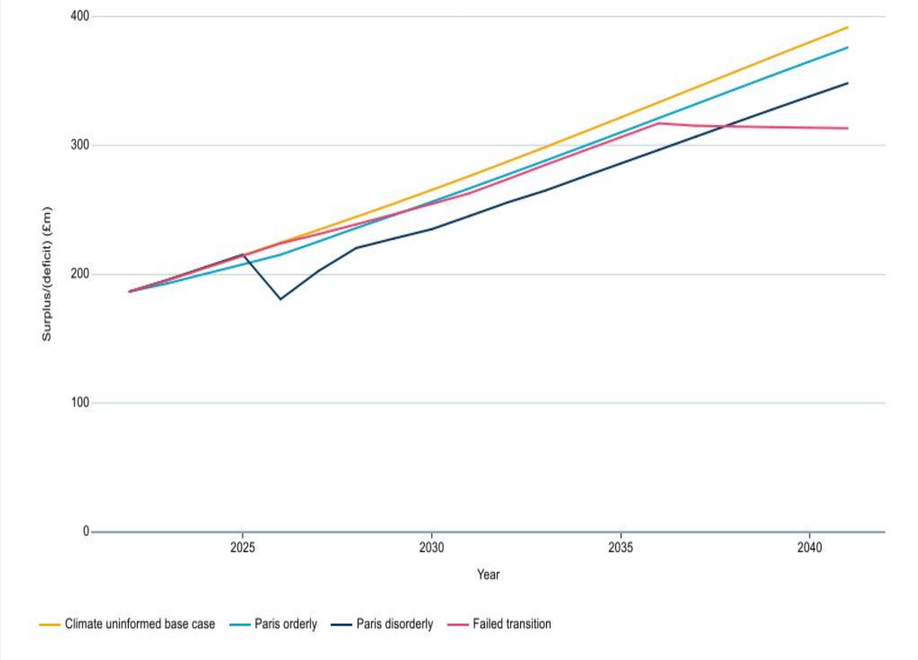
The scenario analysis looked at the impact of the Scheme's funding position over time on the Scheme's long-term funding target of self-sufficiency (gilts + 0.25% pa). The chart on the right illustrates the expected change in surplus of the DB section under each of the three scenarios considered, as well as in the "climate uninformed" base case.

The key impacts of each scenario on the DB section were:

- Under the Paris Orderly Transition scenario (light blue line), the overall impact on the funding position is modest. Whilst transitional risks impact the funding position in earlier years, the resultant new climate policies and technology help to reduce physical risks in later years.
- Under the Paris Disorderly Transition scenario (dark blue line), there is volatility in the mid-2020s as markets react abruptly to changes in policy and technology to address climate change. Whilst in the short-term this has a detrimental impact on the funding position, the overall impact is relatively low as the Trustee has already taken significant steps to de-risk the investment strategy. The earlier volatility in the funding position means the outcome is worse than under the Paris Orderly Transition, however the Scheme is expected to remain in a strong funding position.
- Under the Failed Transition scenario (pink line), there would be a more significant impact on the funding position, but not until after 2035. In practice, given the Scheme's strong funding position, and expectation that this should continue to improve over time, the Scheme should be in a strong position to withstand large shocks at this time.

The JISC acknowledges that many alternative plausible scenarios exist but found these were a helpful set of scenarios to explore how climate change might affect the Scheme in future.

Impact of different climate scenarios on the DB section's funding position over time



Analysis as at 31 December 2021. Further details on the modelling approach is outlined in Appendix 3.

Overall, the analysis highlighted that the DB section is expected to be relatively resilient against climate risks over the long-term due to its strong funding position and low risk investment strategy.

Appendix 2: Climate Scenario Modelling 2022 *(continued)*

DB section: Impact of climate change on life expectancy

If a member lives longer, the Scheme pays the member's DB pension for longer and therefore needs more assets to make the payments.

Like the economic impacts, the impact of climate change on life expectancy is highly uncertain. As part of the climate scenario discussions, the Trustee considered the various possible drivers for changes in mortality rates with both positive and negative impacts expected in each of the scenarios considered.

For example, in the Paris Orderly Transition scenario, the reduced use of fossil fuels should lead to lower air pollution, increasing life expectancy. But this effect could be countered by economic prosperity generally being lower in this scenario, and this may limit the funding available for healthcare.

As part of the 31 December 2021 actuarial valuation, analysis was carried out by Aon which showed that if members were to live 1 year longer, the technical provisions would increase by around £101m.

Given the level of uncertainty, the Trustee noted that no specific allowance had been made in the scenario analysis, but that it would keep up to date on developments in this area and consider it further as part of the 31 December 2024 actuarial valuation.

DB section: Considerations for alternative long-term funding targets

As at the date of the analysis, the Scheme had significant surplus on its long-term self-sufficiency target (gilts + 0.25% pa). Therefore, the JISC also discussed the possible impact of climate change on an indicative buy-out basis, as a potentially more prudent, alternative long-term target for the Scheme.

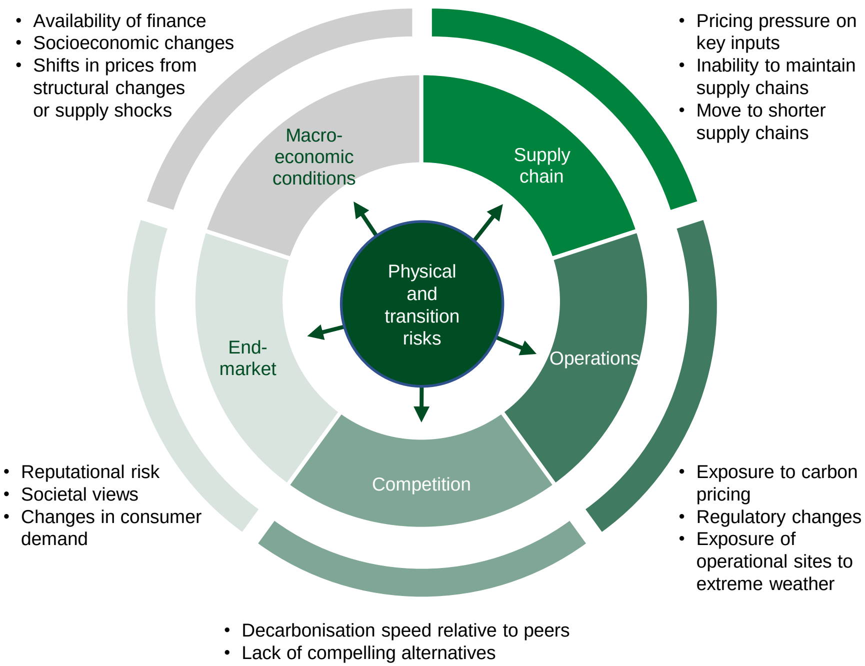
Whilst climate scenario modelling was not undertaken for an indicative buy-out basis, the JISC discussed how climate change risks could affect insurer pricing for securing pension benefits. A change in insurer pricing levels could have a significant impact on when it will be feasible to secure benefits with an insurer.

Potential impacts of climate change on Employer covenant

If the impacts of climate risks are more severe in practice than has been modelled by the climate scenario analysis, this could have implications for the Scheme's journey plan and potentially require additional contributions from the Employer. The Trustee therefore undertook additional scenario analysis on Employer covenant in December 2022 with its covenant adviser, Cardano. Cardano's assessment was based on the Group rather than the Scheme's Employer given the Scheme's access to the assets of the Group parent company via a guarantee provided by Heidelberg Materials AG.

Transmission channels

Climate change can impact a business or organisation throughout the whole value-chain, and the key issues arising from climate change are complex and multi-dimensional. The figure below provides an overview of the transmission channels and the potential risks or impacts from climate change that are considered as part of the high-level, climate focused, covenant assessment of the Group.



Appendix 2: Climate Scenario Modelling 2022 *(continued)*

Covenant climate scenarios

The following three climate scenarios have been considered as part of the climate focused covenant assessment carried out by Cardano. These three scenarios are consistent with the actuarial and investment scenarios used by the Trustee for TCFD purposes. In all three scenarios, it is assumed that the Group continues to implement its sustainability commitments and de-carbonisation targets.

	Failed Transition 3 - 4°C scenario	**Orderly Transition** 1.5°C scenario	**Disorderly Transition** 2°C scenario
Scenario outline	No new transition policies above existing commitments leads to continued increase in GHG emissions and rise in global temperature	Global decarbonisation starts now so policies intensify progressively and immediately. Large transition changes will happen quickly	The key difference between this scenario and Orderly transition is that financial markets react belatedly to the transition
Physical risks	More pronounced physical risks, particularly over the longer-term	Long-term physical risks are reduced but deviations from the present climate are still expected	Long-term physical risks are reduced but deviations from the present climate are still expected
Transition risk	Limited transition risks over and above existing commitments and policies	Highest in the near-term as major policies are implemented immediately, but continuing throughout	Highest in the near-term, but macro-risks delayed until medium-term
Macro-economic impact	UK and global GDP growth permanently lower with that impact growing over time. Macroeconomic uncertainty increases	Overall longer-term impact on GDP growth muted, with assumed long-term benefit from green tech investment offset somewhat by physical impacts	Compressed nature of financial market adaptation causes more abrupt market impacts

Covenant scenario analysis

The table to the right provides an overview of the scenario risk analysis over time on the covenant of the Group. The key findings from the risk analysis are:

- In the near-term, climate risks appear modest, with the greatest risk in the Orderly Transition scenario arising from (i) costs associated with reducing carbon emission of operations and / or offsetting those emissions (ii) price and access to financing and (iii) the impact of changing regulation on the efficacy of the production process.
- Over the mid-term, the risk in all three scenarios rises due to the risk of increased extreme weather disruption of the Group's operational sites. In the lower-warming scenarios, the costs associated with emissions are likely to continue to rise, whilst the physical risks are expected to be somewhat more pronounced in the Failed Transition scenario.
- Over the longer-term, the Group's operations and supply chain exposure to physical risks, especially in a Failed Transition scenario, increase materially. Carbon neutrality will require the full-scale adoption of carbon capture, utilisation and storage and a shift to recycled / low-clinker products, requiring new, unproven technology and the reshaping of the value chain. Failure to decarbonise increases costs in both transition scenarios.

	Near-term **Up to 2025**	**Mid-term** **2025 to 2035**	**Long-term** **2035+**
Orderly Transition	Medium risk	Medium risk	Lower risk
Disorderly Transition	Lower risk	Medium risk	Higher risk
Failed Transition	Lower risk	Medium risk	Higher risk

Appendix 2: Climate Scenario Modelling 2022 *(continued)*

DC section: Potential impacts on the assets and liabilities identified by the scenario analysis

The scenario analysis looked at the retirement outcomes (in terms of size of their projected retirement pot) for individual members of different ages who are invested in the default strategy. The default strategy is the only “popular arrangement” within the DC section. The analysis highlighted that DC section members will be subject to climate risk of varying degrees dependent on both the scenario and the age of the member. Analysis was conducted for the default strategy for members at four different ages to reflect the different asset classes (and therefore level of climate risk) at different points in the lifestyle.

Climate risks are expected to have a greater impact on return-seeking assets, such as equities. The default strategy has been designed in a way that reduces exposure to these types of assets as members approach retirement. As such, climate risks are also expected to reduce the closer a member is to retiring.

The main potential impacts under each scenario for the DC section were as follows:

- The Paris Orderly Transition led to the best outcome for members of all ages, as in this scenario physical climate risks are low, and transitional climate risks are well managed.
- The Paris Disorderly Transition includes a market shock in the short-term which impacts return seeking assets the most. For younger members, whilst in a worse off position than under the Paris Orderly Transition scenario, there is still time for return seeking assets to recover through future investment returns and contributions. Members within 10 years of retirement hold a low and decreasing allocation to return-seeking assets so they are less impacted than younger members in this scenario.
- The Failed Transition has limited short-term impacts of climate change, but larger long-term effects, as it assumes increasingly severe physical impacts emerge over time. This scenario therefore has a larger impact on younger members, who remain invested in the Scheme for longer.

The table below shows the percentage change in the value of members’ pots at retirement, relative to the climate uninformed scenario, across the three different scenarios and different starting ages.

Change in value of members’ pots at retirement, relative to the climate uninformed base case

Scenario	Member aged 25	Member aged 35	Member aged 45	Member aged 55
Paris Orderly Transition outcome	-8%	-5%	-3%	-2%
Paris Disorderly Transition outcome	-13%	-9%	-6%	-6%
Failed Transition outcome	-28%	-22%	-17%	-2%

Appendix 2: Climate Scenario Modelling 2022 *(continued)*

Modelling approach – Investment and Funding

- The scenario analysis is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics. The outputs were then applied to the Scheme's assets and liabilities by LCP.
- The three climate scenarios are projected year by year, over the next 40 years. The three climate scenarios chosen are intended to be plausible, not "worst case". They are only three scenarios out of countless others which could have been considered. Other scenarios could give better or worse outcomes for the Scheme.
- ClimateMAPS uses a top-down approach that consistently models climate impacts on both assets and liabilities, enabling the resilience of the DB Section's funding strategy to be considered. The model output is supported by in-depth narratives that bring the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities.
- ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is one of the most comprehensive models of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.
- Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate impacts that may be possible, under each scenario's climate pathway. LCP takes the median (ie the middle outcome) of this range of impacts, for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions.
- LCP then uses these adjusted median impacts to project the assets and liabilities of the Scheme to illustrate how the different scenarios could affect its funding level. The modelling summarised in this report used scenarios based on the latest scientific and macro-economic data at 30 June 2021, calibrated to market conditions at 31 December 2021.
- Due to the strong funding position of the Scheme the DB section is no longer receiving ongoing contributions from the sponsoring Employer. As such, no further Employer contributions have been assumed in the analysis for this section.
- For the DC section, members' starting pots values were assumed to equal the average value for Scheme members of their age, and member and employer contributions were assumed to be paid in line with the current contribution structure. No allowance was made for changes to the investment strategy or contributions in response to the climate impacts modelled.

Modelling limitations – Investment and Funding

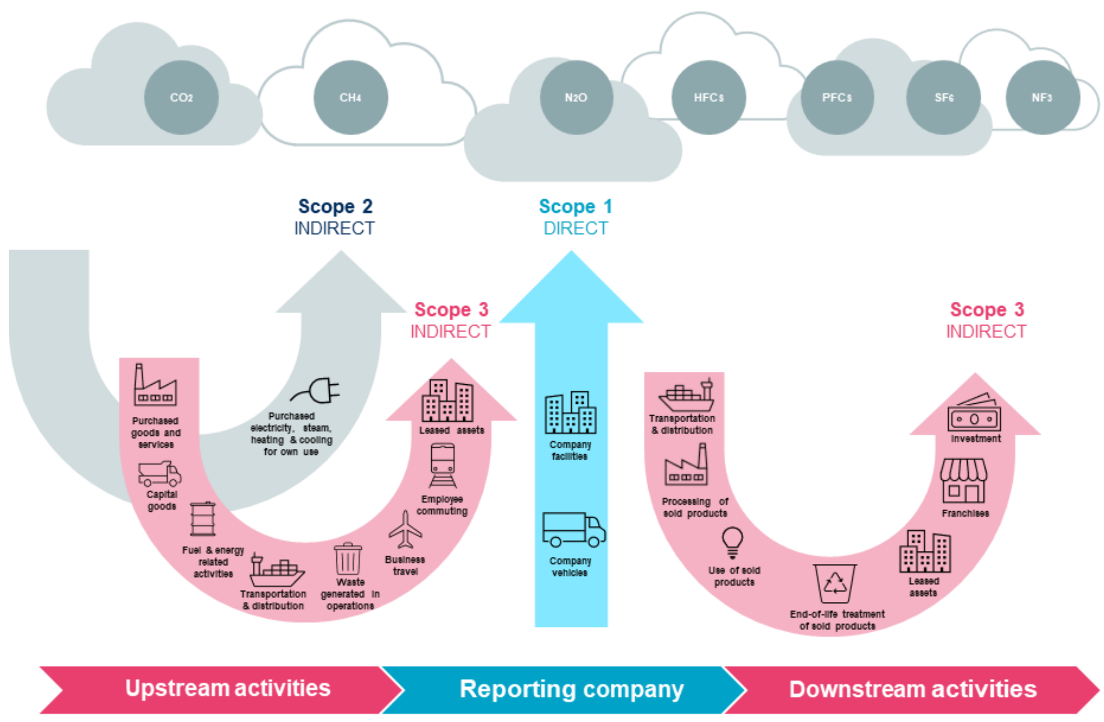
- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, ie assuming that the Scheme's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the Scheme's investment portfolio. As such, it does not require extensive scheme-specific data and so the JISC and Trustee were able to consider the potential impacts of the three climate scenarios for all of the DB section's assets and DC assets in the default strategy.
- In practice, the Scheme's investments may not experience climate impacts in line with the market average. The Trustee considers, on an ongoing basis, how the Scheme's climate risk exposure differs from the market average using climate metrics (which are compared with an appropriate market benchmark) and its annual responsible investment review which considers the investment managers' climate approaches.
- The asset and liability projections shown reflect the Scheme's strategic journey plan in effect as at 31 December 2021. No allowance is made for changes that might be made (or have been made since the date of the analysis) to the funding or investment strategy as the climate pathways unfold, nor for action to be taken in response to the Scheme achieving its long-term funding target.
- The Trustee notes that the modelling is based on median outcomes. It therefore illustrates how the centre of the "funnel of doubt" surrounding DB funding and DC asset projections might be affected by climate change. It does not consider tail risks within that funnel, nor does it consider how the funnel might be widened by the additional uncertainties arising from climate change. In addition, only three scenarios out of infinitely many have been considered. Other scenarios could give better or worse outcomes for the Scheme.
- Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts include how climate change might affect interest rates and inflation, and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the Failed Transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.
- The Scheme currently has an insurance contract covering a proportion of the DB benefits payable to pensioners. As this contract exactly matches the DB benefits payable to members, it has been excluded from the analysis. The Trustee considered qualitatively how insurance contracts might be affected by climate risk.

Appendix 3: Greenhouse gas emissions explained

Within the 'metrics and targets' section of the report, the emissions metrics relate to seven greenhouse gases – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). The figures are shown as "CO_2 equivalent" (CO_2e) which is the amount of carbon dioxide that would be equivalent to the excess energy being stored by, and heating, the earth due to the presence in the atmosphere of these seven greenhouse gases.

The metrics related to greenhouse gas emissions are split into the following three categories: Scope 1, 2 and 3. These categories describe how directly the emissions are related to an entity's operations, with Scope 1 emissions being most directly related to an entity's everyday activities and Scope 3 referring to indirect emissions in an entity's value chain. Scope 3 emissions often form the largest share of an entity's total emissions but are also the ones that the entity has least control over.

- **Scope 1** greenhouse gas emissions are all direct emissions from the activities of an entity or activities under its control.
- **Scope 2** greenhouse gas emissions are indirect emissions from electricity purchased and used by an entity which are created during the production of energy which the entity uses.
- **Scope 3** greenhouse gas emissions are all indirect emissions from activities of the entity, other than scope 2 emissions, which occur from sources that the entity does not directly control



Source: GHG Protocol

Appendix 4: Further information on climate-related metrics: UK government bonds and LDI

Modelling approach – Investment and Funding

GHG emissions for government bonds (gilts) are calculated on a different basis from the other asset classes, so cannot be compared with the other emissions figures shown.

The emissions figures were calculated by the Trustee's investment adviser using publicly available data sources. As suggested in the statutory guidance, Scope 1+2 emissions have been interpreted as the production-based emissions of the country. Scope 3 emissions have been interpreted as the emissions embodied in goods and services imported by the country and consumed within the country (rather than re-exported).

In line with guidance from the Partnership for Carbon Accounting Financials (PCAF), emissions intensity has been calculated as:

$$\frac{Total\ greenhouse\ gas\ emissions\ produced\ by\ the\ UK}{UK\ GDP\ using\ PPP\ methodology}$$

GHG emissions have then been calculated as:

$$Emissions\ intensity\ x\ value\ of\ the\ Scheme's\ investment\ in\ gilts.$$

For the LDI mandate, derivatives have been treated as an investment in an equivalent gilt. Greenhouse gas emissions have been calculated for the gilt exposure (including any repo loan amount). The Scheme did not have any swap exposure in the LDI mandate during the year.

Appendix 5: Glossary of Terms

Actuarial valuation – an actuarial valuation is an accounting exercise performed to estimate future liabilities arising out of benefits that are payable to members of a DB pension scheme, typically once every three years. In the actuarial valuation exercise, a liability payout at a future date is estimated using various assumptions such as discounting rate and salary growth rate.

Alignment – in a climate change context, alignment is the process of bringing greenhouse gas emissions in line with 1.5°C temperature rise targets. It can be applied to individual companies, investment portfolios and the global economy.

Asset class – a group of securities which exhibit broadly similar characteristics. Examples include equities and bonds.

Bond – a bond is a security issued to investors by companies, governments and other organisations. In exchange for an upfront payment, an investor normally expects to receive a series of regular interest payments plus, at maturity, a final lump sum payment, typically equal to the amount invested originally, or this amount increased by reference to some index.

Buy-in – DB pension scheme trustees may choose to “buy-in” some of their scheme’s expected future benefit payments by purchasing a bulk (ie one covering many individuals) annuity contract with an insurance company. This allows the trustees to reduce their scheme’s risk by acquiring an asset (the annuity contract) whose cash flows are designed to meet ie “match” a specified set of benefit payments under the pension scheme. The contract is held by the trustees and responsibility for the benefit payments remains with the trustees. Common uses of buy-in arrangements have been to cover the payments associated with current pensioners or a subset of those members. Contracts to meet payments to members who are yet to become pensioners can also be purchased.

Buy-out – DB pension scheme trustees may choose to “buy-out” some or all of their scheme’s expected future benefit payments by purchasing a bulk (ie one covering many individuals) annuity contract from an insurance company. The insurer then becomes responsible for meeting pension benefits due to scheme members (effected ultimately by allocating to each scheme member an individual annuity contract). Following a full buy-out, (ie one covering all scheme members) and having discharged all the trustees’ liabilities, the pension scheme would normally be wound up.

Carbon emissions - These refer to the release of carbon dioxide, or greenhouse gases more generally, into the atmosphere, for example from the burning of fossil fuels for power or transport purposes.

Carbon footprint – In an investment context, the total carbon dioxide or greenhouse gas emissions generated per amount invested (eg in £m) by an investment fund. Related definitions are used to apply the term to organisations, countries and individuals

Covenant – the ability and willingness of the sponsor to make up any shortfall between a DB scheme’s assets and the agreed funding target.

Defined Benefit (DB) – a pension scheme in which the primary pension benefit payable to a member is based on a defined formula, frequently linked to salary. The sponsor bears the risk that the value of the investments held under the scheme fall short of the amount needed to meet the benefits.

Defined Contribution (DC) – a pension scheme in which the sponsor stipulates how much it will contribute to the arrangement which will depend upon the level of contributions the member is prepared to make. The resultant pension for each member is a function of the investment returns achieved (net of expenses) on the contributions and the terms for purchasing a pension at retirement. In contrast to a defined benefit scheme, the individual member bears the risk that the investments held are insufficient to meet the desired benefits.

Debt – money borrowed by a company or government which normally must be repaid at some specified point in the future.

Default strategy – the fund or mix of funds in which contributions in respect of a DC member will be invested in the absence of any explicit fund choice(s) of that member.

Appendix 5: Glossary of Terms *(continued)*

Environmental, social and governance (ESG) – an umbrella term that encompasses a wide range of factors that may have been overlooked in traditional investment approaches. Environmental considerations might include physical resource management, pollution prevention and greenhouse gas emissions. Social factors are likely to include workplace diversity, health and safety, and the company's impact on its local community. Governance-related matters include executive compensation, board accountability and shareholder rights.

Equity – through purchase on either the primary market or the secondary market, company equity gives the purchaser part-ownership in that company and hence a share of its profits, typically received through the payment of dividends. Equity also entitles the holder to vote at shareholder meetings. Note that equity holders are entitled to dividends only after other obligations, such as interest payments to debt holders, are first paid. Unlike debt, equity is not normally contractually repayable.

Fiduciary obligations – a legal obligation of one party (a fiduciary) to act in the best interest of others. Fiduciaries are people or legal entities that are entrusted with the care of money or property on behalf of others. They include pension scheme trustees.

Fossil fuels – fuels made from decomposing plants and animals, which are found in the Earth's crust. They contain carbon and hydrogen, which can be burned for energy. Coal, oil, and natural gas are examples of fossil fuels.

Funding position – a comparison of the value of assets with the value of liabilities for a DB pension scheme.

Gilts – bonds issued by the UK government. They are called gilts as the bond certificates originally had a gilt edge to indicate their high quality and thus very low probability of default.

Greenhouse gas (GHG) emissions – gases that have been and continue to be released into the Earth's atmosphere. Greenhouse gases trap radiation from the sun which subsequently heats the planet's surface (giving rise to the "greenhouse effect"). Carbon dioxide and methane are two of the most important greenhouse gases. See also Appendix 2.

Gross Domestic Product (GDP) – this is the value of all goods and services produced in a country over a given period, typically a year.

Liabilities – obligations to make a payment in the future. An example of a liability is the pension benefit 'promise' made to DB pension scheme members, such as the series of cash payments made to members in retirement. The more distant the liability payment, the more difficult it often is to predict what it will actually be, and hence what assets need to be held to meet it.

LDI (Liability Driven Investment) – an investment approach which focusses more than has traditionally been the case on matching the sensitivities of a DB pension scheme's assets to those of its underlying liabilities in response to changes in certain factors, most notably interest rate and inflation expectations.

Net Zero – this describes the situation in which total greenhouse gas emissions released into the atmosphere are equal to those removed. This can be considered at different levels, eg company, investor, country or global.

Offsetting – the process of paying someone else to avoid emitting, or to remove from the atmosphere, a specified quantity of greenhouse gases, for example through planting trees or installing wind turbines. It is sometimes used to meet net zero and other emission reduction targets.

Paris Agreement – the Paris Agreement is an international treaty on climate change, adopted in 2015. It covers climate change mitigation, adaptation and finance. Its primary goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

Physical risk – these are climate-related risks that arise from changes in the climate itself. They include risks from more extreme storms and flooding, as well as rising temperatures and changing rainfall pattens.

Appendix 5: Glossary of Terms *(continued)*

P led mandate – a feature of a collective investment vehicle whereby an investor's money is aggregated (ie "pooled") with that of other investors to purchase assets. Investors are allotted a share of those assets in proportion to their contribution. Ownership is represented by the number of "units" allocated – eg if the asset pool is worth £1m and there are 1m units then each unit is worth £1. Pooled funds offer smaller investors an easy way to gain exposure to a wide range of investments, both within markets (eg by buying units in a UK equity fund) as well as across markets (eg by buying units in both a UK equity fund and a UK corporate bond fund).

Portfolio alignment metric – this measures how aligned a portfolio is with a transition to a world targeting a particular climate outcome, such as limiting temperature rises to well below 2°C, preferably to 1.5°C, as per the Paris Agreement. Assessments using these metrics consider companies' and governments' greenhouse gas (GHG) emissions reduction plans and likelihood of meeting them, rather than current, or the latest reported, GHG emissions.

Responsible Investment (RI) – the process by which environmental, social and governance (ESG) issues are incorporated into the investment analysis and decision-making process, and into the oversight of investments companies through stewardship activities. It is motivated by financial considerations aiming to improve risk-adjusted returns.

Science-based targets – targets to reduce greenhouse gas emissions that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement.

Science-Based Targets initiative (SBTi) – an organisation that sets standards and provides validation for science-based targets set by companies and investors.

Scope 1, 2 and 3 – a classification of greenhouse gas emissions. See Appendix 3.

Self-select – in contrast with a default fund, a self-select fund within a DC scheme is one of a range of funds that members can choose to invest in.

Stakeholder – an individual or group that has an interest in any decision or activity of an organisation. The stakeholders of a company include its employees, customers, suppliers and shareholders.

Statutory obligations – statutory obligations are those obligations that do not arise out of a contract but are imposed by law.

Stewardship – stewardship is the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. It is often implemented via engagement with investee companies and exercising voting rights.

Taskforce on Climate-related Financial Disclosures (TCFD) – a group of senior preparers and users of financial disclosures from G20 countries, established by the international Financial Stability Board in 2015. The TCFD has developed a set of recommendations for climate-related financial risk disclosures for use by companies, financial institutions and other organisations to inform investors and other parties about the climate-related risks they face.

Transition risk – these are climate-related risks that arise from the transition to a low-carbon economy and can include changes in regulation, technology and consumer demand.