Climate Change report

Scheme year to 31 December 2024

Hanson Industrial Pension Scheme

A foreword from the Chair of the Trustee

On behalf of the Trustee, I am pleased to present our climate change report for the year to 31 December 2024, in line with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"). The report provides an overview of the progress we have made during the past year to manage climate-related risks and opportunities for the Scheme.

During 2024, we explored how we could better embed climate considerations into the Scheme's investments. For the DB section this included training on how sustainability guidelines could be incorporated into the Scheme's buy and maintain bond mandate. For the DC section we discussed potential options to access private market investments in the future through Long Term Asset Funds ("LTAFs"), noting that many of the available LTAFs already have climate factors embedded in their investment guidelines.

We've also taken action to address areas of weakness in our managers' approaches to managing climate risks and opportunities. We currently have an ongoing dialogue with BlackRock to improve their practices in this area – in particular we have encouraged BlackRock to consider climate change as a systemic risk and take appropriate action to address it.

We continue to make good progress towards our climate target and remain on track to achieve it by 2029. The target aims to increase the proportion of the underlying companies within the Scheme's investments that are aligned to a low carbon economy (eg by having Net Zero and interim carbon reduction targets, and appropriate plans in place to meet them).

Looking ahead, we plan to refresh our climate scenario analysis during 2025 to allow for recent changes to the Scheme's investment strategies and to reflect changes to the evolving climate landscape.

We remain committed to transparency and playing our part in addressing the global challenge of climate change. We hope that our efforts, alongside those of other investors, companies, and policymakers, will contribute to real-world change.

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 2024, the DB section had invested assets of around £1,508m, plus insurance policies valued at around £48m, which pay the benefits of a small portion of retired members. The DC section had assets of around £346m as at the same date.

Appendix 5 includes a glossary of relevant terms. To aid with the reading of this 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 low carbon economy.

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.
- The Trustee reviewed its climate governance processes during 2024 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

- For the DB section, the JISC received training during the year on how sustainable guidelines could be implemented into the buy and maintain bond mandate, including those relating to climate change.
- For the DC section, the Trustee implemented the agreed changes from the 2023 DC investment strategy review, which included the introduction of a low carbon equity fund into the self-select range. It also received training on Long Term Asset Funds ("LTAFs") as a way for DC schemes to access private markets, which provided an overview of a range of sustainable funds with climate guidelines.
- The Trustee received an update from its covenant advisor on its covenant scenario modelling. The update highlighted that whilst there have been changes to the regulatory environment in which the Group operates, it remains on track to meet its near-term climate targets and no new material climate risks have been identified.

Risk Management

- With the help of its investment adviser, the JISC reviewed its investment managers' approaches to managing climate risks during the year. Whilst the review highlighted the majority of the Scheme's managers had strong approaches to climate risk management, it highlighted a few areas for improvement for some managers.
- Following the review, the Trustee wrote to BlackRock to set its expectations for the manager and to get a better understanding of its approach to systemic risks like climate change.

Metrics and Targets

- The Trustee has set four climate metrics to help it understand and monitor climate risks for the Scheme. These are total carbon emissions, carbon footprint, portfolio alignment, and data quality.
- The Trustee is pleased to report a reduction in carbon footprint across all DB and most DC investments. Whilst data coverage has improved in general across both sections, the Trustee notes that some gaps remain. It has liaised with managers to confirm its expectations for greater data coverage and quality in the future.
- 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. The Scheme has continued to make progress against this target over the year, with a 3% increase in alignment for both the DB and DC sections.

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, JISC, their advisers and investment managers. The Governance Statement also sets out the nature and frequency of monitoring of climate-related risks and opportunities to be undertaken for 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 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.

The Trustee reviewed the Governance Statement in September 2024 and concluded that it remained fit for purpose given the position of the Scheme and the Trustee's understanding of climate impacts on pension schemes and financial markets. It also determined that the roles and responsibilities outlined within the Governance Statement remained appropriate.

The Governance Statement can be found in Appendix 1.

Climate beliefs and policies

The Trustee incorporates its beliefs and policies on climate-related risks and opportunities 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 2024 . As part of this review, the Trustee determined that the existing climate policies and beliefs, which were last updated in 2022, remained suitable.

The Trustee's climate policies and beliefs are outlined below, and 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 2024, 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 agenda items over the year to 31 December 2024

May 2024

- 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 years.

July 2024*

- Training on LTAFs for DC schemes, including key fund developments with respect to ESG and climate.
- This included an overview of funds with a strong focus on sustainability and/or climate-related objectives.

September 2024

Refresher training on the Scheme's ongoing TCFD requirements, including:

- Review of Governance Statement;
- Review of climate risks in the Risk Register;
- Consideration of further climate scenario modelling.

November 2024

- High-level review of investment managers' approaches to climate, including refresher training on how to assess ESG factors.
- Training on how sustainability factors (including climate change) can be incorporated into the Scheme's bond portfolio.

*The July 2024 meeting relates to the Trustee's DC day, rather than a JISC meeting

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 action if any concerns are raised.

In November 2024, 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.
- Clarity of advice and whether suitable training had been provided to make informed climate-related decisions.
- LCP's expertise and resources to provide climate advice.
- Prioritisation of climate-related risk in advice.

The JISC concluded that LCP had delivered a quality service over the year, providing advice that appropriately addressed climate related risks and opportunities, and providing the JISC with the necessary information 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, 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 2024, this included considering how sustainability factors (including climate) could be incorporated into the DB section's buy and maintain corporate bond portfolio. For the DC section, the Trustee received an update on developments in the private markets space for DC schemes. The session focussed on LTAFs, highlighting key fund developments with an emphasis on ESG and climate considerations, given many of the new funds have a strong focus on sustainability and climate-related objectives.

Where appropriate, the Trustee has questioned information provided by its advisers and investment managers to ensure it has a clear understanding of the risks facing the Scheme and the actions it can take. Examples of how the Trustee has challenged advisors and managers are provided on the next page.

The Trustee, in conjunction with its actuarial and covenant advisers have agreed to ensure that climate-related risks and opportunities are considered during the 31 December 2024 triennial actuarial valuation, which is currently being carried out, and the accompanying assessment of the Employer's covenant.

The Trustee ensures that the JISC and Joint Governance Sub-Committee ("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.

1. Governance

Challenging managers

When one of the DC section's Diversified Growth ("DGF") managers, Ruffer, presented to the JISC in February 2024, the JISC noted Ruffer's "highest emitters" engagement plan.

The Trustee noted that the largest emitter in the portfolio contributed to over 25% of the fund's carbon footprint and, despite the fact Ruffer had engaged with the company on climate, it was not on track to transition into a low carbon business. The Trustee queried whether this holding aligned with Ruffer's wider stance on climate.

Ruffer highlighted its preference to engage first and use divestment as a last resort. It noted that it was currently undertaking its engagement escalation process with the company and would report back to the Trustee on its progress in its future reporting.

Challenging advisers

In November 2024, LCP provided training to the JISC on incorporating sustainability factors, including climate, into the investment guidelines for its buy and maintain portfolio.

The JISC queried the potential impact on the credit characteristics of the portfolio of such a change. LCP noted that whilst new sustainable guidelines may reduce the investible universe, as the Scheme invests in a global bond mandate a sufficiently diversified portfolio could still be constructed. In addition, based on a model portfolio by the Scheme's bond manager, the portfolio would retain a similar level of credit quality, yield and duration.

2. Strategy

Identification and assessment of climate-rated 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 last reviewed the appropriateness of its chosen time horizons in September 2024. For both sections, the JISC agreed that the "target dates" and the rationales for selecting these remained appropriate, and agreed to subsequently reduced the "time horizons" by one year each per year to reflect the time passing since they were originally set. The different time horizons are outlined in the tables below, along with the JISC's rationale for each.

The JISC plans to review the horizons in 2025 alongside a refresh of its climate scenario analysis, incorporating any updated assumptions from the 31 December 2024 actuarial valuation.

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.

DB Section

	Time horizon	Rationale
Short term	1 year *(to 2025)*	This is in line with the next actuarial valuation cycle
Medium term	6 years *(to 2030)*	This is the period in which climate transition risks will be heightened
Long term	14 years *(to 2038)*	This is the approximate duration of the aggregate DB section liabilities

DC Section

	Time horizon	Rationale
Short term	3 years *(to 2027)*	Major improvements in climate data quality are expected over this period
Medium term	8 years *(to 2032)*	Key period over which policy action will determine if Paris Agreement goals are met
Long term	28 years *(to 2052)*	Many economies are targeting to be Net Zero by this point

2. Strategy

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 September 2024, the JISC agreed that it would undertake climate scenario analysis in 2025, incorporating the outcome of the 31 December 2024 actuarial valuation. As part of this decision, it determined that there would be limited benefit to conducting additional analysis during 2024.

For the DB section, the JISC noted that it remained in a strong funding position and that there had been no substantial changes to the Scheme's investment strategy. For the DC section, it was decided that the changes made to the strategy in 2024 following the DC strategy review in 2023 did not warrant updating the climate scenario analysis over the year to 31 December 2024.

In forming this view, the JISC also considered whether any new climate scenarios should be considered and whether any changes should be made to the scenario assumptions (eg due to changing market conditions or climate policies).

A summary of the conclusions from last year's scenario analysis is outlined to the right. Further details on the scenarios selected, the outcome of the scenario analysis modelling and the limitations of the 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 from 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 used the output of the scenario analysis in discussions and decisions for the 2023 DC section strategy review. Changes agreed as part of the strategy review were implemented in 2024.

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 processes in place are include in the "Risk Management" section of this report. The Trustee also used the results to help determine the key risks and opportunities facing each section, as outlined on the next two pages.

Updates to the Covenant analysis

In July 2024, the Trustee received an update from its Covenant Advisor, Cardano, on the Group's exposure to climate risk and any developments since its 2022 climate scenario analysis. Cardano's assessment highlighted that whilst there have been changes to the regulatory environment in which the Group operates, it remains on track to meet its near-term climate targets and no new material climate risks have been identified.

Cardano noted that the Group has looked to enhance its carbon reduction targets including submitting a new 2050 Net-Zero target to the Science Based Targets initiative ("SBTi") in February 2024, to complement its existing SBTi validated interim targets to reduce Scope 1, 2 and 3 emissions by 2030.

The Trustee noted that different regulatory and physical risks face the Scheme under different climate scenarios, but it was comforted that the Group was continuing in its efforts to minimise the impact of these risks on its business.

The Trustee agreed to consider covenant further as part of its climate scenario analysis in 2025.

2. Strategy

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 *(1 year)*	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 has an investment in renewable energy generation via its infrastructure mandate, which is expected to benefit from the climate transition as this type of infrastructure is essential to the transition to a low carbon economy.
Medium term *(6 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.	
Long term *(14 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.	Buy-out is expected to provide greater protection from climate risks for members' benefits and there may be pricing opportunities along the journey.

2. Strategy

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 *(3 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. The Low Carbon Global Equity Fund, available through the self-select fund range, offers members a way to position their investments more defensively in anticipation of such repricing events.
Medium term *(8 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 the period. Climate-aware strategies may be well-placed to benefit from the transition to a low carbon economy, with the potential to deliver resilient returns as policy, regulation and capital flows begin to favour sustainable business models.
Long term *(28 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.

3. Risk Management

Processes and Tools for identifying and assessing climate-related risks

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

- Climate-related training to understand how climate-related risks might affect pension schemes and their investments.
- 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 and putting in place monitoring to highlight any changes.
- 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.
- 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 on a day-to-day basis. The above processes are integrated into the overall risk management of the Scheme through the business plan, risk register and ongoing support from advisers.

Investment Manager assessments

Review of managers' approaches to climate risks and opportunities

LCP presented its review of the Scheme's investment managers' approaches to Responsible Investment ("RI"), including climate at the November 2024 JISC meeting. The review covered all of the DB and DC sections' managers.

The assessment for each manager included:

- LCP's assessment of the RI capabilities of each manager, based on their responses to LCP's 2024 RI Survey. Each manager was assessed on a firm-wide basis against five key categories, as set out below:

  1. ESG foundations – how well RI is incorporated into the business, including individual responsibilities, training, board oversight and integration of RI into investment processes.
  2. Engagement – how effective is engagement on RI issues, including level of engagement, clarity of objectives, escalation policies and collaboration with other investors.
  3. Voting – including ensuring voting rights are exercised, taking an active role in voting decisions, and willingness to co-file resolutions and escalate where necessary.
  4. Net Zero – setting Net Zero and interim targets with suitable plans to meet them, reporting against industry standards, and support for a nature positive and just transition.
  5. Systemic stewardship – including engagement with policymakers, monitoring of alignment with policy position and availability of their policy advocacy publicly.

  The JISC expects its managers to score highly across all five categories to demonstrate their capabilities in managing climate risks and opportunities. 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" rating.
- 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 also considered the scores for ESG integration and voting and engagement for each of the funds, noting that these are also key in the managers' climate approaches. Climate risk management and the approach towards Net Zero alignment for each of the funds was also considered.

3. Risk Management

Investment Manager assessments (Continued)

Outcome of the manager review

At a firm-wide level the JISC was pleased to see that the majority of the Scheme's managers scored well across ESG foundations, Net Zero and voting (where applicable). In particular, it noted an improvement in LaSalle's climate practices since LCP's 2022 RI Survey, including increased data reporting and increased use of climate scenario analysis.

The JISC noted room for improvement for some managers with respect to engagement and systemic stewardship. It was disappointed to see that BlackRock's overall RI score had fallen since LCP's 2022 Survey and wrote to BlackRock to highlight areas where it would like to see improvement. A summary of this engagement is outlined to the right.

There were no changes to the climate scores for the Scheme's individual investments over the year. Three new DC funds were added to the assessment this year – the Nordea Diversified Return Fund, which has replaced the Baillie Gifford Multi Asset Growth Fund within the "HIPS Active Diversified" fund, and the L&G Low Carbon Transition Global Equity Index and HSBC Islamic Global Equity Index funds which were both added to the self-select fund range.

As at the date of the analysis, the only funds with "weak" climate risk management 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 fund. With this in mind, the JISC undertook a deep dive into each of its passive managers' stewardship practices and was comfortable that these funds remained suitable for the Scheme.

The Trustee reviewed climate case studies from all its managers, including 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, buy and maintain bond and LDI mandates are provided on the next page.

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 with BlackRock on its RI practices

Following a review of BlackRock's RI practices, the Trustee wrote to the manager to highlight areas it was keen to see improvement. These included:

- Providing substantial and regular RI training to all investment staff.
- Working towards Net Zero for all assets under management (subject to client and regulatory constraints) and having a clear transition plan.
- Articulating a clear, public view on climate policy which recognises climate change as a systemic risk, is aligned with latest climate science and highlights where policy ambition and implementation falls short.

The Trustee asked BlackRock to provide a clear response on how it planned to make progress towards these expectations and its timeline for doing so.

In response, BlackRock confirmed that RI and climate training is available to all employees with deeper technical training available for investment and sustainability teams. It noted that training was available in different formats to best meet the individual needs of staff. Whilst the Trustee was comforted with the availability training it noted it was not clear how much was compulsory and sought to clarify this with BlackRock.

With respect to Net Zero and systemic stewardship, BlackRock confirmed that in its view the role of an asset manager does not extend to imposing environmental commitments on clients, unless explicitly requested. The Trustee noted that this approach did not recognise climate change as a systemic risk which was disappointing, noting other managers typically implement an "opt-out" approach, rather than BlackRock's "opt-in" approach. The Trustee will continue to engage with BlackRock on this matter.

3. Risk Management

Climate engagement case studies

Insight Buy and Maintain Bonds:
Climate engagement with TotalEnergies SE

Insight engaged with TotalEnergies SE, as part of its climate engagement programme, focussing on the largest contributors to its financed emissions. The basis of the engagement was the rating of the issuer's Net Zero targets as "misaligned with the Paris Agreement" by the Transition Pathway Initiative ("TPI").

The issuer confirmed it considers its targets to be aligned with Net Zero, noting it was in discussion with TPI about TPI's methodology, which now incorporates the trading of oil and gas products in the measurement of emissions. The issuer believes this practice is akin to double counting.

Insight also asked the issuer to outline its carbon offset strategy, including the use of carbon capture and storage technology, and how it prevents greenwashing. The issuer confirmed it does not buy carbon credits, and it has an expert in-house team to carefully analyse and select offsetting projects.

Insight was encouraged to see the issuer reach out to the TPI and was comfortable it remains committed to Net Zero.

IFM Infrastructure:
Airports Ground Service Electrification Workshop

IFM has been working to improve the climate credentials of Sydney Airport since it acquired a stake in the asset in 2022. During 2024, IFM participated in a workshop with the airport to discuss opportunities for electric Ground Service Equipment, smart pilot-controlled pre-conditioned air terminals and lower emissions ground taxing support vehicles.

Throughout the session, IFM and attending industry experts were able to draw their international experience, particularly from IFM's Vienna Airport asset (as discussed in the Scheme's 2023 TCFD report), to explore the implementation of such opportunities, including:

- Appropriate funding models for the upgrades;
- Safety and operational efficiency impacts of lower emissions taxi-support vehicles; and
- The role of Sustainable Aviation Fuels and Renewable Diesel in airport Scope 3 decarbonisation.

CTI Government Bonds:
Involvement in the UK Sustainable Investment and Finance Association ("UKSIF")

CTI's engagement on climate policy is primarily through engagement with industry bodies and collaborative engagement initiatives. As part of its involvement with UKSIF, CTI provided input into its work on hydrogen policy in the UK, providing views of the barriers of hydrogen development.

CTI believes that hydrogen has the potential to be an important solution in the energy transition; acting as a green energy carrier. However, a lack of clear policy and visibility on regulation creates barriers to financing and scaling of the technology.

CTI's input into UKSIF's work, including the importance of responsible sourcing and the need for clear policy frames and incentives to support industry transition, will feed into UKSIF's review of the UK government's hydrogen policies.

3. Risk Management

Investment Manager assessments (continued)

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.

Changes to investment mandates

If the JISC identifies any concerns with the way one of the Scheme's 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 2024, no manager changes were made due to concerns over their climate approaches.

DB section

Over the year the Scheme inherited assets from the legacy Hanson No2 Pension Scheme as part of a merger between the two schemes. This included a portfolio UK Gilt funds and a US Treasuries fund, all managed by L&G. As the Trustee already held passive investments with L&G it determined that, from a climate perspective, it was comfortable with these investments for the Scheme. The Trustee formally reviewed these allocations following year end as part of a post-merger strategy review.

DC section

Changes to the investment strategy, agreed as part of the review undertaken in 2023, were implemented in 2024. Before investing in new funds, the Trustee received formal written advice from LCP, which included information on the managers' investment processes and philosophies, including how climate-related risks and opportunities are accounted for.

In the Active Diversified Fund, the Trustee replaced the Baillie Gifford Multi Asset Growth Fund with the Nordea Diversified Return Fund given concerns around performance. The fund's RI credentials – including Nordea's approach to climate change – were considered as part of the manager selection process.

The JISC explored the risks and opportunities associated with the transition to a low-carbon and sustainable economy. It reviewed the climate credentials of a climate-tilted equity fund relative to a standard market-cap equity index. The Trustee incorporated a low carbon equity fund, the HIPS Low Carbon Global Equity Fund, within the self-select fund range in 2024. This decision was intended to support members in managing potential losses from climate-related tail risks and to provide an option for those wishing to align their investments with climate objectives. The Trustee also intends to revisit the potential inclusion of this fund within the default strategy in future.

HIPS Low Carbon Global Equity Fund – Key Features

The Trustee made available to members a self-select fund called the HIPS Low Carbon Global Equity Fund from 4 June 2024. The key features of the fund are as follows:

- A global equity fund with a low tracking error relative to a market capitalisation equivalent index.
- 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 added an Islamic Global Equity Index Fund within the self-select range to provide more specialist equity options to their members.

3. Risk Management

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 2024, the JGSC scored the risk a 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.

In 2023, the Trustee made further updates to include a climate related employer covenant risk, namely that "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". The JGSC has set out the inclusion of ESG and sustainability metrics within its covenant monitoring as a key mitigation tool for this risk. Over the year the JGSC scored the risk a 4 for impact and a 1 for likelihood noting the work undertaken by the Group to manage climate risks.

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 investment 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 aims to meet at least one of its managers at each quarterly JISC meeting. 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. Ruffer, IFM, Insight and CTI presented to the JISC during the year.

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, in line with the risk mitigation measures set out in the Scheme's Risk Register.

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
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 CO2. 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 CO2 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 or equivalent. 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.
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. The Trustee chose "data quality" as a fourth metric as it complements the other emissions data collected for the Scheme and will be useful to track the progress of mandates where data coverage is currently low.

In May 2024, the JISC reviewed the Scheme's choice of climate-related metrics and was comfortable that they continued to be appropriate for the Scheme.

The Trustee has collected climate metrics data for both the DB and DC sections as at year end for this report, as summarised later in this section.

4. Metrics and Targets

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 assets as at 31 December 2024 (unless stated otherwise). For comparison, the equivalent figures as at 31 December 2023 are shown in brackets. 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 the metric has stayed the same, an amber equals sign is shown. Where data has been disclosed for the first time this year, no arrow is shown. Scope 3 emissions are detailed on page 21.

Portfolio	Asset value[6]	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)[1]	Data coverage (Total Emissions and Carbon Footprint, % portfolio)	Portfolio alignment (% targets set)	Data quality (reported/estimated/ unavailable)
CTI – LDI[2]	**£1,142m / 76%** *(£1,224m / 78%)*	**173,412** ↓ *(204,246)*	**170** ↓ *(170)*	**100%** = *(100%)*	**100%** = *(100%)*	**100 / 0 / 0** = *(100 / 0 / 0)*
Insight – Buy & Maintain credit	**£108m / 7%** *(£106m / 6%)*	**3,659** ↓ *(3,675)*	**40** ↓ *(41)*	**86%** ↑ *(84%)*	**43%** ↑ *(41%)*	**69 / 17 / 14** ↑ *(66 / 18 / 16)*
LaSalle -Property[3]	**£16m / 1%** *(£93m / 6%)*	**111** ↓ *(150[6])*	**1** ↓ *(2[6])*	**82%**[4] ↓ *(85%[4,6])*	**30%**[4] = *(30%[4])*	**82 / 0 / 18** ↓ *(86 / 0 / 14)*
IFM – Infrastructure[3]	**£101m / 7%** *(£97m / 6%)*	**10,451** ↓ *(11,257)*	**107** ↓ *(122)*	**100%** = *(100%)*	**98%**[5] ↑ (94%[5])	**100 / 0 / 0** = *(100 / 0 / 0)*
L&G - Listed equities	**£54m / 4%** *(£46m / 4%)*	**2,943** ↓ *(3,118)*	**56** ↓ (69)	**98%** = *(98%)*	**56%** ↑ *(55%)*	**95 / 3 / 2** = *(95 / 3 / 2)*
L&G - UK Gilts[5]	**£82m / 5%** *(-)*	**13,912**	**170**	**100%**	**100%**	**100 / 0 / 0**
L&G - US Treasuries[5]	**£5m / <1%** *(-)*	**827**	**152**	**100%**	**0%**	**100 / 0 / 0**
Prudential – annuities	**£6m** *(£6m)*	**73** ↓ *(154)*	**32** ↓ *(59)*	**40%** ↓ *(42%)*	**7%** = (7%)	**33 / 7 / 60** ↑ (27 / 15 / 58)

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 commentary on page 27 and the calculation methodology in Appendix 4 for help interpreting this data. We note that different data sources have been used for the LDI metrics in 2023 and 2024, in line with the Department of Work and Pensions ("DWP") recommendations.
[3] LaSalle and IFM climate data has been provided as at 31 December 2023 due to availability of data. The carbon footprint for these funds has therefore been calculated with reference to the value of these funds at this date, £93m and £97m respectively.
[4]LaSalle data coverage and portfolio alignment metrics are at a fund level and are not representative of the property exposures in the underlying funds.
[5]The L&G UK Gilts and US Treasuries portfolios were transferred into the portfolio as part of a merger between the Scheme and the legacy Hanson No2 Pension Scheme.
[6] Percentage of total asset value includes the Scheme's invested assets and excludes the annuities held with Prudential and the Scheme's other annuity providers.
Other annuities not included in the table above were valued as at £0.2m as at 31 December 2023 and £42.3m as at 31 December 2024.
Further details on obtaining data for metric calculations is provided on page 27

4. Metrics and Targets

Climate metrics (Scope 1 and 2 emissions) – DB Section (continued)

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 76% of total invested Scheme assets as at 31 December 2024. 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. The Trustee is therefore comforted to see that around 98% of the portfolio has a credible carbon reduction plan in place, an increase of around 4% from the previous year. IFM confirmed that there remains only one portfolio company without a formal carbon reduction plan, and that it was in the process of working with the board to develop one. As well as an improvement in portfolio alignment, the Trustee noted it was positive to see an overall reduction in the carbon footprint of the portfolio, demonstrating the positive effect of the transition plans that are already in place.

When IFM came to present to the JISC in May 2024, it provided a case study that outlined how it was managing a portfolio company through its low carbon transition plan. This helped provide comfort that the plans in place had suitable detail and milestones to meet their overall carbon reduction targets, and that IFM would take appropriate action if a portfolio company was at risk of falling short of its targets. IFM also provided an update on the fund's portfolio companies that invest in climate opportunities (eg renewables), which the JISC noted are not reflected in the metrics data.

The JISC noted marginal improvements to metrics for the Scheme's buy & maintain bond portfolio, including a slight increase data coverage (+2%) and portfolio alignment (+3%). When Insight presented to the JISC in September 2024, the JISC queried the steps it was taking to improve the climate metrics of the portfolio further. Insight noted that whilst the fund did not have any specific climate guidelines, climate considerations are an integral part of its investment process (noting climate risk as one of many risks impacting the financial risk of a bond) and it uses its influence as a significant purchaser of debt to engage with issuers on their climate approaches.

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. The Trustee noted a slight reduction in the data coverage over the quarter. LaSalle confirmed that this is likely to be the result of underlying managers buying and selling properties during the period, and in the cases where new properties are purchased, emissions data is typically not included until a full year of data has been collected. The JISC noted that the metric data reflected the position of the property mandate as at the end of 2023 (due to availability of data), however 31 December 2024, the Scheme had sold the majority of its property holdings, meaning the position could be materially different as at the reporting date.

The Trustee notes that metrics in future reports may be adversely impacted by the property 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 for the equity mandate, but noted a slowdown in improvements to portfolio alignment. It noted that as it invests in a passive index-tracking fund, that L&G is limited to voting and engagement to encourage better alignment from the underlying portfolio companies.

This year the Trustee received climate metrics data from Prudential for the first time, in relation to the Scheme's annuity policy held with the insurer. Prudential also provided figures for the year ending 31 December 2023, which we have included in this report for comparison. The total emissions and carbon footprint for the investments underlying the annuity policy reduced over the year. Prudential noted that this was in part due to improvements in its emissions accounting methodology which reclassified some of the insurers underlying investments from public to private. There was a slight reduction in data coverage although an improvement in data quality.

4. Metrics and Targets

Climate metrics (Scope 3 emissions) – DB Section

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, they 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. This means material changes in reported Scope 3 emissions year-to-year may be the result of changes in methodology rather than in actual emissions. The difference between Scope 1, 2 and 3 emissions is outlined in Appendix 3. Scope 3 emissions metric data for the DB section is shown below, based on assets as at 31 December 2024 (unless stated otherwise).

Portfolio	Asset value[7]	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)[1]	Data coverage (Total Emissions and Carbon Footprint, % portfolio)	Data quality (reported/estimated/unavailable)
CTI – LDI[2]	**£1,142m / 76%** *(£1,224m / 78%)*	**138,754** *(163,415)* ↓	**136** *(136)* ↓	**100%** *(100%)* =	**100 / 0 / 0** *(100 / 0 / 0)* =
Insight – Buy & Maintain credit	**£108m / 7%** *(£106m / 6%)*	**28,899** *(30,177)* ↓	**316** *(342)* ↓	**88%** *(83%)* ↑	**0 / 88 / 12** - ↑
LaSalle -Property[3]	**£16m / 1%** *(£93m / 6%)*	**2,965** *(1,486)* ↑	**39** *(19)* ↑	**82%**[4] *(86%[4])* ↓	**82 / 0 / 18** *(86 / 0 / 14)* ↓
IFM – Infrastructure[3]	**£101m / 7%** *(£97m / 6%)*	**362,187**[5] *(Not provided)*	**3,720**[5] *(Not provided)*	**100%** *(Not provided)* ↑	**91 / 9 / 0** - ↑
L&G - Listed equities	**£54m / 4%** *(£46m / 4%)*	**37,410** *(26,983)* ↑	**706** *(586)* ↑	**98%** *(98%)* =	**70 / 28 / 2** *(63 / 35 / 2)* ↑
L&G - UK Gilts[5]	**£82m / 5%** *(-)*	**11,131**	**136**	**100%**	**100 / 0 / 0**
L&G - US Treasuries[5]	**£5m / <1%** *(-)*	**Not provided**	**Not provided**	**Not provided**	-
Prudential – annuities	**£6m** *(£6m)*	**5,081** *(313)* ↑	**2,174** (133) ↑	**41%** *(38%)* ↑	**32 / 9 / 59** (26 / 12 / 62) ↑

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 commentary on page 27 and the calculation methodology in Appendix 4 for help interpreting this data. We note that different data sources have been used for the LDI metrics in 2023 and 2024, in line with DWP recommendations.
[3] LaSalle and IFM climate data has been provided as at 31 December 2023 due to availability of data. The carbon footprint for these funds has therefore been calculated with reference to the value of these funds at this date, £93m and £97m respectively.
[4] LaSalle data coverage reflects fund level information and is not shown on a look-through basis.
[5] IFM is only able to provide Scope 3 emissions on a total basis (ie not weighted by equity stake), as a result the reported Scope 3 emissions will be significantly large than that attributable to the Scheme's holding.
[6] The L&G UK Gilts and US Treasuries portfolios were transferred into the portfolio as part of a merger between the Scheme and the legacy Hanson No2 Pension Scheme.
[7] Percentage of total asset value includes the Scheme's invested assets and excludes the annuities held with Prudential and the Scheme's other annuity providers. Other annuities not included in the table above were valued as at £0.2m as at 31 December 2023 and £42.3m as at 31 December 2024.

4. Metrics and Targets

Climate metrics (Scope 3 emissions) – DB Section (continued)

Commentary on Scope 3 metrics for the DB section

Whilst at first glance the IFM infrastructure mandate has the highest total emissions, it is important to note that these are not comparable to metrics for the other managers as IFM is unable to provide Scope 3 emissions on a financed/ attributable basis. As IFM does not hold a 100% stake in each of its portfolio companies, this means that total emissions reported will be significantly higher than the actual emissions attributable to the Scheme's investment in the fund. Despite this, the Trustee noted that changes in IFM's Scope 3 emissions year to year will help demonstrate how its portfolio companies' carbon reduction plans are working to reduce wider carbon emissions resulting from their business activities.

There has been a significant increase in the level of Scope 3 emissions attributable to the LaSalle property, L&G equity and Prudential annuity portfolios over the year. LaSalle has confirmed that it is reliant on information from underlying fund managers for Scope 3 data. All three have confirmed that they expect the majority of the increase in Scope 3 emissions to relate to changes in the calculation methodology of the underlying managers/ portfolio companies, which can have a material impact on emissions data.

L&G highlighted the issues in collecting Scope 3 data, noting that it continues to work with portfolio companies to encourage greater disclosure, and advocate for improved and standardised Scope 3 disclosure to facilitate comparisons and allow for meaningful insights to be drawn.

Climate metrics (Scope 1 and 2 emissions) – DC Section

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 2024, 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 2024 (unless stated otherwise). For comparison, the equivalent figures as at 31 December 2023 are shown in brackets. Scope 3 emissions are detailed on page 25.

As per the metrics tables for the DB section, 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 the metric has stayed the same, this is noted with an amber equals sign. Where data has been disclosed for the first time this year, no arrow is shown.

The following disclosures should be noted with respect to the data table on the next page:

[1]Figures relate only to the assets for which data is available. Total emissions are for the Scheme's assets, not the whole pooled fund. Data quality figures may not sum to 100% due to rounding. The portfolio alignment metric for the Invesco Global Real Estate Fund ("GREF") relates to the listed equity and corporate bond portfolio of the fund only.

[2]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.

[3]Climate metrics for the gilt funds have been calculated by LCP. Further details on the methodology used are outlined in Appendix 4.

[4]This data is for corporates and sovereigns. L&G define 'Sovereigns' as, Agency, Government, Municipals, Strips and Treasury Bills and is calculated by using: the CO2e/GDP, Carbon Emissions Footprint uses: CO2e/Total Capital Stock.

[5]The Scheme disinvested from the Baillie Gifford Multi-Asset Growth Fund in June 2024. Since June 2024, the Scheme does not use the BlackRock Over 15 Years Gilt Index Fund and the BlackRock Over 15 Years Index Linked Gilt Fund in the default strategy.

[6]The allocation to Invesco Global Real Estate Fund within the HIPS Passive Diversified Fund was replaced with the DC version of the fund, the Invesco Global Direct Property Fund in April 2024. Information shown for the Invesco global property mandate relates to the Global Real Estate Fund, due to availability of data.

[7]Our estimates assume gilts to have a science-based target. This is because the UK has Net Zero emissions by 2050 written into law, with interim carbon budgets set based on advice from the independent Committee on Climate Change.

4. Metrics and Targets

Climate metrics (Scope 1 and 2 emissions) – DC Section

Asset class	Portfolio	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)[1]	Data coverage (Total Emissions and Carbon Footprint, % portfolio)	Portfolio alignment (% targets set)	Data quality (reported/estimated/ unavailable)
Equities	BlackRock MSCI World Equity Index	£165.8m / 48% *(£149.3m / 49%)*	6,886 ↓ *(7,960)*	42 ↓ *(54)*	99% = *(99%)*	47% ↑ *(43%)*	88 / 12 / 1 ↑ *(88 / 11 / 1)*
	BlackRock MSCI World Equity Fund (hedged)	£49.4m / 14% *(£43.6m / 14%)*	2,051 ↓ *(2,325)*	42 ↓ *(54)*	99% = *(99%)*	47% ↑ *(43%)*	88 / 12 / 1 ↑ *(88 / 11 / 1)*
Diversified Growth	Nordea Diversified Return Fund	£31.1m / 9% -	512 -	18 -	92% -	61% -	89 / 4 / 8 -
	Ruffer Diversified Return Fund	£31.3m / 9% *(£26.3m / 9%)*	5,503 ↑ *(2,918)*	201 ↑ *(111)*	88% ↓ *(89%)*	29% ↑ *(21%)*	82 / 6 / 12 ↓ *(80 / 9/ 11)*
	Baillie Gifford Multi-Asset Growth Fund[5]	- *(£26.7m / 9%)*	N/A *(1,562)*	109 ↑ *(59)*	82% ↑ *(43%)*	42% -	69 / 13 / 18 ↑ *(36 / 7 / 57)*
	L&G Emerging Market Multi Asset Fund[2]	£5.4m / 2% *(£4.8m / 2%)*	949 ↓ *(1,033)*	192 ↓ *(216)*	91% ↑ *(90%)*	13% ↓ *(14%)*	51 / 40 / 9 ↑ *(47 / 43/ 8)*
Alternatives	Invesco Global Real Estate Fund[6]	£5.5m / 2% *(£6.5m / 2%)*	43 -	10 -	78% -	8% -	77 / 1 / 22 -
	L&G Infrastructure Equity MFG Fund	£7.3m / 2% *(£4.6m / 2%)*	1,711 ↑ *(1,178)*	235 ↓ *(265)*	95% ↓ *(96%)*	37% ↓ *(38%)*	94 / 1 / 5 ↓ *(94 / 2 / 3)*
Bonds	BlackRock Over 15 Years Gilt Index Fund[5,7]	- *(£8.6m / 3%)*	N/A *(1,458)*	170 = *(170)*	100% = *(100%)*	100% = *(100%)*	100 / 0 / 0 = *(100 / 0 / 0)*
	BlackRock Over 5 Years Index Linked Gilt Fund[5,7]	- *(£8.2m / 3%)*	N/A *(1,387)*	170 = *(170)*	100% = *(100%)*	100% = *(100%)*	100 / 0 / 0 = *(100 / 0 / 0)*
	BlackRock Corporate Bond Index All Stocks Fund	£7.4m / 2% *(£6.5m / 2%)*	200 ↑ *(148)*	31 ↓ *(45)*	91% = *(91%)*	29% ↑ *(27%)*	76 / 15 / 9 ↑ *(67 / 24/ 9)*
	L&G Overseas Bond Fund[4]	£7.2m / 2% *(£5.9m / 2%)*	861 ↑ *(779)*	119 ↓ *(133)*	100% ↑ *(99%)*	N/A *(0%)*	100 / 0 / 0 ↑ *(99/ 0 / 0)*
	L&G All Stocks Gilt Index Fund[3,7]	£9.0m / 3% -	1,529 -	170 -	100% -	100% -	100 / 0 / 0 -
	L&G All Stocks Index Linked Gilt Fund[3,7]	£9.0m / 3% -	1,520 -	170 -	100% -	100% -	100 / 0 / 0 -
Cash	BlackRock Cash Fund	£8.3m / 2% *(£6.8m / 2%)*	3 ↓ *(5)*	1 = *(1)*	89% ↑ *(85%)*	3% ↓ *(6%)*	89 / 0 / 11 ↑ *(78 / 7 / 15)*

For footnotes and caveats relating to the above table please see notes on previous slide.

4. Metrics and Targets

Climate metrics (Scope 1 and 2 emissions) – DC Section (continued)

Commentary on Scope 1 and 2 metrics for the DC section

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 has for reducing emissions in the portfolio.

The equity allocation continues to have the potential to cause large impacts when considering climate transition, given that it represents the highest proportion of the DC section assets. The Trustee has reviewed BlackRock's voting behaviour in respect of these funds and was comforted to see that it had voted on 98% of eligible resolutions for these funds over the year to 31 December 2024, including a number of climate-related resolutions. Other funds with high absolute emissions include government bond funds and DGFs which invest in a range of asset classes across different sectors with high emissions 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 Ruffer Diversified Return Fund as the DGFs 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, coverage for some funds has increased in comparison to last year.

In terms of portfolio alignment with science-based targets, a considerable proportion of companies in the equity and diversified growth funds have committed to reducing emissions in alignment with 1.5°C warming targets. Relatively fewer companies within the emerging markets and corporate bond funds have science-based targets, indicating higher transition risk. However, it should be noted that lower coverage of these funds means that the percentage of reported assets with science-based targets 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 setting these commitments. This impacts the DGFs alongside the corporate bond fund. The Trustee expects this to improve over time.

As it can be seen from the data, the proportion of companies within the Scheme's funds with SBTi commitments (or equivalent) has increased. 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.

The following disclosures should be noted with respect to the data table on the next page:

[1]Figures relate only to the assets for which data is available. Total emissions are for HIPS' assets, not the whole pooled fund. Data quality figures may not sum due to rounding. Portfolio alignment metrics for the Invesco GREF relate to the listed equity and corporate bond portfolio of the fund only.

[2]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. The total emission figure for the fund for the previous year has been restated to take account of coverage.

[3]Climate metrics for the gilt funds have been calculated by LCP. Details of the methodology used are outlined in Appendix 4.

[4]This data is for corporates and sovereigns. L&G define 'Sovereigns' as, Agency, Government, Municipals, Strips and Treasury Bills and is calculated by using: the CO2e/GDP, Carbon Emissions Footprint uses: CO2e/Total Capital Stock.

[5]The Scheme disinvested from the Baillie Gifford Multi-Asset Growth Fund in June 2024. Since June 2024, the Scheme no longer uses the BlackRock Over 15 Years Gilt Index Fund and the BlackRock Over 15 Years Index Linked Gilt Fund in the default strategy.

[6]The allocation to Invesco GREF within the HIPS Passive Diversified Fund was replaced with the DC version of the fund, the Invesco Global Direct Property Fund in April 2024. Data has been shown for the GREF.

4. Metrics and Targets

Climate metrics (Scope 3 emissions) – DC Section

Asset class	Portfolio	Asset value	Total emissions (tonnes CO_2e)[1]	Carbon footprint (tonnes CO_2e per £m invested)[1]	Data coverage (Total Emissions and Carbon Footprint, % portfolio)	Data quality (reported/ estimated/unavailable)
Equities	BlackRock MSCI World Equity Index	£165.8m / 48% *(£149.3m / 49%)*	60,084 -	365 -	99% -	0 / 99 / 1 -
	BlackRock MSCI World Equity Fund (hedged)	£49.4m / 14% *(£43.6m / 14%)*	17,896 -	365 -	99% -	0 / 99 / 1 -
Diversified Growth	Nordea Diversified Return Fund	£31.1m / 9% -	7,046 -	246 -	92% -	3 / 89 / 8 -
	Ruffer Diversified Return Fund	£31.3m / 9% *(£26.3m / 9%)*	18,519 ↑ *(14,565)*	708 ↑ *(554)*	84% -	0 / 84 / 16 -
	Baillie Gifford Multi-Asset Growth Fund[5]	- *(£26.7m / 9%)*	N/A *(3,101)*	289 ↑ *(116)*	82% ↑ *(43%)*	0 / 82 / 18 ↑ *(0 / 43 / 57)*
	L&G Emerging Market Multi Asset Fund[2]	£5.4m / 2% *(£4.8m / 2%)*	*2,778* ↑ *(2,329)*	1,080 ↑ *(1,030)*	47% = *(47%)*	16 / 31 / 53 -
Alternatives	Invesco Global Real Estate Fund[6]	£5.5m / 2% *(£6.5m / 2%)*	117 -	27 -	78% -	71 / 7 / 22 -
	L&G Infrastructure Equity MFG Fund	£7.3m / 2% *(£4.6m / 2%)*	4,115 ↑ *(2,334)*	566 ↑ *(525)*	95% ↓ *(96%)*	71 / 24 / 5 -
Bonds	BlackRock Over 15 Years Gilt Index Fund[5,7]	- *(£8.6m / 3%)*	N/A *(1,166)*	136 = *(136)*	100% = *(100%)*	100 / 0 / 0 = *(100 / 0 / 0)*
	BlackRock Over 5 Years Index Linked Gilt Fund[5,7]	- *(£8.2m / 3%)*	N/A *(1,110)*	136 = *(136)*	100% = *(100%)*	100 / 0 / 0 = *(100 / 0 / 0)*
	BlackRock Corporate Bond Index All Stocks Fund	£7.4m / 2% *(£6.5m / 2%)*	1,485 -	322 -	91% -	0 / 91 / 9 -
	L&G Overseas Bond Fund[4]	£7.2m / 2% *(£5.9m / 2%)*	Not available *(784)*	294 ↑ *(134)*	Not available *(99%)*	Not available -
	L&G All Stocks Gilt Index Fund[3,7]	£9.0m / 3% -	1,223 -	136 -	100% -	100 / 0 / 0 -
	L&G All Stocks Index Linked Gilt Fund[3,7]	£9.0m / 3% -	1,216 -	136 -	100% -	100 / 0 / 0 -
Cash	BlackRock Cash Fund	£8.3m / 2% *(£6.8m / 2%)*	515 -	91 -	89% -	100 / 0 / 0 -

For footnotes and caveats relating to the above table please see notes on previous slide.

4. Metrics and Targets

Climate metrics (Scope 3 emissions) – DC Section (continued)

Commentary on Scope 3 metrics for the DC section

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' direct 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.

Based on the data available, the Scheme's equity funds have the highest total absolute emissions. The listed infrastructure fund has the highest carbon footprint because the essential services they finance, such as airports, toll roads, pipelines etc cause massive downstream Scope 3 emissions that are far greater than their own operational emissions.

The Trustee has not reported Scope 3 emissions for all the metrics for the funds due to limited availability of data for the managers. The Trustee will continue to monitor improvements and changes in future reporting.

4. Metrics and Targets

Obtaining data to calculate metrics

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

Metrics for the 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 other portfolios.

IFM and LaSalle were unable to provide data as at 31 December 2024, and therefore the metrics provided have been quoted as at 31 December 2023. 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 pleased to see that L&G had started providing data quality metrics this year. The Trustee was also pleased to see improvements in Scope 3 emissions reporting, including the provision of data quality information from Insight and emissions data from IFM. The Trustee notes that IFM were unable to provide data on a financed/attributable basis, which means total emissions and carbon footprint data is likely to be significantly higher than that attributable to the Scheme's investments. However, this is an improvement on previous years where no Scope 3 emissions data was available, and provides a benchmark for improvement in future years.

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 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 the underlying 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 L&G US Treasuries, and received incomplete data for the L&G overseas bond 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 greater disclosure of Scope 3 metrics for future reports. Following its review of emissions data in May 2024, the JISC reaffirmed the requirement to provide Scope 3 emissions to its managers.

This year the Trustee received data from Prudential for the first time, with respect to the Scheme's annuity policy held with the insurer. Prudential also provided figures for the year ending 31 December 2023, which have included in this report for comparison. As part of the merger with the Hanson No2 Pension Scheme, the Scheme inherited a further annuity policy with Standard Life, valued at £42m as at 31 December 2024. The Trustee is working with the insurer to provide climate data for inclusion in next year's report.

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 aims to provide standardised and validated ESG data for Real Estate and other investments.

4. Metrics and Targets

Setting 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 the analysis of climate metrics undertaken in August 2022. It was chosen as portfolio alignment is a forward-looking metric that is focussed 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 sections 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 approach 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 2024, alongside its review of the climate data as at 31 December 2023. 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

Progress towards meeting the Scheme's 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 2023 (previous reporting date) and 31 December 2024 (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 2023	Current reporting date 31 December 2024	Target 31 December 2029
DB Section	49%	64%	67%	85%
DC Section	37%*	43%	46%	64%

As at the date of the report, infrastructure, equity and corporate bond portfolios accounted for 18% of total DB assets and 67% of total DC assets.

Over 2024, both sections made good progress towards their climate targets, with the weighted average portfolio alignment across the underlying mandates increasing by around 3% each.

DB Section

The DB section saw improvements in the portfolio alignment of all the relevant underlying mandates. The infrastructure mandate saw the largest improvement in portfolio alignment over the year, up to 98% of total assets. The Trustee notes that there is now limited scope for further improvements for this mandate, with only one remaining portfolio company without a finalised carbon reduction plan in place.

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.

For the DC section, the equity and corporate bond mandates showed improved portfolio alignment compared to the previous year. However, alignment within the passive emerging market equity allocation – via the L&G Emerging Markets Multi Asset Fund – and the listed infrastructure mandate has reduced slightly. Changes in underlying benchmarks of index tracking funds, such as the inclusion of new companies with weaker climate alignment, can impact year-on-year alignment even if there is no change to the fund's investment strategy.

Portfolio alignment within the DC section is lower because:

- The DC section has an allocation to emerging markets, in which companies are less likely to have accredited carbon reduction plans in place.
- The DC section gains exposure to infrastructure through a listed equity mandate, where the 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. 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 access, at present the listed approach remains the most appropriate approach.

4. Metrics and Targets

Progress towards meeting the Scheme's climate target (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 climate change 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 Trustee 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 JISC undertook training on introducing sustainable guidelines into the investment manager agreement for its corporate bond portfolio. This included consideration of the impacts on the credit characteristics of the portfolio, what Insight were willing to implement given the size of the mandate and what other sustainable pooled funds were doing.
- 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 the 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;
- its draft TCFD reporting;

Appendix 1: Governance Statement (continued)

- 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, and has been reviewed at least annually thereafter. The statement was last reviewed in September 2024.

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.

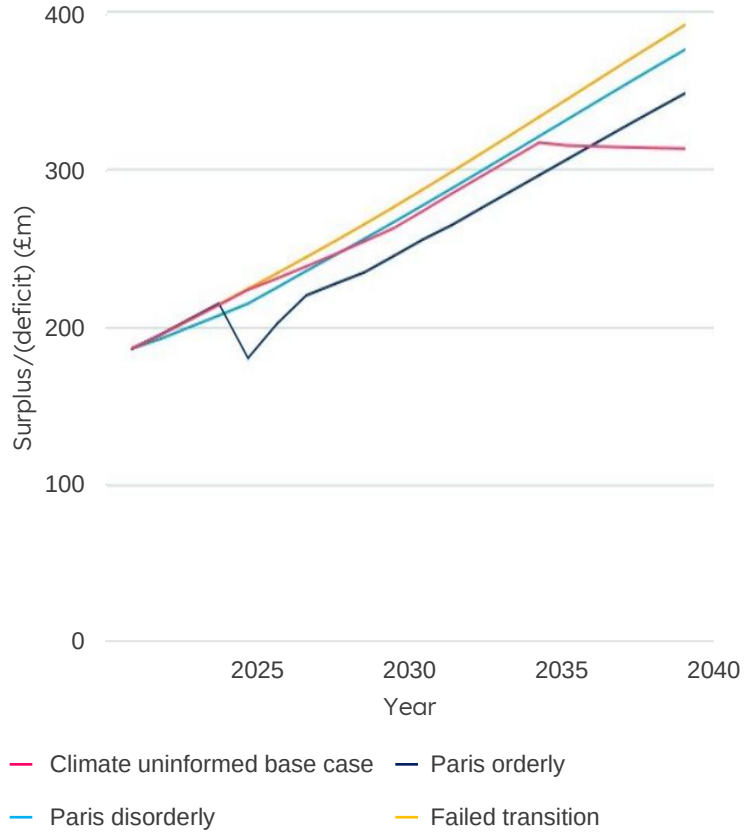
The key impacts of each scenario on the DB section were:

- 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.

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.

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



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 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.

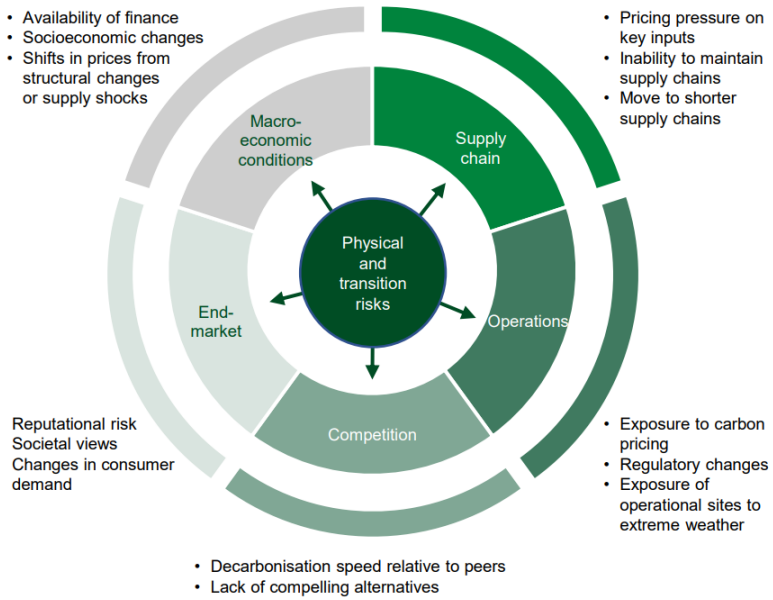
Whilst climate scenario modelling was not undertaken for an indicative buy-out basis, the JISC discussed how climate change risks could affect insurer pricing for securing pension benefits. A change in insurer pricing levels could have a significant impact on when it will be feasible to secure benefits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

- 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 2031**	**Long-term 2031+**
Orderly Transition	Medium risk	Medium risk	Medium 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.

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

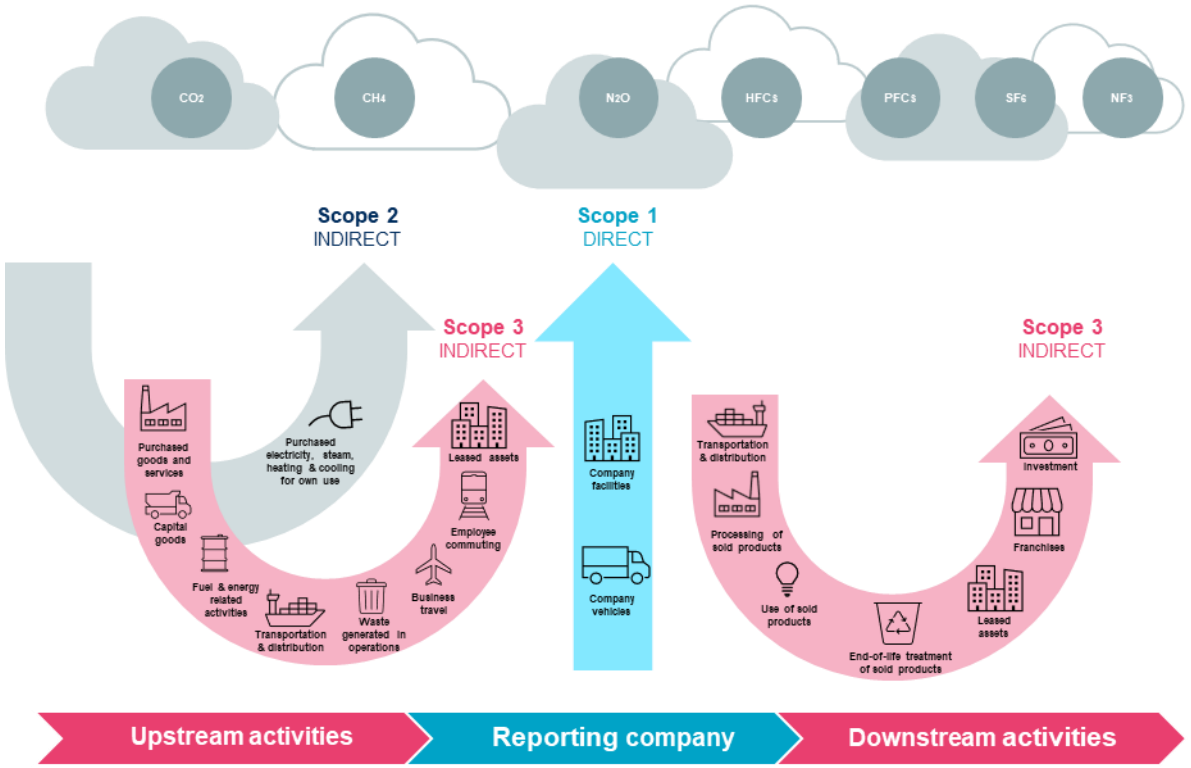
- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, ie assuming that the Scheme's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach 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 (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3). The figures are shown as "CO2 equivalent" (CO2e) 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

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") issued in December 2022, emissions intensity has been calculated as:

$$\frac{UK\ GHG\ emissions}{PPP-adjusted\ GDP\ for\ the\ UK}$$

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 the repo loan amount) but not the swap positions. This is in line with the Trustee's understanding of the typical interpretation of the DWP guidance by investment managers and consultancies as not requiring estimation of emissions for swap exposures at this time.

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 3 years. In the actuarial valuation, 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, it 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 insurer. This allows the trustees to reduce scheme risk by acquiring an asset (the annuity contract) whose cash flows are designed to match a specified set of benefit payments of the 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 – a DB pension scheme may choose to "buy-out" some or all of its expected future benefit payments by purchasing a bulk 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 of 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.

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.

Appendix 5: Glossary of terms (continued)

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.

Liability Driven Investment ("LDI") – 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.

Pooled mandate – a pooled fund combines money from multiple investors to buy assets, with each investor owning a proportionate share based on the number of units they hold. For example, if a £1m fund has 1m units, each unit is worth £1. Pooled funds give smaller investors easy access to diversified investments within and across markets.

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' GHG emissions reduction plans and likelihood of meeting them, rather than current, or the latest reported, GHG emissions.

Appendix 5: Glossary of terms (continued)

Responsible Investment ("RI") – the process by which 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 2.

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 Pathway Initiative ("TPI") – is a global, asset-owner led initiative that, using publicly available information and data, assess the progress that companies are making on the transition to a low carbon economy.

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.