FOR PUBLICATION

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

WEDNESDAY, 18 JANUARY 2023

Report of the Interim Director - Finance and ICT

Climate Risk Report

1. Purpose

1.1 To present Derbyshire Pension Fund's (the Pension Fund/Fund) Climate Risk Report dated January 2023, prepared by LGPS Central Limited, to the Pensions and Investments Committee.

2. Information and Analysis

2.1 LGPS Central Limited (LGPSC) has prepared a Climate Risk Report (LGPSC Climate Risk Report) for the Fund structured around the Taskforce for Climate-related Financial Disclosures' (TCFD) four thematic areas of: governance; strategy; risk management; and metrics and targets. It includes the assessment of financially material climate-related risks within the Pension Fund's investment portfolio, highlights climate-related opportunities and provides information to set an annual Climate Stewardship Plan for the Pension Fund.

This is the third Climate Risk Report prepared by LGPSC, with the first and second reports being presented to the Pensions and Investments Committee in March 2020 and November 2021, respectively.

Recognising that there is considerable uncertainty in the crystallisation pathway for climate risk, LGPSC believes that a suite of carbon risk metrics and climate scenario analysis currently provides the most appropriate method of analysing climate risk to support the management of climate risk within investment portfolios.

LGPSC's contractual arrangements with the third-party provider of the carbon risk metrics data prevents the publication of the full Climate Risk Report because the report contains some propriatary information in respect of individual investment manager and stock holding carbon metrics, which is subject to a non-disclosure clause. The full report will be presented in the restricted part of the meeting. A public version of the report, which provides largely the same degree of overall portfolio and asset class information but omits the propriatary information noted above, is attached as Appendix 2.

2.2 Governance

The Fund has made considerable progress in terms of its responsible investment and climate change practice in the last three years. In LGPSC's first Climate Risk Report for the Fund, there were 12 governance recommendations, all with medium term horizons. The November 2021 Climate Risk Report noted that eleven of these recommendations had been completed. The one remaining recommendation related to the Fund signing-up to the new 2020 UK Stewardship Code, particuarly Principle 7 which refers to climate risk. The In-House Investment Management Team (IIMT) expects to submit an appliation to become a signatory to the 2020 UK Stewardship Code in April 2023.

The LGPSC Climate Risk Report includes one new governance recommendation: ''continue to report progress against short-term decarbonisation targets on an annual basis'. The Fund will continue to report decarbonisation progress through the publication of an annual Taskforce for Climate-Related Financial Disclosures Report.

The LGPSC Climate Risk Report also includes the following four new governance considerations:

- Work to determine the most appropriate decarbonisation pathway in order to achieve Net Zero
- Integrate 'climate solutions' data into the Carbon Risk Management System (CRMS) once an industry-agreed definition is available
- Establish a Net Zero Stewardship Programme
- Develop a Net Zero Manager Monitoring Programme

Net zero transtion pathways and defined climate solutions are still at an early stage of market development and reporting. The Fund will continue to work with fellow asset owners and with LGPSC to facilitate the development of a credible journey to net zero, within the context of overall portfolio risk and return, as the appropiate tools become available.

2.3 Strategy: Climate Scenario Analysis

The LGPSC Climate Risk Report includes climate scenario analysis prepared by Mercer LLC (Mercer). As climate scenario analysis is a developing field, it is prudent to view the outputs from the analysis as directional information on the sensitivity of the Fund's portfolio to different climate scenarios.

The scenario analysis has been carried out at the asset class level and estimates the effects of different climate scenarios on key financial parameters (e.g. risk and return) over a selection of time periods. The climate scenarios forecast are:

- 1.5°C Rapid Transition: average temperature increase of 1.5°C by 2100 in line with the Paris Agreement. This scenario assumes sudden large-scale downward re-pricing across multiple securities in 2025. This could be driven by a change of policy or realisation that policy change is inevitable, consideration of stranded assets or expected cost. To a degree, the shock is sentiment driven and is, therefore, followed by a partial recovery across markets. The physical damages are most limited under this scenario.
- 1.6°C Orderly Transition: average temperature increase of 1.6°C by 2100. This scenario assumes political and social organisations act in a co-ordinated way to implement the recommendations of the Paris Agreement to limit global warming to well below 2°C. Transition impacts do occur but are relatively muted across the broad market.
- 4°C Failed Transition: average temperature increase above 4°C by 2100. This scenario assumes the world fails to co-ordinate a transition to a low carbon economy and global warming exceeds 4°C above pre-industrial levels by 2100. Physical climate impacts cause large reductions in economic productivity and increasingly negative impacts from extreme weather events. These are reflected in re-pricing events in the late 2020s and late 2030s.

The climate scenario analysis covers the following asset allocations: the Fund's actual asset allocation at 31 March 2022; and the Fund's strategic asset allocation benchmark at 31 March 2022. According to the analysis, there is no material difference between the two asset allocations in terms of climate impact.

The climate scenario analysis forecasts the estimated climate related impact on returns, and does not take account of any other factors which may have an impact on investment returns, including economic and market conditions; political and geopolitical events; monetary policy conditions, etc.

The absolute basis points forecasts should be viewed with caution given the level of uncertainty and the forecast time horizons (up to 40 years) but provide a directional indicator. It is also important to note that the asset allocation required to capture the upside under one scenario, may have a negative impact under an alternative scenario.

The climate scenario analysis forecasts the following:

- A 1.5°C Rapid Transition is forecast to have a negative impact on returns, particularly on a five-year basis, reflecting an assumption that the hastiness and uncoordinated response to a rapid transition leads to a short-term decline in asset prices. Thereafter, the forecast impact on long-term returns stabilises, albeit remaining marginally negative.
- The impact of a 1.6°C Orderly Transition is forecast to be broadly return neutral across all time horizons.
- A 4°C scenario would have a significant negative impact on long-term returns (c.100 basis points per annum), reflecting the market wide impact of physical risks.

Over the long-term, Mercer forecasts that a successful transition leads to enhanced projected returns for nearly all investors when compared to scenarios associated with higher temperature outcomes due to lower physical damage.

LGPSC Climate Risk Report recommendations for the Fund:

- to continue with its planned net zero trajectory through its various collaborations including with LGPSC and other external managers
- to keep the commitment to growth assets under review and consider asset level climate impact, alongside consideration of other performance drivers, when deciding on future assets allocations
- to work with its appointed fund managers to understand how they are assessing, monitoring, and mitigating key transition and physical risks within the high-impact sectors

- to evolve the Fund’s sustainable investment targets to include more ambitious climate objectives

The delivery of a successful transition will require a global and coordinated policy response and is outside the control of the Fund. However, the Fund will continue to work collaboratively with its managers and with fellow investors towards the aim of achieving a portfolio of assets with net zero carbon emissions by 2050.

2.4 Risk Management: Climate Stewardship Plan

The LGPSC Climate Risk Report sets out a review of the progress made in respect of the Fund’s current Climate Stewardship Plan. Stewardship activities remain an important aspect of the Fund’s approach to managing climate risk. The Fund expects all investee companies to manage material risks, including climate change, and the Fund believes that climate risk management can be meaningfully improved through focussed stewardship activities by investors.

As a largely externally managed pension fund, the identification and assessment of climate-related risks is also the responsibility of individual fund managers appointed by the Fund. Existing fund managers are monitored on a regular basis to review their integration of climate risks into portfolio management, and to understand their engagement activities.

The IIMT notes that four of the six companies included in the Fund’s current Climate Stewardship Plan (BP, CRH, Rio Tinto & Shell) are covered by the Transition Pathway Initiative (TPI). The TPI framework evaluates companies based on their climate risk management quality and carbon performance in terms of alignment with the Paris Agreement. The former includes an assessment of policies, strategy, risk management and targets, with the TPI awarding a quality level to each company assessed under the framework, ranging from Level 0 – unaware of (or not acknowledging climate change) to Level 4* - satisfies all management quality criteria. Of the four companies covered by the TPI framework, all four were awarded one of the top two scores achievable in respect of the climate risk management quality assessment (Level 4 & Level 4*).

In terms of carbon performance and alignment with the Paris Agreement, TPI assessed that two companies covered were 2°C and below aligned by 2050; one company had National Pledges by 2050; and one company was not Paris aligned by 2050.

A National Pledge relates to a pledge in line with the global aggregate of emission reductions pledged by countries up to mid-2020s. The International Energy Authority states that the aggregate of national pledges is currently insufficient to limit temperature rises to 2 degrees or below. Current national pledges are estimated to lead to a temperature rise of 2.6 degrees by 2100, with a probability of 50%.

Of the two remaining companies not covered by the TPI framework, Taiwan Semiconductor Manufacturing has set a net zero target, and the value of the Fund’s holding in Gazprom, a Russian energy business, has been written down to nil following the outbreak of the conflict between Ukraine and Russia. The LGPSC Climate Risk Report recommends that Gazprom is removed from the forward Climate Stewardship Plan.

Two new companies have been recommended for inclusion in the Fund’s forward Climate Stewardship Plan. Anglo American is one of the largest contributors to the portfolio’s carbon footprint and Glencore is one of the largest contributors to the portfolio’s financed emissions. Both companies are covered by the TPI framework and have climate risk management quality assessment scores of 4 and above. From a carbon performance perspective, both companies had National Pledges by 2050.

Following the above changes, the forward Climate Stewardship Plan comprises: Anglo American (Materials); BP (Energy); CRH (Materials); Glencore (Materials); Rio Tinto (Materials); Shell (Energy); and Taiwan Semiconductors Manufacturing Company (IT). All of these companies have committed to net zero by 2050.

2.5 Carbon Risk Metrics

Carbon risk metrics analysis on the Fund’s listed equities (51.3% of total investment assets at 31 March 2022) and investment grade bonds (6.2% of total investment assets at 31 March 2022) portfolios considers:

- Portfolio carbon footprint (weighted average carbon intensity)
- Financed emissions (absolute emissions)
- Percentage of companies covered by net zero targets
- TPI Assessment scores (listed equities only)
- Fossil fuel exposure
- Thermal coal exposure
- Clean technology (portfolio weight in companies whose products and services include clean technology)

Key highlights of the carbon risk metrics analysis are:

- Total Quoted Equity carbon footprint is 44.1% more carbon efficent than the 2020 Weighted Benchmark.
- 31.5% reduction in Total Quoted Equity carbon footprint between 31 July 2019 and 31 March 2022.
- 35.8% reduction in Total Quoted Equity Financed Emissions (a measure of absolute tons of CO_2 emissions for which an investor is responsible) between 31 July 2019 and 31 March 2022.
- 80% of Climate Stewardship Plan companies with Transition Pathway Initiatie Management Quality 4/4*.
- 27% of the Fund is invested (29% on a committed basis) in low carbon and sustainable investments at 31 March 2022, up from 19% on an invested basis at 31 March 2021.
- The Fund has met its 2025 carbon reduction target and is on track to meeting its 2025 sustainable investment target.
- 7.3% of the Total Quoted Equity portfolio was invested in fossil fuel companies on 31 March 2022, 3.0% lower than on 31 July 2019, and 1.0% lower than the benchmark on 31 March 2022 of 8.3%.

The LGPSC Climate Risk Report reports that the Total Quoted Equities weight in fossil fuels reserves was 7.3% at 31 March 2022. The difference between this reported weight in fossil fuel reserves and the IIMT's quoted internal estimate of around 2.8% reflects two key drivers:

1. The LGPSC figure is the percentage weight of the Total Quoted Equities portfolio, whereas the IIMT estimate is the percentage weight of the Fund's total investment portfolio; listed equities only account for around 51% of the total investment portfolio.

2. The IIMT's esimate includes the Fund's actual holdings in the widely recognised oil producing majors (ExxonMobil; Chevron; Total Energies; BP; Shell; ConocoPhillips; and Eni). The methodology used in the LGPSC Climate Risk Report to calculate the weight in fossil fuel reserves includes the full weight of any company which has either fossil fuel reserves, thermal coal reserves or derives more than 30% of its energy mix from coal power, regardless of how much those activities/reserves represent of the company's total operations.

As noted in the LGPSC Climate Risk Report, when apportioned by revenue, only 0.8% of the Total Quoted Equities portfolio derives revenue from fossil fuel reserves, indicating that most of companies with fossil fuel reserves are diversified businesses.

The measure for clean technology exposure should be treated with some caution as there appears to be a moderate positive correlation in the dataset between sectors that have a high carbon intensity and those that have a higher weight in clean technology. Furthermore, the analysis takes no account of the Fund’s unquoted onshore & offshore, solar and hydro renewable energy infrastructure investments. These investments and commitments were in excess of £250m at 31 March 2022.

2.6 Climate Strategy Targets

The Fund developed a standalone Climate Strategy which was approved by Committee in November 2020. The Climate Strategy sets out the Fund’s approach to addressing the risks and opportunities related to climate change, including a statement that the Fund supports the ambitions of the Paris Agreement, and aims to achieve a portfolio of assets with net zero carbon emissions by 2050.

The Climate Strategy included two targets: (i) reduce the carbon footprint (Scope 1 & 2) of the Fund’s listed equity portfolio by at least 30% relative to the weighted benchmark in 2020 by the end of 2025; and (ii) invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025.

The table below, shows the progress to date in respect of the two targets:

Target	Target by end of 2025	Actual at 31 March 2022
Reduce the carbon footprint (Scope 1 & 2) of the Fund’s listed equity portfolio by at least 30% relative to the weighted benchmark in 2020 by the end of 2025	(30%)	(44%)
Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025	30%	Invested: 27% Committed: 29%

The Fund has already achieved the first target and expects to make further progress on this measure and significant progress in respect of the second target in 2022-23 as part of the final move to the new final strategic asset allocation benchmark. It is expected that additional material progress will need to be supported by emissions reductions by companies in the Fund’s investment universe in order to avoid the risk of unbalancing the equity portfolio and limiting diversification.

It should be noted that any improvement in the consistency, comparability and quality of climate-related data is likely to have an impact on the Fund's carbon metrics relative to the targets noted above.

The targets are scheduled to be reviewed towards the end of 2023, and at least every three years thereafter, and are expected to increase in line with the stated ambition of achieving a portfolio of assets with net zero carbon emissions by 2050. The impact of the significant ongoing transitions on performance and risk within the investment portfolio is being closely monitored and assessed.

2.7 Other Asset Classes

The carbon metrics in the LGPSC Climate Risk Report relate to the Fund's listed and investment grade bond portfolios, representing 57.5% of the Fund's total investment assets at 31 March 2022. The poor availability of data in asset classes other than listed equities and investment grade bonds (e.g. Sovereign Bonds, Infrastructure, Property, Private Equity, etc) prevents a more complete analysis at the present time. The IIMT notes that several of these asset classes are naturally tilted towards lower carbon industries (e.g. Infrastructure and Private Equity) or supported by national net zero commitments (e.g. Sovereign Bonds), albeit similar to other assets, they are not immune to climate risk, particularly those with a growth tilt. The IIMT notes that most of the Fund's underlying asset managers have made net zero commitments and are working towards reduced carbon emissions in line with the Paris Agreement.

2.8 Climate-Related Disclosures

In collaboration with LGPSC, the Fund has prepared a third Climate-related Disclosures Report (the Disclosures Report) for publication, which includes:

- the high level results of the climate scenario analysis
- carbon risk metrics analysis in respect of the Fund's listed equity and investment grade bond portfolios
- progress against the Fund's Climate Strategy targets
- an overview of the climate-related risks and responsibilities in respect of the Fund's asset classes other than listed equities and investment grade bonds

The Disclosures Report also includes information on the Fund’s governance of climate risk and on the Fund’s climate-related stewardship activities.

The Fund believes that publication of a Climate-related Disclosures Report represents best practice.

3. Implications

3.1 Appendix 1 sets out the relevant implications considered in the preparation of the report.

4. Background Papers

4.1 Papers held by the Pension Fund.

5. Appendices

5.1 Appendix 1 – Implications
5.2 Appendix 2 – LGPS Central Limited Climate Risk Report

6. Recommendation(s)

That Committee:

a) notes the LGPSC Climate Risk Report attached as Appendix 2.

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Appendix 1

Implications

Financial

1.1 None

Legal

2.1 None

Human Resources

3.1 None

Information Technology

4.1 None

Equalities Impact

5.1 None

Corporate objectives and priorities for change

6.1 None

Other (for example, Health and Safety, Environmental, Sustainability, Property and Asset Management, Risk Management and Safeguarding)

7.1 None