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PUBLIC

To: Members of Pensions and Investments Committee

Tuesday, 10 January 2023

Dear Councillor,

Please attend a meeting of the **Pensions and Investments Committee** to be held at **10.30 am** on **Wednesday, 18 January 2023** in the Council Chamber, County Hall, Matlock, the agenda for which is set out below.

Yours faithfully,

Helen E. Barrington

Helen Barrington
Director of Legal and Democratic Services

A G E N D A

PART I - NON-EXEMPT ITEMS

1. Apologies for Absence

2. To receive declarations of interest (if any)

3. To confirm the non-exempt minutes of the meeting held on 7 December 2022 (Pages 1 - 4)

4. Climate Risk Report (Pages 5 - 58)

5. Climate Related Disclosures (Pages 59 - 96)

6. Governance Policy and Compliance Statement (Pages 97 - 110)

7. Derbyshire Pension Fund Risk Register (Pages 111 - 126)

8. Exclusion of the Public

   To move "That under Regulation 21 (1)(b) of the Local Authorities (Executive Arrangements) (Access to Information) (England) Regulations 2000, the public be excluded from the meeting for the following items of business on the grounds that they involve the likely disclosure of exempt information as defined in Paragraph(s)… of Part 1 of Schedule 12A to the Local Government Act 1972"

PART II - EXEMPT ITEMS

9. Declarations of Interest

   To receive declarations of interest (if any)

10. Climate Risk Report (Pages 127 - 222)

PUBLIC

MINUTES of a meeting of **PENSIONS AND INVESTMENTS COMMITTEE** held on Wednesday, 7 December 2022 in the Council Chamber, County Hall, Matlock.

PRESENT

Councillor D Wilson (in the Chair)

Councillors R Ashton, N Atkin, B Bingham, L Care (Derby City Council), P Smith and A Sutton (substitute Member).

R Graham, K Gurney and J Sadler representing the Pension Board.

Also in attendance was M Fairman, D Kinley, A Nelson, A Parker and N Smith (representing Derbyshire County Council); A Fletcher (Independent Investment Adviser); B Dodds and R Warden (representing Hymans Robertson).

Apologies for absence were submitted for Councillors M Carr (Derby City Council), M Foster, G Musson and M Yates .

46/22 **TO RECEIVE DECLARATIONS OF INTEREST (IF ANY)**

There were no declarations of interest.

47/22 **TO CONFIRM THE NON-EXEMPT MINUTES OF THE MEETING HELD ON 19 OCTOBER 2022**

The minutes of the meeting held on 19 October 2022 were confirmed as a correct record.

48/22 **INVESTMENT REPORT**

The Committee were provided with data on the Fund's asset allocation, investment activity since the last meeting, long term performance analysis and to seek approval for the investment strategy in the light of recommendations from the Director of Finance & ICT and the Fund's independent external adviser.

A copy of Mr Fletcher's report, incorporating his view on the global economic position, factual information for global market returns, the performance of the Fund and his recommendations on investment strategy and asset allocation, was attached as Appendix 2.

RESOLVED to

1) Note the report of the independent external advisor, Mr Fletcher;
2) Note the asset allocations, total assets and long-term performance

analysis set out in the report; and
3) Approve the IIMT recommendations outlined in the report.

49/22 **STEWARDSHIP REPORT**

The Pensions and Investments Committee were provided with an overview of the stewardship activity carried out by Derbyshire Pension Fund's (the Fund) external investment managers in the quarter ended 30 September 2022.

To note the Fund's submission to the Department for Levelling Up, Housing & Communities' consultation on proposals to require LGPS administering authorities in England and Wales to assess, manage and report on climate-related risks, in line with the recommendations of the Taskforce on Climate-related Financial Disclosures.

RESOLVED to

1) Note the stewardship activity of LGIM and LGPSC; and
b) Note the Fund's response to the DLUHC consultation on proposals to require LGPS administering authorities in England and Wales to assess, manage and report on climate-related risks, in line with the recommendations of the TCFD.

50/22 **ACTUARIAL VALUATION**

The Committee were informed of the initial whole fund results of the actuarial valuation (the Valuation) of Derbyshire Pension Fund (the Fund/Pension Fund) at 31 March 2022 and to seek approval of the Fund's draft updated Funding Strategy Statement, attached as Appendix 2, for consultation with relevant stakeholders.

Approval was sought for the Fund's draft updated Admission, Cessation and Bulk Transfer Policy at Appendix 3.

RESOLVED to

1) Note the initial whole fund results of the actuarial valuation of Derbyshire Pension Fund.
2) Approve the Fund's draft updated Funding Strategy Statement, attached as Appendix 2, for consultation with relevant stakeholders.
3) Approve the Fund's draft updated Admission, Cessation and Bulk Transfer policy, attached as Appendix 3.

51/22 **EXCLUSION OF THE PUBLIC**

To move that under Section 100(a)(4) of the Local Government Act 1972 the public be excluded from the meeting for the following items of business on the grounds that in view of the nature of the business, that if members of the public were present exempt information as defined in Paragraph 3 of Part 1 of Schedule 12A of the Local Government Act 1972 would be disclosed to them and the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

52/22 **TO CONFIRM THE EXEMPT MINUTES OF THE MEETING HELD ON 19 OCTOBER 2022**

The exempt minutes of the meeting held on 19 October 2022 were confirmed as a correct record.

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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.

Report Author:	**Neil Smith**	**Contact details:**	**neil.smith2@derbyshire.gov.uk**

Appendix 1

<u>Implications</u>

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

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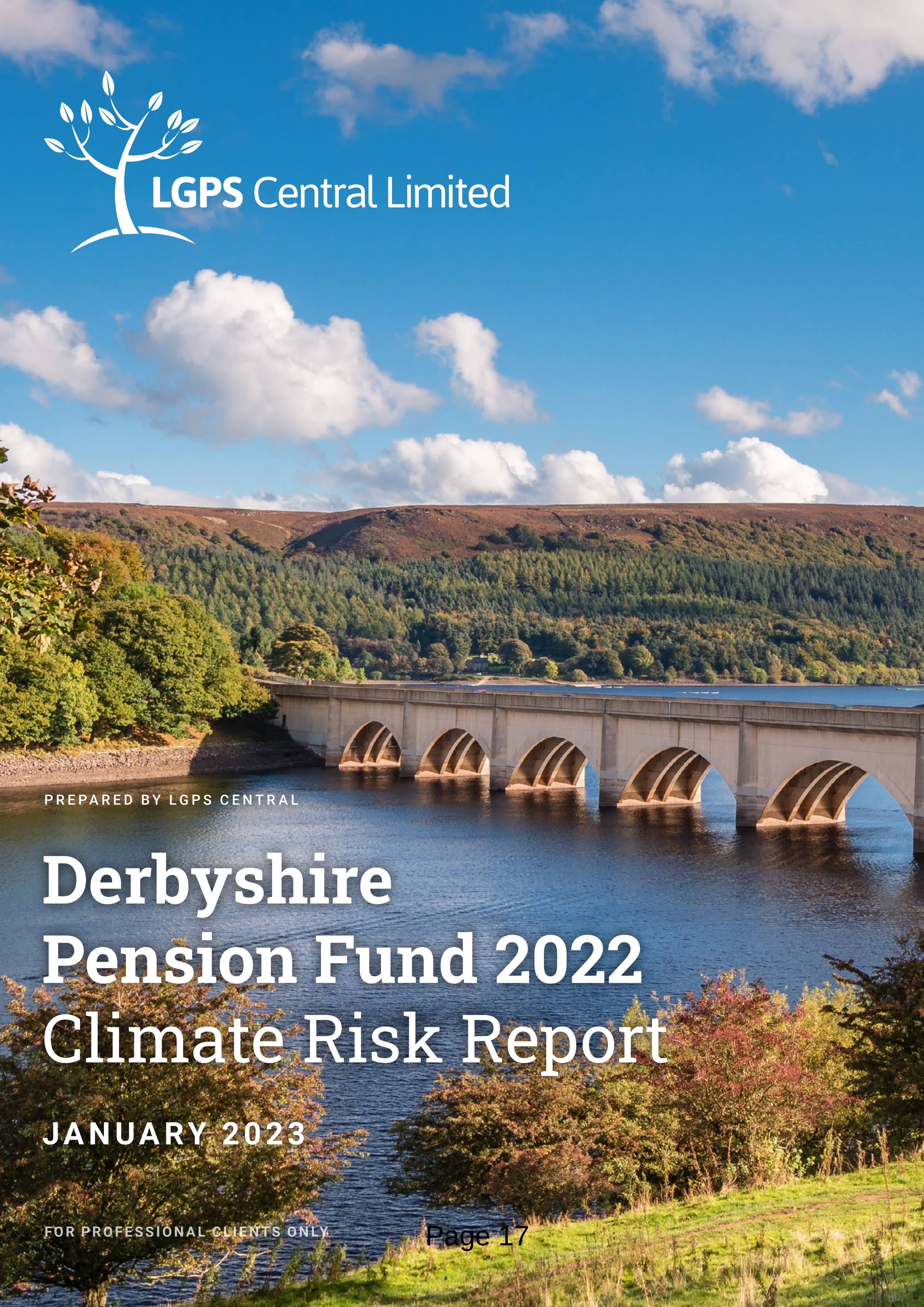

LGPS Central Limited

PREPARED BY LGPS CENTRAL

Derbyshire Pension Fund 2022 Climate Risk Report

JANUARY 2023

PREPARED BY LGPS CENTRAL

Derbyshire Pension Fund 2022 Climate Risk Report

JANUARY 2023

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LGPS Central Limited

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1.0 Executive Summary

Key Highlights from 2021:

TOTAL EQUITIES' carbon footprint is ▲ **44.08%** **more carbon efficient** THAN THE 2020 WEIGHTED BENCHMARK

31.48% **reduction in** Total Equities carbon footprint between 31ST JULY 2019 AND 31ST MARCH 2022

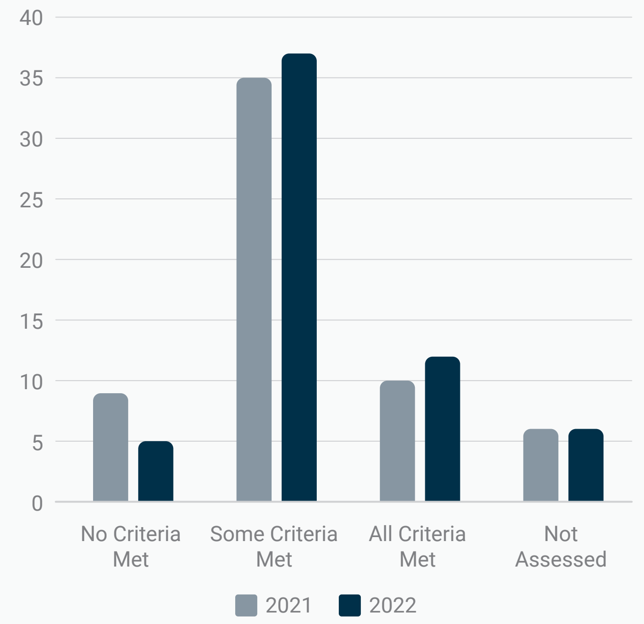
ON 31ST MARCH 2022 **7.29%** of the Total Equity portfolio was invested in fossil fuel companies

▼ 3.02% LOWER than on 31st March 2019

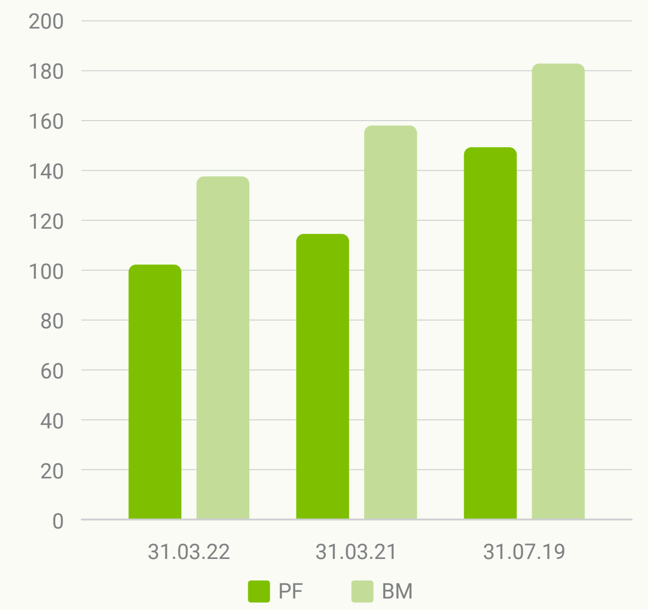
▼ 1.01% LOWER than the benchmark on 31st March 2022 of 8.30%

27% (29% on a committed basis) of the Fund is invested **in low carbon and sustainable investments** AS OF 31ST MARCH 2022 UP FROM 19% ON AN INVESTED BASIS AS OF 31ST MARCH 2021

Total CA100+ NZB Indicators Met by CSP Companies



Total Equities Carbon Footprint



80% of Climate Stewardship Plan (CSP) companies **with Transition Pathway Initiative[1] Management Quality 4/4***

THE FUND HAS MET ITS **2025 carbon reduction target** AND IS ON TRACK TO MEETING ITS **sustainable investment target**

▼ **35.82%** REDUCTION IN **Total Equities Financed Emissions[2]** (a measure of the absolute tons[3] of CO_2 for which an investor is responsible) BETWEEN 31st July 2019 AND 31st March 2022

[1] The Transition Pathway Initiative (TPI) framework evaluates companies based on their climate risk management quality and their carbon performance.

[2] Financed Emissions is calculated by the total emissions of the company apportioned by DPF's financing of the company (both debt and equities exposure) divided by the EVIC.

[3] For context, driving approximately 6,000km in a diesel car releases one ton of CO2 emissions. To capture a ton of CO2 emissions 50 trees must be grown for one year.

This report is Derbyshire Pension Fund's ("The Fund" or "DPF") third Climate Risk Report. It follows previous iterations delivered in February 2020 and October 2021. Through a combination of bottom-up and top-down analysis, each of these reports have been designed to allow DPF regular insights into the nature of the climate risk held throughout its equities and fixed income asset portfolios, accompanied by proposed actions the Fund could take to manage and reduce that risk.

The purpose of this third report is to analyse progress against the baseline of data from previous reports, reassess the Fund's exposure to climate-related risks and opportunities, and identify further means for the Fund to manage its material climate risks. The report is structured to align with the four pillars of the Taskforce on Climate-Related Financial Disclosures (TCFD) and facilitates public disclosure against this framework. We provide below a summary of the salient findings from each section in the report.

GOVERNANCE

The Fund has fully completed most of the governance recommendations and considerations from the previous Climate Risk Reports. We find the climate governance at the Fund to be of a very high standard, with the Fund's pledge to become Net Zero reflecting this. With a view to supporting DPF in achieving this target, we recommend several additional steps the Fund could consider taking.

STRATEGY

The findings from Mercer's climate scenario analysis highlights the possible impact from transition and physical risks of climate change. The Fund will likely perform better in an Orderly or Rapid transition scenario. In a Failed transition scenario, physical impact from climate change will likely affect longer-term investment return.

RISK MANAGEMENT

We have reviewed ongoing engagements with the five companies in the Fund's Climate Stewardship Plan. We find evidence of decarbonisation progress; all of the five firms have committed to Net Zero, they all have TPI Management Quality scores of 4 and above, and have taken additional steps in the past twelve months to enhance their management of climate-related risks. Despite this, many fall short in failing to have 1.5°C aligned targets, and the progress against the CA100+ Net Zero Benchmark remains limited in several cases. We encourage the Fund to continue monitoring engagement with these five companies, alongside two new companies.

METRICS AND TARGETS

The Carbon Risk Metrics we have analysed suggest that the Fund's management of climate risk continues to be progressing well. Between 31st July 2019 and 31st March 2022, the carbon footprint of the Fund's Total Equity portfolio decreased by 31.48%. The Financed Emissions of the Total Equity Portfolio decreased by 35.82%. The Fund's exposure to fossil fuel reserves remains below the benchmark, whilst the Total Equity exposure to clean technology has increased by 5.41%. Looking at the climate governance of the Total Equity portfolio, 64.51% of the Fund's financed emissions are covered by a Net Zero target. The number of companies assessed by the TPI as achieving a management quality of 4/4* has increased by 6.94%, whilst the number of companies committed to targets aligned with a 1.5 degree scenario has increased by 9.05%.

2.0 Recommendations and Considerations

2.1 Governance

CATEGORY	PORTFOLIO	RECOMMENDED ACTION	REPORT REFERENCE
Governance	Total Fund	• **R:** Continue to report progress against short-term decarbonisation targets on an annual basis • **C:** Work to determine the most appropriate decarbonisation pathway in order to achieve Net Zero • **C:** Integrate 'climate solutions' data into the Carbon Risk Management System (CRMS) once an industry-agreed definition is available • **C:** Establish a Net Zero Stewardship Programme • **C:** Develop a Net Zero Manager Monitoring Programme	4.1

2.3 Risk Management

CATEGORY	PORTFOLIO	RECOMMENDED ACTION	REPORT REFERENCE
Company Stewardship	Total Equities	• **R:** Continue to engage the companies highlighted in the Climate Stewardship plan through selected stewardship partners • **R:** Report progress in the next Climate Risk Report	4.3

2.4 Metrics & Targets

CATEGORY	PORTFOLIO	RECOMMENDED ACTION	REPORT REFERENCE
Metrics	Total Fund	• **R:** Repeat Carbon Risk Metrics analysis annually • **R:** Report annually on progress on climate risk using the TCFD Framework	4.4.2
	Total UK Equities	• **R:** Continue to monitor **Shell**, **BP**, **Rio Tinto** and **CRH** via the Fund's Climate Stewardship Plan • **R:** Consider adding **Glencore** and **Anglo American** to the Fund's Climate Stewardship Plan	
	Total Japan Equities	• **R:** Monitor engagement activity with **Inpex Corporation** and **Shin-ETSU Chemical** • **R:** Monitor the portfolio's net zero alignment	
	Total Asia Pacific Equities	• **R:** Continue to monitor engagement activity with **Ultratech Cement**	

	Total Emerging Market Equities	• **R:** Continue to include **Taiwan Semiconductor Manufacturing** in the Fund's Climate Stewardship Plan • **R:** Monitor manager engagement with **Cemex** and **Huxain Cement** • **R:** Monitor manager engagement around Net Zero, utilising TPI data to track the % of companies committed to Net Zero	
	Total Sustainable Equities	• **R:** Monitor manager engagement with **CSX**, **Equinor** and **First Quantum Minerals** • **R:** Continue to include **Taiwan Semiconductor Manufacturing** in the Climate Stewardship Plan	
	Total Corporate Bonds	• **R:** Monitor engagement with **The Southern Company** • **R:** Query the fund managers position on the Utilities sector in relation to the climate transition and net-zero ambitions	

3.0 Introduction

3.1 Scope of the Report

This report is DPF's third Climate Risk Report. It follows previous iterations delivered in February 2020 and October 2021. The purpose of this report is to:

1. Analyse progress against the baseline of data from previous reports
2. Reassess the Fund's exposure to climate-related risks and opportunities
3. Identify further means for the Fund to manage its material climate risks

Our mode of analysis continues to be consistent with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD). Each section in chapter 4 corresponds to one of the TCFD pillars.

3.2 Climate Action to Date

To demonstrate the urgency surrounding climate change, and why it is necessary for Pension Funds to act now to mitigate climate risks, we provide below a summary of the key climate updates which have occurred since 2016.

The evidence is clear that climate change represents a massive systemic risk, and potential for market failure. Whilst concern is being voiced, the action to date shows we are not yet doing enough, with the current trajectory of 3°C likely to place us beyond the realm of human experience sometime in the next 30 years. This is sub-optimal for pension funds, even accounting for their ability to diversify idiosyncratic risk. The climate scenario with the lowest estimated economic damages and the one most favourable to long-term investors is a scenario that aligns with the Paris Agreement. Climate risks could to one extent or another affect all asset classes, sectors and regions, it is unlikely that climate-risks can be mitigated through diversification alone.

For investors, climate change is a fiduciary issue. Local authority pension funds typically investment over multidecadal time horizons and have long-term liability profiles. Significant uncertainty remains, and no single tool or data-set can provide an accurate and complete observation of a pension fund's climate risk. For responsible investors looking to proactively manage climate risk, a combination of metrics and methodologies, paired with targeted engagement, represents the best possible information set currently available.

DECEMBER 2015

THE PARIS AGREEMENT COP 21

In December 2015 the Paris Climate Agreement is adopted. The objective of the agreement is to maintain the increase of global temperatures to well below 2°C from pre-industrial levels, whilst also making an effort to limit the increase to 1.5°C.

The Paris Agreement entered into force in November 2016.

OCTOBER 2018

UN IPCC 1.5°C SPECIAL REPORT

The United Nations Intergovernmental Panel on Climate Change (IPCC) published a report investigating the impact of a 1.5°C rise in global mean temperature from pre-industrial levels. The report concluded that emissions will have to be reduced by more than previously estimated.

NOVEMBER 2019

EUROPEAN PARLIAMENT DECLARES CLIMATE EMERGENCY

The European Parliament declares a climate emergency in Europe and globally, aiming to ensure that all relevant legislative and budgetary proposals are fully aligned with the objective of limiting global warming to less than 1.5°C.

MAY 2021

IEA 1.5°C SCENARIO

The International Energy Agency (IEA) publishes its 1.5°C 'Net Zero' Scenario. It argues the new scenario is the most technically feasible, cost-effective and socially acceptable way to stay below the 1.5°C limit. Stipulations of the scenario include: no new investments in fossil fuel supply as of 2021; a 75% decline in methane emissions; a radical shift towards renewable energy; an increase in CCS capacity of 4000%; no sales of new combustion engines in cars by 2035; and net zero emissions from the power sector by 2040.

AUGUST 2021

IPCC SIXTH ASSESSMENT PART ONE

The IPCC releases Part One "Physical Science Basis" of its Sixth Assessment Report. The report reconfirms that human activity is the cause of global warming, and that much of the damage caused by climate change is now irreversible. The report warns that mankind has emitted 2,560bn tons of CO_2e since 1750 and we only have a budget of 500bn tons more if we want to limit warming to 1.5°C. The report focuses on three modelled scenarios (1.5°C, 2°C and 4°C). The first scenario implies a drastic reduction in global emissions. The second assumes the commitment of effective, ambitious, and coordinated climate policies. The first two scenarios both assume that most fossil fuels will no longer be used. According to the report, the probable temperature rise is 3°C by the end of the Century, with 1.5°C reached before 2040.

OCTOBER 2021

UN EMISSIONS GAP REPORT 2021

The UN released its Emissions Gap Report 2021. The report shows that countries' 2030 climate targets would lead to a global temperature rise of 2.7°C by the end of the century. This is above the goals of the Paris Agreement and would lead to catastrophic changes in the Earth's climate.

NOVEMBER 2021

COP26

The outcomes of COP26 included the following:

1. 197 countries agreed to adopt the Glasgow Climate Pact. This commits countries to review and strengthen their NDCs at COP27, and to accelerate efforts towards the phase-down of unabated coal power.
2. 100 countries signed a pledge to cut methane emissions by 30% by 2030. The pledge includes six of the world's ten largest emitters.
3. Joint US-China climate declaration centred around principles for climate cooperation, ranging from methane reduction to protecting forests.
4. UK-led initiative of 190 countries and organisations agreeing to phase out the use of coal-fired power for major economies in the 2030s.
5. Article Six was finalised, ensuring rules for a global carbon offset market.
6. Agreement between 141 countries to end deforestation by 2030.

DECEMBER 2021

IEA ANNUAL REPORTS

The 2021 IEA Renewables Forecast revealed that a record amount of renewable energy was added to energy systems globally in 2021, but it remains half of what is needed annually to be on track to reach net zero emissions by 2050. Additionally, within their Coal Forecast, the IEA called for strong and immediate action from governments to tackle emissions from coal as it predicted the amount of electricity generated from burning the fuel would jump by 9%.

FEBRUARY 2022

IPCC SIXTH ASSESSMENT PART TWO

The IPCC releases Part Two "Impacts, Adaptation and Vulnerability" of its Sixth Assessment Report. The report warns that climate change risks are greater than previously thought. The world has a brief and rapidly closing window to adapt to climate change. Some losses are already irreversible, and ecosystems are reaching the limits of their ability to adapt to the changing climate. Hazards such as the rise in sea level were unavoidable and "any further delay" to mitigate and adapt to warning would miss the "window of opportunity to secure a liveable and sustainable future for all".

APRIL 2022

IPCC SIXTH ASSESSMENT PART THREE

The IPCC releases Part Three "Mitigation of Climate Change" of its Sixth Assessment Report. The Report covers efforts to mitigate the effects of climate change and finds that the world can still achieve 1.5°C if radical action is taken. Net carbon emissions must peak within the next three years and be eliminated by the early 2050s. The IPCC reports that on our current trajectory, we are heading for a temperature rise of 3°C. The main finding for investors is that financial flows are currently 3-6 times lower than the level needed by 2030 to limit global warming. While there is sufficient capital to close investment gaps, increasing flows relies on clearer signalling from governments.

4.0 Analysis

4.1 Governance

4.1.1 SCOPE

In the Fund's first Climate Risk Report we reviewed the Fund's published documentation and governance arrangements from the perspective of climate strategy setting. We recommended several actions the Fund could consider implementing to further enhance its management of climate risk. In the 2021 Climate Risk Report, we provided a progress update. Through its own initiative, the Fund has achieved full completion of these recommendations. With this in mind we provide an overview of DPF's climate governance journey to date. We supplement this with some further policy extensions the Fund could consider, focusing on Net Zero.

4.1.2 KEY FINDINGS

TABLE 4.1.2.1 DPF'S MANAGEMENT TIMELINE

AUGUST 2017

CLIMATE CHANGE REPORT
A report outlining the Fund's approach to incorporating the implications of climate change into the Fund's investment process was presented to the Pensions and Investments Committee.

JULY 2019

CLIMATE RISK REPORT
The Fund commissioned its first Climate Risk Report form LGPS Central (LGPS Central or LGPSC) which included the results of carbon risk metrics analysis and climate scenario analysis.

FEBRUARY 2020

CLIMATE STEWARDSHIP PLAN
The Fund commits to a Climate Stewardship Plan which includes a focus list of companies that the Fund will monitor.

MARCH 2020

TCFD REPORT
The Fund published its first TCFD-aligned report. It described the way in which climate-related risks were managed by the Fund. It included the results of carbon risk metrics and climate scenario analysis.

NOVEMBER 2020

CLIMATE TARGETS
The Fund commits to Net Zero emissions by 2050. Alongside this overarching aim, the Fund commits to two underlying targets. Firstly, to reduce the carbon footprint (scope 1 and 2) of its listed equity portfolio by at least 30% relative to the 2020 benchmark by the end of 2025. Secondly, to invest at least 30% of the Fund portfolio in low carbon and sustainable investments by the end of 2025.

PARIS AGREEMENT SUPPORT
The Fund publicly declares support for the Paris Agreement through its Climate Strategy.

INVESTMENT BELIEFS
The Fund publishes more detailed climate-related investment beliefs via its Climate Strategy.

CLIMATE STRATEGY
The Fund publishes its first Climate Strategy. The strategy recognises the importance of climate change and draws together the Fund's climate-related policies, statements and targets into one consolidated document.

RISK REGISTER
Climate Risk is included in the Fund's Risk Register.

RESPONSIBLE INVESTMENT FRAMEWORK
The Fund publishes its Responsible Investment Framework. It sets out the integration of ESG considerations into the investment process and Fund stewardship and governance activities.

MARCH 2021

CLIMATE TARGETS PROGRESS
As of 31st March 2021, the Fund's Total Equity carbon footprint is 37.4% below its 2020 weighted benchmark. The Fund has 19.0% of its weight in global sustainable or low carbon equities.

JULY 2021

2ND CLIMATE RISK REPORT
The Fund received its second Climate Risk Report from LGPS Central which provided an update to the carbon risk metrics analysis.

NOVEMBER 2021

2ND TCFD REPORT
The Fund publishes its second TCFD Report. The Report includes the latest carbon risk metrics results.

MARCH 2022

CLIMATE TARGETS PROGRESS
The Fund's allocation to global sustainable or low carbon equities increases to 27% on an invested basis, increasing to 29% on a committed basis.

DPF CLIMATE STRATEGY

The Climate Change Strategy has two explicit short-term targets which we find to be consistent with the Fund's wider investment objectives. Progress against the targets is shown below.

TARGET	STATUS
Reduce the carbon footprint by 30% relative to the weighted benchmark in 2020 by the end of 2025	As of 31st March 2022, the Total Equity portfolio is 44.08% more carbon efficient than the 2020 weighted benchmark.
Invest at least 30% of the Fund portfolio in low carbon and sustainable investments by the end of 2025	The Fund's allocation to global sustainable and low carbon investments as of 31st March 2022 was 27% on an invested basis, increasing to 29% on a committed basis.

We find that the Fund is making commendable progress towards its short-term decarbonisation targets. These targets are generally aligned with the Institutional Investors Group on Climate Change (IIGCC) Net Zero Investment Framework (see below) and will be reviewed by the Fund every three years. We note that Net Zero frameworks amongst asset owners are still in their early stage. The Fund's current commitment puts it in a relatively good standing against peers. As the tools and methodologies for measuring Net Zero improve, the Fund could consider releasing a Net Zero Strategy to augment this commitment.

We find the IIGCC's Net Zero Investment Framework[4] to be a useful guide to Net Zero and would recommend DPF utilise it as the foundation for a Net Zero Strategy if one is developed. Other helpful resources include the IIGCC's Net Zero Stewardship Toolkit[5] and the IIGCC's Guidance on Target Setting[6].

KEY ELEMENTS OF THE IIGCC'S NET ZERO INVESTMENT FRAMEWORK

The IIGCC's Net Zero Framework has two overarching objectives:

1. Decarbonise portfolios in a way that is consistent with achieving global net zero greenhouse gas (GHG) emissions by 2050.
2. Increase investment in the range of 'climate solutions' needed to meet that goal.

These objectives can be broken down into four targets that investors need to meet:

1. A <10yr emissions reduction target, with 5-year interim targets.
2. A <10yr goal for increasing the % of investments in 'climate solutions'.
3. Ensure 70% of portfolio financed emissions are either aligned or under active engagement.
4. Increase the % of AUM in net zero or aligning assets, reaching 100% by 2040.

A Net Zero Strategy should set both the parameters for these targets (i.e., define the level of decarbonisation sought) and explain how the investor intends to meet them. For the latter, investors can select and develop certain programmes that will allow achievement of the targets. This could include implementing a net zero stewardship plan, a net zero manager monitoring plan, reviewing asset allocation decisions, utilising Paris-aligned benchmarks, and ensuring robust policy advocacy and market engagement.

Based on the above, we provide in Table 4.1.2.2 some suggested workstreams that would help DPF to set a Net Zero Strategy.

[4] Available at: https://www.iigcc.org/resource/net-zero-investment-framework-implementation-guide/
[5] Available at: https://www.iigcc.org/resource/iigcc-net-zero-stewardship-toolkit/
[6] Available at: https://www.iigcc.org/resource/the-net-zero-investment-framework-supplementary-target-setting-guidance/

WORKSTREAM	CONTEXT	DPF'S CURRENT PRACTICE	EXTENSIONS	ACTIONS	CONSIDERATIONS	RECOMMENDATIONS
EMISSIONS REDUCTION TARGET	Emissions reduction targets can be expressed either as an absolute emissions metric or an intensity metric. Beyond this, Investors also need to select a science-based Net Zero emissions reduction pathway to determine the emissions trajectory for the portfolio. Investors then need to calculate how their emissions reduction targets align to their chosen net zero pathway.	DPF have a decarbonisation target to reduce the carbon footprint by 30% relative to the weighted benchmark in 2020 by the end of 2025. The Fund also has access to annual emissions data from LGPS Central.	DPF could consider setting longer term decarbonisation targets stretching out to 2030. Investment performance and any other relevant factors, including portfolio diversification, will also need to be taken into account when setting these targets. DPF will review its current targets in 2023. Further alignment to a credible Net Zero Pathway, if required, can be considered by DPF.	• Choose Net Zero emissions reduction pathway. • Map emissions to chosen net zero pathway. • Review existing targets to determine whether they align to the net zero pathway. • Consider setting new targets if necessary.	The IIGCC acknowledge that asset owners may not be able to apply such a granular approach to target setting. In such cases, targets can be guided by global scenarios such as the IPCC's CO_2 reduction to Net Zero by 2050.	We encourage DPF to collaborate with its investment managers on setting a 2030 target. LGPSC is currently reviewing its own targets and following this will be in a position to advise on alignment with a Net Zero pathway.
CLIMATE SOLUTIONS TARGET	The IIGCC recommend that investors set a goal for increasing the % of investments in 'climate solutions'. This definition should be based on EU taxonomy mitigation criteria. Investors would need to determine their baseline exposure before setting goals for increased exposure.	DPF have set a target to invest a 30% of total Fund assets in sustainable and low carbon asset classes.	DPF could set a more ambitious target should a credible definition of 'climate solutions' emerge. Investment performance and any other relevant factors, including portfolio diversification, will also need to be taken into account when these setting targets. In line with the Fund's Climate Strategy, this target is next subject to review in 2023.	• Review industry developments over the next 12-24 months to see if a credible definition of 'climate solutions' emerges.	The IIGCC presents three kinds of Climate Solution: Low-carbon solutions; Transitional solutions; and Enabling solutions. These solutions can stem from four different metrics: Green Investment Ratio; Priority net zero investment ratio; Green capex alignment; and Portfolio carbon returns. A successful Climate Solution strategy will consider a range of the above definitions and metrics.	DPF to integrate 'climate solutions' data into the CRMS once a standardised definition has been provided by the IIGCC. This work could be carried out in collaboration with LGPSC.

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WORKSTREAM	CONTEXT	DPF'S CURRENT PRACTICE	EXTENSIONS	ACTIONS	CONSIDERATIONS	RECOMMENDATIONS
NET ZERO STEWARDSHIP	Investors need to ensure a minimum level of engagement is delivered. This equates to 70% of financed emissions being either aligned or under engagement.	The Fund has a section on stewardship in its Climate Strategy. The Fund also has a number of engagement partners including LGPSC, LAPPF, EOS and its external managers.	The Fund could commit to ensuring 70% of its financed emissions are covered through baseline engagement.	• Define vehicles for ensuring baseline engagement. • Map financed emissions to engagement programmes.	As the Fund's portfolios are externally managed, the Fund would not be expected to do the engagement directly. It should utilise its engagement partners.	DPF should map its financed emissions to current engagements. This work could be carried out in collaboration with LGPSC. The Fund can also provide input into LGPSC's Net Zero Voting Policy via the Responsible Investment Working Group (RIWG). This work could be carried out in collaboration with LGPSC to the extent required.
	Investors can implement a targeted engagement programme with a small group of companies which account for the majority share of their finance emissions. These companies should be assessed against a net zero alignment framework on a regular basis.	The Fund currently operates a Climate Stewardship Plan. LGPSC provides DPF with annual financed emissions data and updates against the Climate Stewardship Plan.	The Climate Stewardship Plan could be enhanced to include the 20 companies responsible for the majority of the Fund's financed emissions. The Fund could then monitor these companies against an alignment framework.	• Identify which companies account for the majority share of financed emissions. • Work with LGPSC to develop a proprietary alignment framework.	DPF should utilise its external partners to conduct the engagement. In an April 2022 press release, The IIGCC published their systematic framework for global investors to prioritise high impact corporate engagement. The framework includes six steps which underpin net zero stewardship with practical examples for the consideration for investment managers with net zero aspirations.	LGPSC is currently working on developing an alignment framework for its own Net Zero Strategy (this could be supplemented with the IIGCC alignment framework once complete). The Fund could integrate this into the CRMS so the Fund can receive annual updates of the progress of its focus companies.
	Investors should outline how they intend to collectively or directly engage with policymakers and regulators on issues such as: carbon pricing relevant to achieving the net zero transition, improving disclosure of information, increasing shareholder rights, etc.	The Fund's Climate Strategy outlines DPF's objective to advocate for Paris-aligned regulations and policies.	We encourage the Fund to continue this commitment. The Fund could add an explicit reference to encouraging a Net Zero Transition.	• Continue to advocate for Paris-aligned regulations.	The Fund should continue to leverage its engagement partners to conduct this engagement.	We encourage the Fund to work with its investment managers, including LGPSC, to create a programme of Net Zero policy advocacy.

WORKSTREAM	CONTEXT	DPF'S CURRENT PRACTICE	EXTENSIONS	ACTIONS	CONSIDERATIONS	RECOMMENDATIONS
NET ZERO MANAGER MONITORING	LGPSC is creating a framework to assess our external manager's progress towards net zero. This is something that DPF could also utilise to monitor the progress of its managers.	The Fund's Climate Strategy currently includes a section on manager monitoring.	The Fund could enhance its manager monitoring to include a proprietary framework from which to assess Net Zero alignment.	• Work with LGPSC to create a net zero manager monitoring framework.	DPF should consider the timeframes against which to assess managers.	DPF should monitor LGPSC's creation of a Net Zero Manager Monitoring Framework.

4.1.3 RECOMMENDATIONS AND CONSIDERATIONS

RECOMMENDATIONS:

- Continue to report progress against short-term decarbonisation targets on an annual basis.

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CONSIDERATIONS:

- Integrate 'climate solutions' data into the CRMS once an industry-agreed definition is available.
- Establish a Net Zero Stewardship Programme. This includes mapping the Funds financed emissions to existing engagements, creating a Net Zero Voting Policy, establishing an alignment framework, and defining a policy advocacy programme.
- Establish a Net Zero Manager Monitoring Programme.

4.2 Strategy

4.2.1 CLIMATE SCENARIO ANALYSIS

CLIMATE SCENARIO ANALYSIS INTRODUCTION

In the Fund's 2020 and 2021 Climate Risk Report, we utilised the services of Mercer LLC (Mercer) to conduct Climate Scenario Analysis of the Fund. Climate Scenario Analysis estimates the effects on key financial parameters (such as risk and return) that could result from plausible climate scenarios. In these reports the scenarios were defined according to the change in mean global surface temperatures since pre-industrial times. We considered three scenarios (2°C, 3°C and 4°C) across three timescales (2030, 2050 and 2100).

For 2022, Mercer has partnered with Ortec Finance and Cambridge Econometrics to develop climate scenarios that are grounded in the latest climate and economic research and give practical insights. This partnership brings together Mercer's investment and climate expertise alongside Ortec's research and scenario generator technology.

This report will summarise the key changes in the model and discuss the results of the analysis, focusing on annualised and cumulative impacts against a baseline assumption, and comparison between the two asset allocations.

WHY SHOULD A PENSION FUND CONDUCT CLIMATE SCENARIO ANALYSIS?

Investors often use scenario analysis to support Strategic Asset Allocation (SAA) and portfolio construction decisions, as it helps to model potential risks and returns.

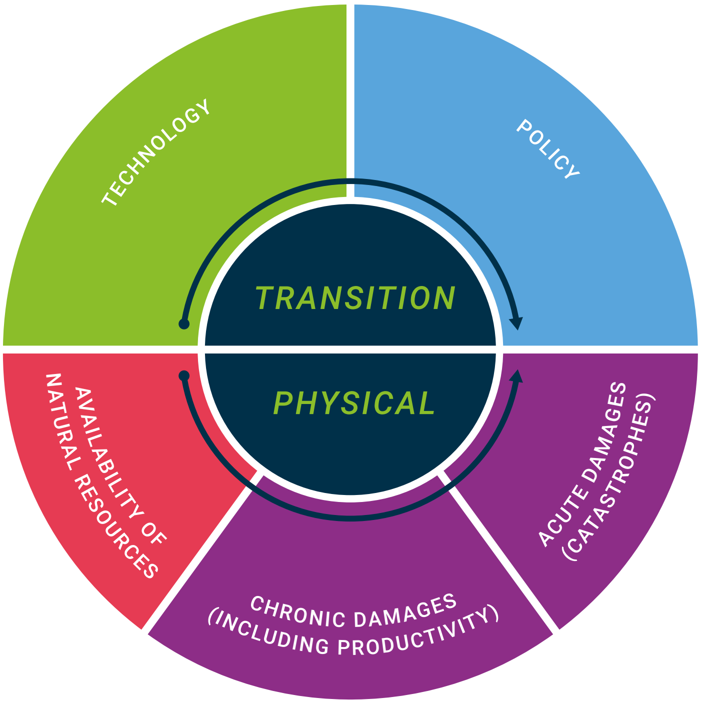
With a growing (but still early) understanding of the potential impacts of climate change on investment performance and following the recommendations of the TCFD, more pension funds are electing to conduct Climate Scenario Analysis. Climate Scenario Analysis helps investors to better understand the short-, medium- and long-term climate change risks and opportunities associated with plausible climate change scenarios, to understand the portfolio's sensitivities to such scenarios, and to build more resilient portfolios.

As we argue above, although the predictions made by climate scientists have gained overwhelming consensus, there remains a great deal of uncertainty for investors around the market reaction to climate risks and changing climate policies. This creates a strong argument for Climate Scenario Analysis to understand the different possible eventualities across a range of scenarios. It is important that investors assess their portfolio's resilience to different climate scenarios and consider the impact of their portfolios on future climate trajectories.

We remain conscious that scenario analysis (of any kind) requires by necessity the use of assumptions about inherently unpredictable phenomena. Climate Scenario Analysis is no different in this regard. We believe, however, that investors looking to manage climate risk proactively ought to attempt an 'inference to the best explanation' and we think the Mercer's model and approach to Climate Scenario Analysis is the best available.

Mercer's climate scenarios are constructed to explore three climate scenarios (Rapid Transition, Orderly Transition and Failed Transition) and explore a range of plausible futures over 5 to 40 years, rather than exploring tail risks. Mercer's analysis considers two risk factors: transition risk and physical risk.

RISK FACTORS



CLIMATE SCENARIO ANALYSIS: PROS AND CONS

Future developments are inherently uncertain and impossible to predict. To manage uncertainty, scenario analysis is used to assist asset allocation decisions.

SCENARIO ANALYSIS CHALLENGES:

- Scenario uncertainty: Any climate scenario only reflects one possible way to achieve a certain temperature goal, while in reality many different scenarios are possible for the same temperature outcome.
- Model uncertainty: Different models lead to different results, due to different model structure and assumptions.
- Uncertainty around assumptions: For example, ambitious scenarios depend on future (negative emissions) technologies such as carbon capture and storage.

- Gaps: On the other hand, certain necessary changes to achieve zero emissions are currently not included in most models, such as changes in lifestyle (e.g. plant-based diets) or economic systems (e.g. circular economy). Furthermore, certain high-risk impacts cannot be covered in most models, such as impacts of sea level rise, migration, health and tipping points in the climate system.

SCENARIO ANALYSIS BENEFITS:

- Proactively assesses impact of changing future climate events.
- Ability to understand a wide range of climate outcomes.
- Forecast the potential impacts into actionable insights.

MERCER'S CLIMATE SCENARIOS

For this year's report, Mercer has partnered with Ortec Finance and Cambridge Econometrics to develop climate scenarios that are grounded in the latest climate and economic research and give practical insights.

Mercer's three climate scenarios are developed by building the investment modelling on top of the economic impacts of different climate change scenarios within the Cambridge Econometric's E3ME climate model. Each climate scenario covers a specific level of warming driven by levels of carbon dioxide (CO_2) and other greenhouse gases. These levels are determined by the policies enacted and technological developments. The impacts of the warming are shown in the physical damages. The three scenarios used in the modelling are outlined below.

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 in policy or realisation that policy change is inevitable, consideration of stranded assets or expected cost. To a degree the shock is sentiment driven and 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

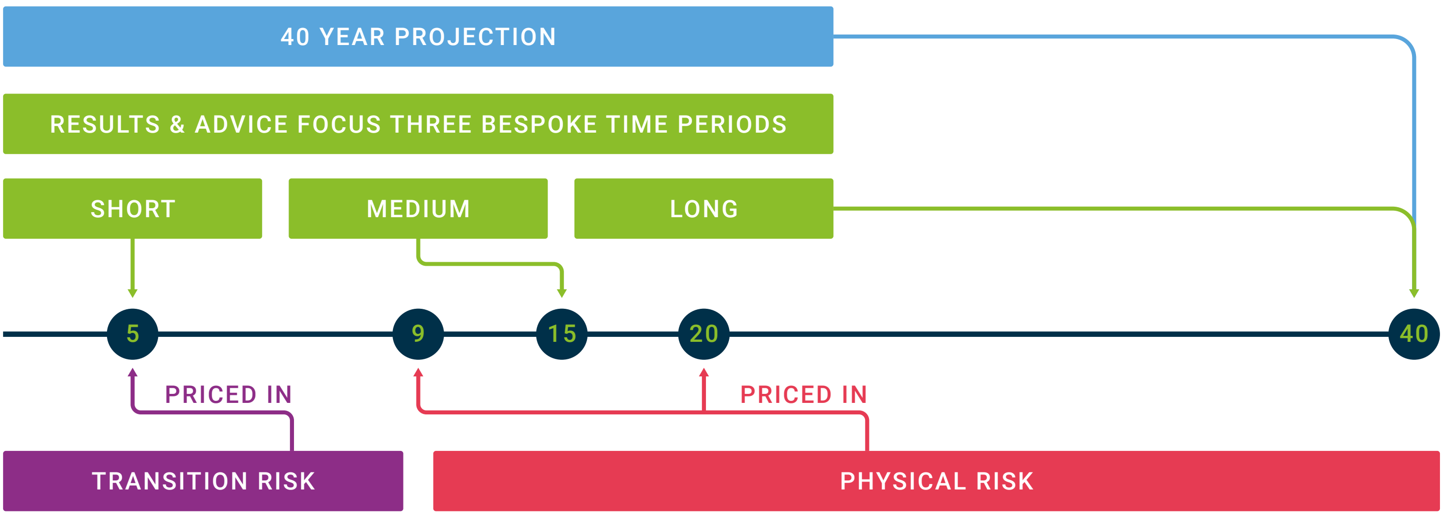
This scenario assumes political and social organisations act in a co-ordinated way to implement the recommendations of the Paris Agreement to limit global warming to well below 2°C. Transition impacts do occur but are relatively muted across the broad market.

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.

In the analysis, Mercer focused on short-, medium- and long-term time frames of 5, 15 and 40 years. In shorter time frames, transition risk tends to dominate while over longer time frames physical risk is expected to be the key driver of climate impacts. Transition risks are priced in around 2026 and future physical damages are priced in around the end of 2020s and 2030s. These pricing in shocks reflect likely market dynamics and mean climate impacts are more likely to fit within investment timeframes.



INTERPRETATION OF THE MAIN RESULTS

The main results produced by Mercer's model is an estimated impact on investment returns, given some particular pair of (a) climate scenario and (b) time horizon, expressed either as annualised (%) or cumulative (£) returns. This should be interpreted as the climate-related impact on the estimated returns for a portfolio or asset class, i.e., it is additional to the expected mean return for that portfolio or asset class. The expected mean return of the portfolio is expressed by a climate aware baseline. It incorporates climate impacts that has been 'priced-in' by the economy and markets associated with the global warming that has occurred to date (approximately 1.2°C relative to pre-industrial levels). It does not include future additional climate impacts associated with further warming or the paradigm shifts in economies that could plausibly result from the transition or physical impacts. There is compelling academic evidence to suggest that climate impacts are currently priced-in to some extent. This means the impacts of the Orderly and Rapid Transition scenarios tend to be smaller as some of the impact is already priced in. The transition impact of a Failed Transition can be positive for sectors that the market is expecting to be negatively impacted by a transition in the short- to medium-term.

This analysis focuses on the potential impacts on the Fund's performance of different global warming scenarios given the funds asset allocation. Under this analysis, the asset allocation of DPF does not determine which scenario is realised or most probably. DPF has developed a climate strategy, which includes supporting the ambitions of the Paris Agreement and aims to achieve a portfolio of assets with net zero carbon emissions by 2050. The transition process and outcome achieved will be determined by a multitude of factors including the policy response and global coordination (or failure to coordinate) of political and social organisations.

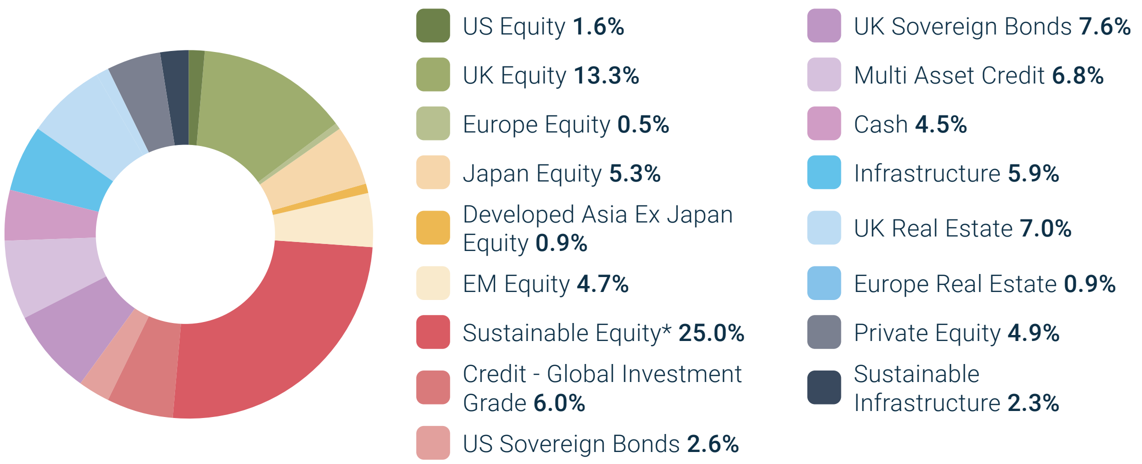
CLIMATE SCENARIO ANALYSIS SCOPE

The analysis includes the whole of DPF's investment portfolio. The analysis is top-down, mapping each of DPF's underlying portfolios to an asset class that is featured within Mercer's model. The projections utilise asset allocations as of 31 March 2022, assumes £5,684m initial asset value and contributions income matches benefit outgoings. Two variations of DPF's investment portfolio are analysed by Mercer:

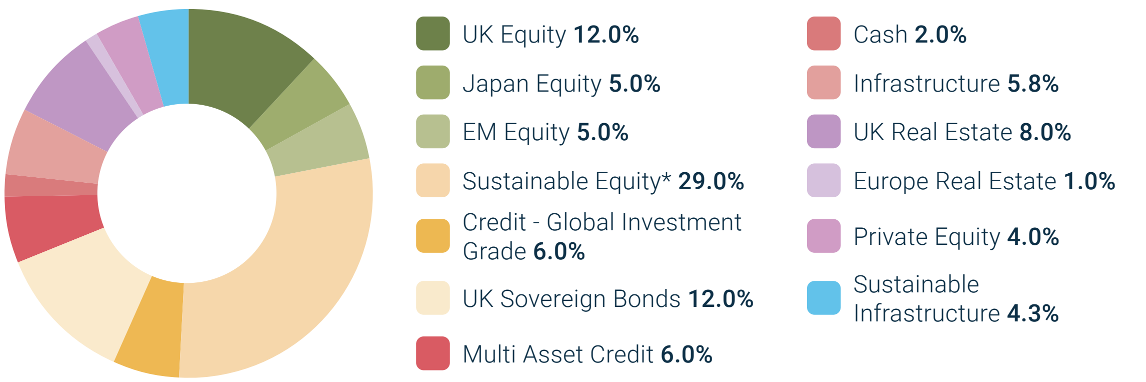
1. The Current Asset Allocation (invested as of 31st March 2022)
2. The Alternative Asset Allocation[7]

TABLE 4.2.1.1 ASSET ALLOCATION VARIANTS ANALYSED

ACTUAL ASSET ALLOCATION



ALTERNATIVE ASSET ALLOCATION



[7] The "Alternative Asset Allocation" was DPF's SAAB as at 31.3.2022.

ASSET CLASS	CURRENT SAA (%)	MODELLING ASSET CLASS	CURRENT SAA (%)	ALTERNATIVE SAA (%)
LISTED EQUITY	51.33%	Equity - US	1.62%	-
		Equity - UK	13.30%	12.00%
		Equity - Europe	0.50%	-
		Equity - Japan	5.28%	5.00%
		Equity - Developed Asia Ex. Japan	0.88%	-
		Equity - Emerging Markets	4.72%	5.00%
		Equity - Sustainable Active*	8.69%	10.06%
		Equity - Passive Climate Aware*	16.35%	18.94%
PRIVATE EQUITY	4.88%	Private Equity	4.88%	4.00%
PROPERTY	7.89%	Real Estate - UK	7.03%	8.00%
		Real Estate - Europe	0.86%	1.00%
INFRASTRUCTURE / TIMBERLAND & FARMLAND	8.37%	Infrastructure	5.94%	5.75%
		Sustainable Infrastructure	2.30%	4.25%
SOVEREIGN BONDS	10.15%	Sovereign Bonds - US	2.58%	-
		Sovereign Bonds - UK	7.57%	12.00%
MULTI ASSET CREDIT	2.36%	Multi Asset Credit	6.82%	6.00%
CORPORATE BONDS	10.52%	Credit - Global Investment Grade	6.18%	6.00%
LIABILITY DRIVEN INVESTMENTS / CASH	4.49%	Cash	4.49%	2.00%

CLIMATE SCENARIO ANALYSIS FINDINGS

KEY CONCLUSION ONE: A SUCCESSFUL TRANSITION IS AN IMPERATIVE

Over medium- to long-term, a successful transition is imperative for DPF as both asset allocations are forecasted to fare better under Rapid and Orderly transition scenarios versus the Failed transition. Over the long term for nearly all investors, a successful transition leads to enhanced projected returns when compared to scenarios associated with higher temperature outcomes due to lower physical damages.

Under a Failed transition scenario, climate impact on returns is felt in the long-term from the manifestation of physical risks. Both asset allocations suffer under this scenario relative to the expected return under the baseline scenario. Under the Orderly and Rapid transition scenarios, long-term physical impact from climate change is less prevalent due to the mitigation responses in the short-term such as policy changes and technological breakthroughs. In a Rapid transition, the hastiness and uncoordinated responses lead to short-term transition impact as asset prices decline as a consequence of these moves.

According to Mercer's model, an Orderly transition leads to superior economic outcomes relative to other climate change scenarios. The model suggests that an Orderly scenario would in the long-term see both the Current Asset Allocation and the Strategic Asset Allocation experience returns that are aligned with the baseline. The Rapid transition scenario produces marginally lower return compared to the Orderly scenario stemming from the short-term transition impact. The asset allocations perform the worst under the Failed scenario. Cumulative losses under the Failed transition scenario over 40 years could amount to c.32% of portfolio's value relative to the baseline.

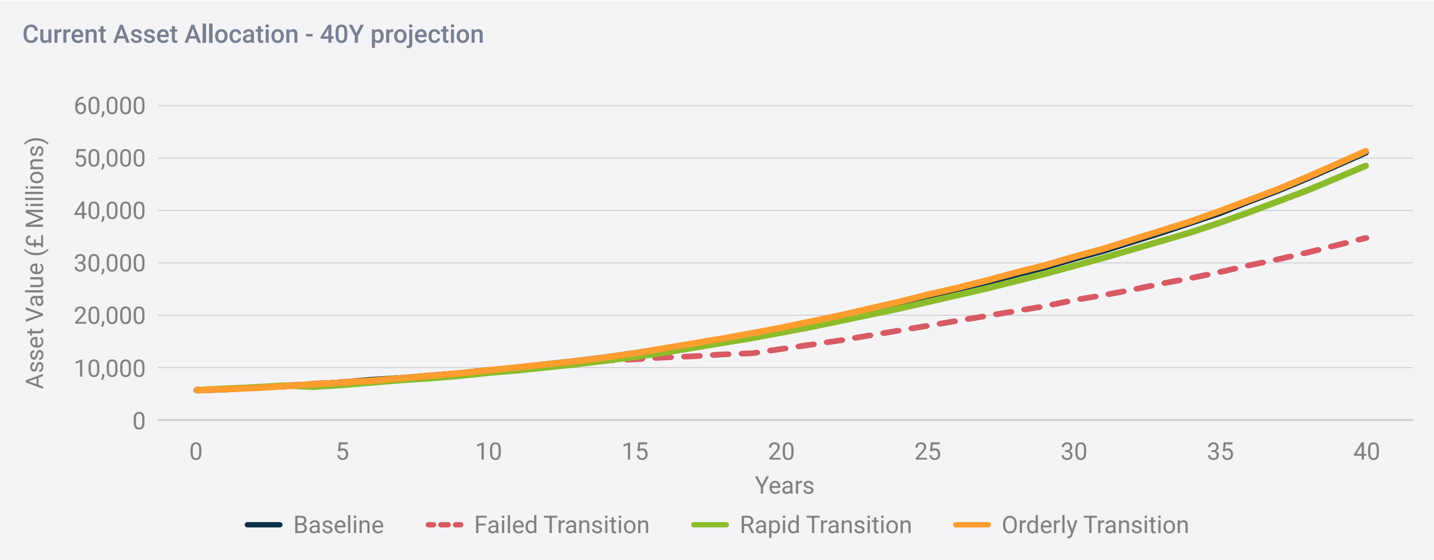
However, there is no material difference between how the two asset allocations are impacted by climate because the two strategies are relatively similar in respect of sustainability tilts and broader allocations. The overall impact to return under all scenarios is affected by the asset and regional allocations and is described in further detail under key conclusions 2 and 3.

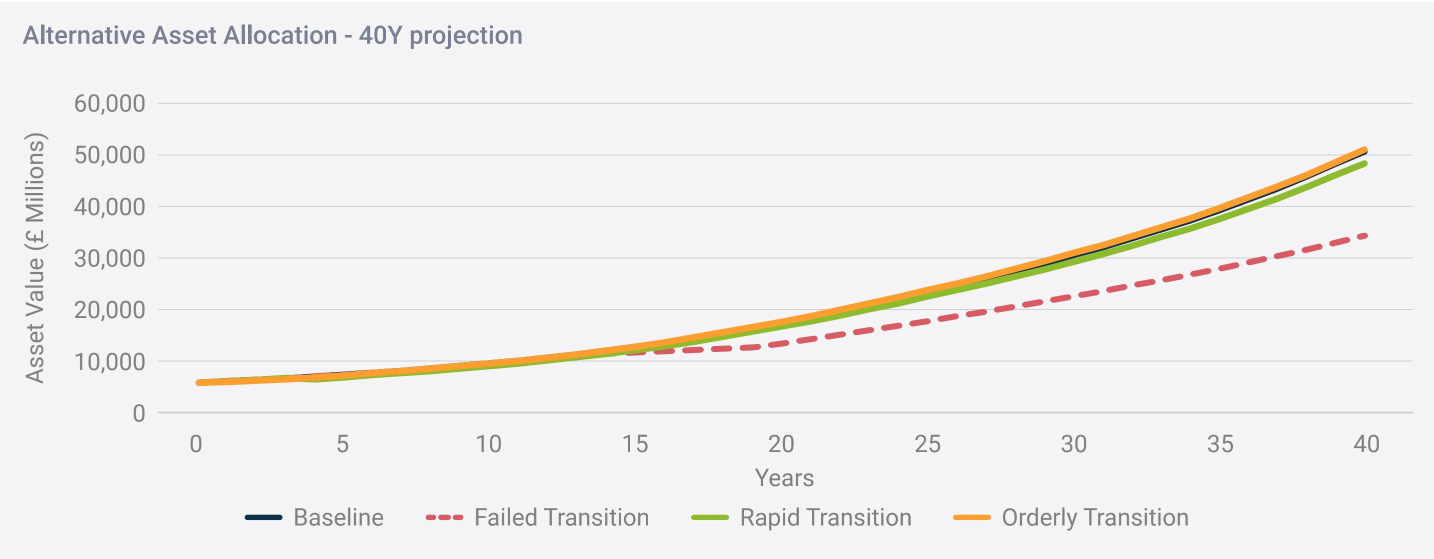
TABLE 4.2.1.2 ANNUALISED CLIMATE CHANGE IMPACT ON PORTFOLIO RETURNS – TO 5, 15 AND 40 YEARS

		CURRENT ASSET ALLOCATION	ALTERNATIVE ASSET ALLOCATION
RAPID	5 years	-1.4%	-1.3%
	15 years	-0.4%	-0.4%
	40 years	-0.1%	-0.1%
ORDERLY	5 years	-0.1%	-0.1%
	15 years	0.0%	0.0%
	40 years	0.0%	0.0%
FAILED	5 years	0.1%	0.1%
	15 years	-0.6%	-0.7%
	40 years	-1.0%	-1.0%

≤ - 10 bps   > -10 bps, < 10bps   ≥ 10 bps

FIGURE 4.2.1.1 CUMULATIVE RETURN PROJECTIONS BY CLIMATE CHANGE SCENARIO





RECOMMENDATIONS:

We recommend the Fund to continue with its planned net zero trajectory through its various collaborations including with LGPSC and other external managers. This is to ensure that climate transition and physical risks are identified and managed through stewardship and/or asset allocation activities.

KEY CONCLUSION TWO: 2. SUSTAINABLE ALLOCATIONS PROTECT AGAINST TRANSITION RISK, GROWTH ASSETS ARE HIGHLY VULNERABLE TO PHYSICAL RISK

Asset class returns vary significantly by scenario depending on their respective exposure to transition and physical risks. For DPF, allocations to sustainable asset classes provide some transition risk protection in the event of a Rapid Transition. On the other end of the scale, growth assets are generally more vulnerable to physical risk.

TABLE 4.2.1.3 CUMULATIVE RETURN IMPACTS FOR CURRENT ASSET ALLOCATION, BY ASSET CLASS ACROSS THREE CLIMATE CHANGE SCENARIO

CURRENT SAA	MODELLING ASSET CLASS	ALLOCATION	5 YEARS			40 YEARS		
			FAILED TRANSITION	RAPID TRANSITION	ORDERLY TRANSITION	FAILED TRANSITION	RAPID TRANSITION	ORDERLY TRANSITION
Listed Equity	Equity – US	1.62%	2%	-13%	-2%	-43%	-13%	-3%
	Equity – UK	13.30%	1%	-10%	-1%	-36%	-8%	0%
	Equity – Europe	0.50%	1%	-13%	0%	-39%	-12%	1%
	Equity – Japan	5.28%	0%	-12%	1%	-44%	-10%	3%
	Equity - Developed Asia Ex. Japan	0.88%	1%	-14%	-1%	-47%	-13%	-1%
	Equity - Emerging Markets	4.72%	1%	-12%	0%	-49%	-11%	0%
	Equity – Sustainable Active*	8.69%	0%	-6%	-1%	-45%	-3%	2%
	Equity – Passive Climate Aware*	16.35%	1%	-9%	-2%	-44%	-7%	0%
Private Equity	Private Equity	4.88%	2%	-12%	-3%	-52%	-9%	-1%
Property	Real Estate – UK	7.03%	-1%	-8%	0%	-41%	-4%	3%
	Real Estate - Europe	0.86%	0%	-2%	0%	-15%	-1%	0%
Infrastructure / Timberland & Farmland	Infrastructure	5.94%	1%	-9%	0%	-37%	-9%	-1%
	Sustainable Infrastructure	2.30%	-1%	-4%	0%	-41%	-2%	2%
Sovereign Bonds	Sovereign Bonds - US	2.58%	0%	0%	0%	-5%	-1%	-1%
	Sovereign Bonds - UK	7.57%	0%	0%	-1%	-1%	1%	1%
Multi Asset Credit	Multi Asset Credit	6.82%	0%	-2%	0%	-7%	-3%	0%
Corporate Bonds	Credit - Global Investment Grade	6.18%	0%	-1%	0%	-5%	-1%	1%
Liability Driven Investments / Cash	Cash	4.49%	0%	0%	0%	-7%	1%	1%

RECOMMENDATIONS:

DPF allocates a significant portion of its investments into growth assets, which include listed equity, private equity, infrastructure and property. These asset classes carry higher long-term physical risks from climate change, and the impacts are depicted in Table 4.2.1.3. Short-term transition risks are somewhat mitigated through DPF's allocation to sustainable/ low carbon assets within listed equity and infrastructure. We recommend DPF to keep the commitment to these allocations under review and consider asset level climate impact, alongside consideration of other performance drivers, when deciding on future asset allocations. It is also important to work with managers with existing net zero commitments and potentially find alternative benchmarks to tilt the portfolios further towards climate alignment.

KEY CONCLUSION THREE: MONITOR SECTOR AND REGIONAL EXPOSURES

Differences in return impact are most visible at an industry sector level, with significant divergence between scenarios. Oil and Gas, Fossil Fuel Based Utilities and Renewables are most impacted by the transition.

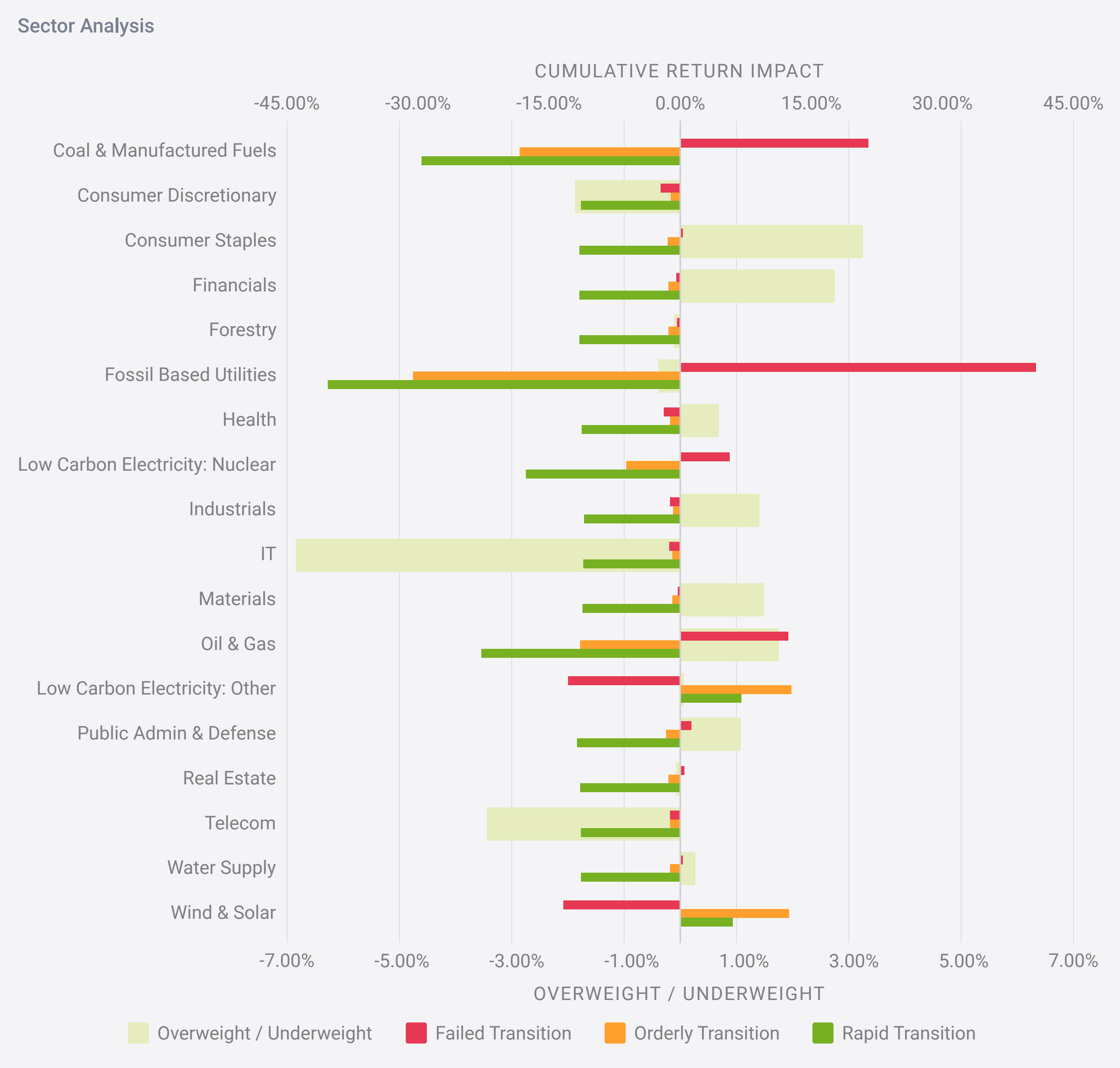
Figure 4.2.1.2 shows the relative under/overweight positions of DPF's overall equity portfolio versus MSCI ACWI (light grey bar), as well as cumulative return impact experienced by different sectors within an equity portfolio over a 5 year-period, when transition risks dominate.

DPF's equity portfolios are underweight fossil fuel-based Utilities but overweight Oil and Gas, possibly due to regional overweight position to the UK where the sector features more prominently.

As these sectors are most impacted by the transition, these positions are expected to contribute significantly towards the overall performance of the Fund relative to the global index. In Rapid and Orderly transition scenarios, the overweight positions in Oil and Gas will lead to a negative attribution to total return whereas the underweight Utilities will have the opposite effect within the models. Conversely, in a Failed transition scenario, the Oil and Gas positions will contribute positively and Utilities negatively as both sectors are expected to do well in this scenario and have been modelled as such.

In the Rapid and Orderly transition scenarios, Renewable Energy (Wind & Solar) and Low Carbon Electricity (ex. Nuclear) are the only two sectors to generate positive returns.

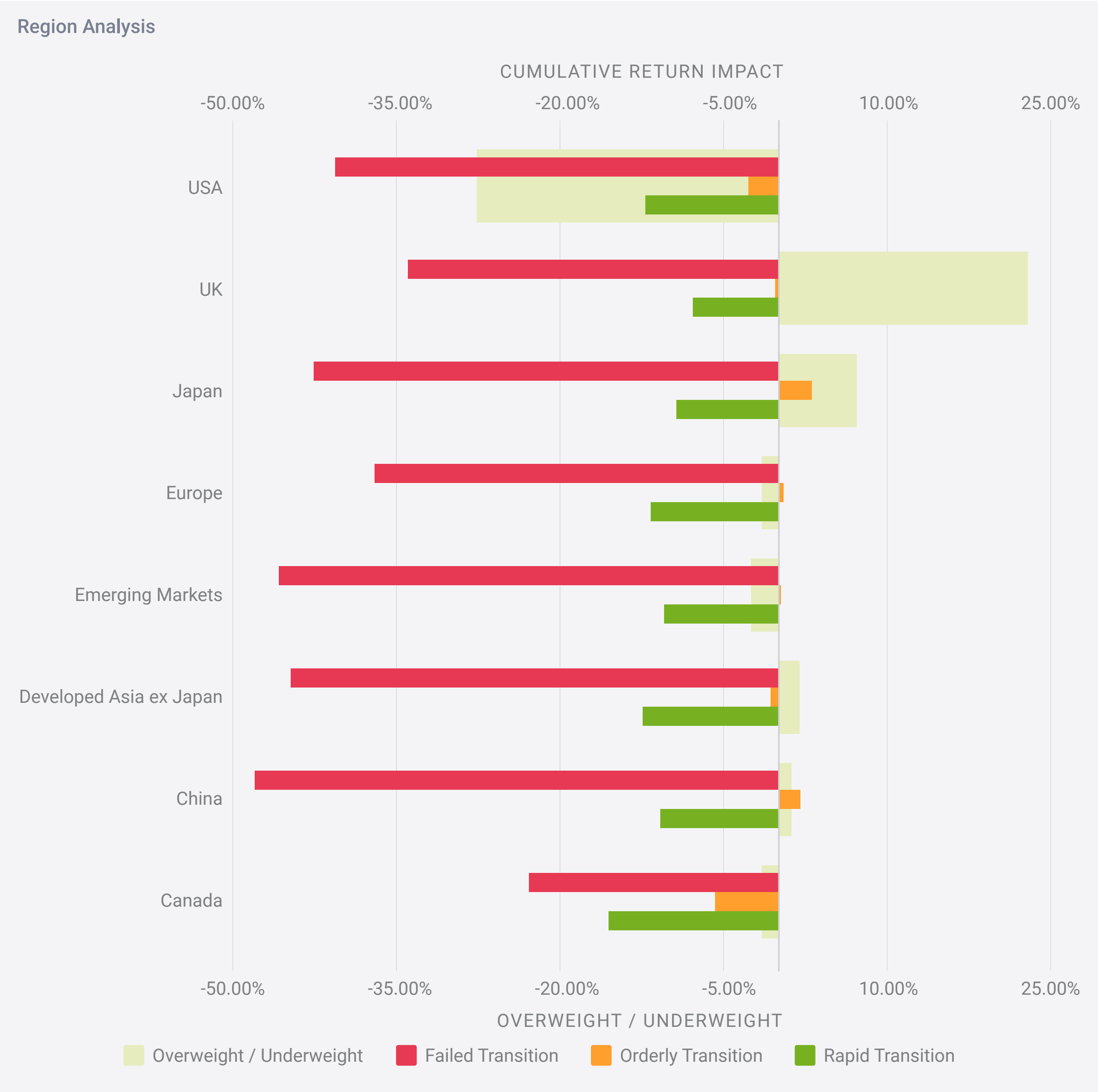
FIGURE 4.2.1.2 SECTORAL CUMULATIVE RETURN IMPACT AND DPF CURRENT EQUITIES SECTOR ALLOCATION



In terms of regional impact, China, Emerging Markets and Developed Asia ex-Japan are most exposed to climate risks. Figure 4.2.1.3 shows the relative under/overweight positions of DPF's overall equity portfolio versus MSCI ACWI (light grey bar), as well as cumulative return impact experienced by different region within an equity portfolio over a 40 year-period, when physical risks dominate.

For DPF, its overweight in Japan and China should be monitored closely as these regions are particularly exposed to physical risks under a Failed transition.

FIGURE 4.2.1.3 REGIONAL CUMULATIVE RETURN IMPACT AND DPF CURRENT EQUITIES SECTOR ALLOCATION



RECOMMENDATIONS:

We recommend DPF 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, particularly in Oil & Gas where the Fund has an overweight position relative to the global index. This analysis should be done in addition to the investment analysis that is ran by the managers. Regional exposures should be kept under review.

KEY CONCLUSION FOUR: BE AWARE OF FUTURE PRICING SHOCKS

As markets react to new information because of changing physical and policy / transition risks, investors will be vulnerable to rapid repricing shocks. Exploring the potential impact that repricing events can have on investment strategy and positioning portfolios ahead of time is critical.

Investors look to predict future events and price these events before they occur. This means that longer-term impacts, including transition and physical risks could impact portfolios earlier than the time these events occur.

Mercer's Rapid Transition includes a shock around 2025 pricing in (and overreacting to a degree) to transition costs. The Failed Transition includes shocks towards the end of the 2020s and 2030s pricing in future damage. While the exact timing of such shocks is unknowable, considering such shocks is an important aspect of Mercer's risk analysis.

As discussed in key conclusion two, DPF's current allocations to sustainable asset classes provide some transition risk protection in the event of a rapid repricing event. DPF's allocations to Listed Equity, Private Equity, Infrastructure and Real Estate are materially exposed to physical risks under a Failed Transition over the medium to longer term.

RECOMMENDATIONS:

Using the analysis from this Climate Scenario Analysis and the overall Climate Risk Report, DPF is on track to get a better understanding of the portfolio's capacity to transition into a low carbon economy. We recommend using this analysis to evolve DPF's sustainable investment targets to include more ambitious climate objectives.

4.3 Risk Management

4.3.1 CLIMATE STEWARDSHIP PLAN SCOPE

Based on the findings of its previous Climate Risk Reports the Fund has developed a Climate Stewardship Plan (CSP). The CSP identifies the areas in which stewardship techniques can be leveraged to further understand and manage climate-related risks within the Fund.

The CSP identifies a focus list of five companies for prioritised engagement. Reflecting the externally managed nature of DPF, the Fund's portfolio managers and suppliers are engaging with these companies on behalf of the Fund.

We have reviewed ongoing engagements with these companies and provide below a progress update on the outcomes of the engagement. The Climate Action 100+ Net Zero Benchmark and Transition Pathway Initiative are used as key tools to monitor progress within the Fund's CSP.

TRANSITION PATHWAY INITIATIVE

The Transition Pathway Initiative (TPI) framework evaluates companies based on their climate risk management quality and their carbon performance. The former includes an assessment of policies, strategy, risk management and targets. There are six management quality levels a company can be assigned to:

- **Level 0** – Unaware of (or not Acknowledging) Climate Change as a Business Issue
- **Level 1** – Acknowledging Climate Change as a Business Issue
- **Level 2** – Building Capacity
- **Level 3** – Integrated into Operational Decision-making
- **Level 4** – Strategic Assessment
- **Level 4*** – Satisfies all management quality criteria

Companies' expected future emissions intensity pathways – labelled carbon performance – is assessed against international targets and national pledges made as part of the 2015 Paris Agreement. Alignment is tested on different timeframes, including 2030 and 2050. There are eight carbon performance trajectories:

- No or unsuitable disclosure
- Not aligned
- International pledges
- National pledges
- Paris pledges
- 2 Degrees
- Below 2 Degrees
- 1.5 Degrees

CLIMATE ACTION 100+ NET ZERO BENCHMARK

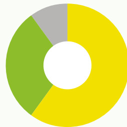
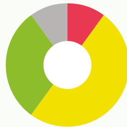
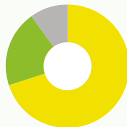
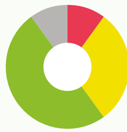
The CA100+ Net Zero benchmark is designed to assess the performance of the world's 159 largest corporate greenhouse gas emitters against ten key indicators. These indicators are all measures of success for business alignment with a net zero emissions future and with the goals of the Paris Agreement. The ten indicators are:

1. Net Zero GHG Emissions by 2050 (or sooner) ambition
2. Long-term (2036-2050) GHG reduction target(s)
3. Medium-term (2026-2035) GHG reduction target(s)
4. Short-term (up to 2025) GHG reduction target(s)
5. Decarbonisation Strategy (Target Delivery)
6. Capital Alignment
7. Climate Policy Engagement
8. Climate Governance
9. Just Transition
10. TCFD Disclosure

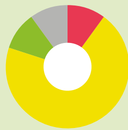
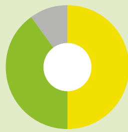
The first assessments for each CA100+ company against the ten indicators were published on 22nd March 2021 and refreshed on 30th March 2022. These assessments offer comparative assessments of individual focus company performance against the goals of the initiative.

4.3.2 PROGRESS UPDATE

TABLE 4.3.2.1 COMPANIES INCLUDED IN THE CLIMATE STEWARDSHIP PLAN

COMPANY	SECTOR	INVESTMENT PORTFOLIO (WEIGHT IN PORTFOLIO %)	CONTRIBUTION TO FUND'S CARBON FOOTPRINT	CONTRIBUTION TO FUND'S FINANCED EMISSIONS	NET ZERO TARGET	CA100+ NET ZERO INDICTORS MET[8]	% OF CA100+ NET ZERO INDICATORS MET	TPI MANAGEMENT QUALITY	TPI CARBON PERFORMANCE		
									TO 2025	TO 2035	TO 2050
BP	Energy	• LGIM UK Equity (2.95%) • LGPSC Climate Multi Factor Fund (0.03%)	1.7%	4.9%	Yes		30%	4*	Not Aligned	Not Aligned	Not Aligned
CRH	Materials	• LGIM UK Equity (0.97%)	3.0%	4.3%	Yes		30%	4	Below 2 Degrees	1.5 Degrees	1.5 Degrees
Rio Tinto	Materials	• LGIM UK Equity (2.71%) • LGIM MSCI World Low Carbon Target Fund (0.11%) • LGPSC Climate Multi Factor Fund (0.62%)	3.6%	4.0%	Yes		20%	4	Paris Pledges	Paris Pledges	Below 2 Degrees
Shell	Energy	• LGIM UK Equity (6.60%) • Wellington US Equity (2.52%) • LGPSC Climate Multi Factor Fund (0.12%)	6.8%	11.5%	Yes		50%	4	Not Aligned	National Pledges	National Pledges
Taiwan Semiconductor Manufacturing	Info Tech	• Wellington US Equities (0.10%) • JP Morgan Asia Fund (12.12%) • Baillie Gifford Positive Change Fund (7.54%) • RBC Global Equity Focus Fund (3.07%) • LGPSC EMEAMMF (0.3%)	3.8%	0.6%	Yes	N/A	-	-	-	-	-

[8] Red - No criteria met; Yellow - Some criteria met; Green - All criteria met; Grey - Not assessed.

COMPANY	SECTOR	INVESTMENT PORTFOLIO (WEIGHT IN PORTFOLIO %)	CONTRIBUTION TO FUND'S CARBON FOOTPRINT	CONTRIBUTION TO FUND'S FINANCED EMISSIONS	NET ZERO TARGET	CA100+ NET ZERO INDICTORS MET[8]	% OF CA100+ NET ZERO INDICATORS MET	TPI MANAGEMENT QUALITY	TPI CARBON PERFORMANCE		
									TO 2025	TO 2035	TO 2050
Anglo American	Materials	• LGIM UK Equity (1.98%) • LGIM EM Life Policy (0.12%) • LGPSC EMEAMMF (0.67%) • LGPSC Climate Multi Factor Fund (0.16%)	2.7%	3.0%	Yes		10%	4*	1.5 Degrees	1.5 Degrees	National Pledges
Glencore	Materials	• LGIM UK Equity (2.68%) • LGPSC Climate Multi Factor Fund (0.13%)	1.1%	5.2%	Yes		40%	4	1.5 Degrees	Below 2 Degrees	National Pledges
Gazprom	Energy	N/A			No	Not Assessed	Not Assessed	4	Not Aligned	Not Aligned	Not Aligned

Keep on the CSP   Remove from the CSP[9]   Add to the CSP[10]

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[8] Red - No criteria met; Yellow - Some criteria met; Green - All criteria met; Grey - Not assessed.
[9] Gazprom removed from CSP following the removal of Russian companies from major indices which led to the unwinding of the Fund's positions in the Company or a write-down of value to zero.
[10] Anglo American and Glencore added to the CSP in response to their presence as significant contributors to the portfolio's carbon footprint and financed emissions.

4.4 Metrics and Targets

4.4.1 SCOPE AND DEFINITIONS OF TERMS

The following Carbon Risk Metrics section is a bottom-up analysis conducted at the company and portfolio level. The purposes of this analysis are:

- To observe climate transition risks and opportunities in the portfolio
- To identify company engagement opportunities
- To support manager monitoring of climate risk management

The scope of the analysis comprises the equities and corporate bond portfolios as at 31st March 2022. The results are compared to data from 31st July 2019 and 31st March 2021. The analysis seeks to identify and assess how the portfolio carbon risk metrics have changed within this timeframe.

The analysis is limited to equities and corporate bonds as unlisted asset classes do not have sufficiently complete and comparable data to facilitate carbon risk metrics analysis at this time.

TABLE 4.4.1.1: SCOPE OF CARBON RISK METRICS ANALYSIS AS AT 31ST MARCH 2022

	EQUITIES	CORPORATE BONDS
NUMBER OF STRATEGIES ANALYSED	17/17	1/1
INDIVIDUAL COMPANIES INCLUDED	4,485	468

Figure 4.4.1.1: Portfolios included in the Carbon Risk Metrics Analysis[11]

[11] By way of comparison, in 2021 the total portfolio was comprised of 52.9% equities and 6.1% fixed income.

[12] All other assets include infrastructure, property, and cash. These are not included in the carbon risk analysis due to insufficient data coverage. LGPSC is engaging with the data providers to be able to include this analysis in future reports.

The analysis is based on a dataset provided by MSCI ESG Research LLC (MSCI)[13]. Table 4.4.1.2 provides an overview of the types of carbon risk metrics utilised. We are aware that the raw numbers are not a complete guide to climate risk and have published elsewhere our views on the limitations of carbon footprinting[14]. We believe, however, that this kind of bottom-up quantitative analysis can assist an asset owner in identifying the parts of the portfolio to prioritise, and in framing relevant questions to put to investee companies and external fund managers.

TABLE 4.4.1.2: CARBON RISK METRICS USED

CARBON RISK METRIC	DEFINITION	USE CASE	LIMITATIONS
PORTFOLIO CARBON FOOTPRINT (WEIGHTED AVERAGE CARBON INTENSITY)	Is calculated by working out the carbon intensity (Scope 1+2 Emissions / $M sales) for each portfolio company and calculating the weighted average by portfolio weight. NB: This way of normalising emissions is recommended by the Task Force on Climate-related Financial Disclosures (TCFD). However, the regulation on the EU climate benchmarks requires that the carbon intensity measure used in portfolio construction be based on enterprise value, including cash (EVIC).	A proxy for carbon price risk. Were a global carbon price to be introduced in the form of a carbon tax, this would (ceteris paribus) be more financially detrimental to carbon intensive companies than to carbon efficient companies.	This metric includes scope 1 and 2 emissions but not scope 3 emissions. This means that for some companies the assessment of their carbon footprint could be considered an 'understatement'.
EXPOSURE TO FOSSIL FUEL RESERVES	The weight of a portfolio invested in companies with evidence of owning fossil fuel reserves regardless of their industry. Fossil reserves are defined as proved and probable reserves for coal, and proved reserves for oil and natural gas.	A higher exposure to fossil fuel reserves is an indicator of higher exposure to stranded asset risk.	It does not consider the amount of revenue a company generates from fossil fuel activities. Consequently, diversified businesses (e.g. those that own a range of underlying companies, one of which owns reserves) would be included when calculating this metric. In reality, these companies may not bear as much stranded asset risk as companies that do generate a high proportion of revenue from fossil fuels.
EXPOSURE TO FOSSIL FUEL RESERVES BY REVENUE	This identifies the maximum percentage of revenue, either reported or estimated, derived from conventional oil and gas, unconventional oil and gas, as well as thermal coal. These values for each company are weighted by their respective portfolio weights and summed together to produce a weighted exposure.	This has been included to overcome the limitations of the metric of Exposure to Fossil Fuel Reserves, which includes all companies which have any exposure regardless of how small.	This measurement uses maximised estimates where reported values are not available. Therefore, there is a potential to overestimate exposure.

[13] Certain information @ 2022 MSCI ESG Research LLC. Reproduced by permission. Attention is drawn to Section 8.0 Important Information.

[14] https://www.responsible-investor.com/articles/carbon-footprint-piece In collaboration with other asset owners.

CARBON RISK METRIC	DEFINITION	USE CASE	LIMITATIONS
EXPOSURE TO CLEAN TECHNOLOGY	The weight of a portfolio invested in companies whose products and services include clean technology (Alternative Energy, Energy Efficiency, Green Buildings, Pollution Prevention, and Sustainable Water).	Provides an assessment of climate-related opportunities so that an organisation can review its preparedness for anticipated shifts in demand.	While MSCI has been used for this report due to its wide range of listed companies and data points, there is no universal standard or definitive list of green revenues. This is due to the inherent difficulty in compiling a complete and exhaustive list of technologies relevant for a lower-carbon economy.
EXPOSURE TO CLEAN TECHNOLOGY BY REVENUE	This identifies the maximum percentage of revenue, either reported or estimated, derived from companies involved in clean technology (see above). A secondary measure, based on the percentage of each company's revenue derived from clean technology is also included.	Allows for a comparison of company's exposure to clean technology, adjusted according to a proportion of that company's size.	This measurement uses maximised estimates where reported values are not available. Therefore, there is potential to overestimate exposure. As methodologies have updated over recent years, it is not feasible to carry out revenue comparisons with 2019.
CARBON RISK MANAGEMENT VIA THE TPI	The TPI framework evaluates companies based on their climate risk management quality and their carbon performance. The former includes an assessment of policies, strategy, risk management and targets.	Contextualises the companies contributing to a portfolio's carbon footprint or fossil fuel exposure. Can be used to track how companies are managing climate risk and whether their strategies are aligned with the goals of the Paris Agreement.	Does not assess every company, only the world's largest high-emitting companies. The data are also not updated very frequently, which can make some assessments outdated.
FINANCED EMISSIONS	Is calculated by multiplying an attribution factor by a company's emissions. The attribution factor is the ratio between an investor's outstanding amount in a company and the value of the financed company.	Measures the absolute tons of CO_2 for which an investor is responsible.	Limited usefulness for benchmarking and comparison to other portfolios due to the link to portfolio size.
NET ZERO (NZ) TARGET COVERAGE	The weight of the portfolio invested in companies that have set a "net zero" emissions target, as defined by the company.	Provides an insight into the alignment of a portfolio with Net Zero based on the commitments of the underlying companies.	Does not provide any insight into how likely the companies are to meet their targets.
COMPANIES IN MATERIAL SECTORS	The selection of companies in material sectors is based on the EU taxonomy, where sectors are chosen based on two factors, high emitting NACE[15] macro sectors, and enabling sectors where economic activities have the potential to enable substantial greenhouse gas emissions reductions in other sectors.	Aligns analysis of material sectors with EU taxonomy. According to the Technical Expert Group on Sustainable Finance (2019) the chosen high emitting NACE macro sectors and enabling sectors account for 93.7% of CO_2 emissions by NACE code.	These sectors are broad, and this approach does not allow for a more granular approach.

[15] The Statistical classification of economic activities in the European Community, abbreviated as NACE, is the classification of economic activities in the European Union (EU); the term NACE is derived from the French Nomenclature statistique des activités économiques dans la Communauté européenne.

4.4.2 TOTAL EQUITIES

We provide brief comments on the Carbon Risk Metrics results at the Total Equities level.

The analysis provided in the subsequent sections is based on data from 31st March 2022. The results, therefore, present a snapshot of the Fund's carbon risk at a point in time. Given that manager positions are in constant fluctuation based on their assessment of relative value, the carbon risk metrics are likely to change in the future as the impact of portfolio alterations are felt. The following analysis should be interpreted with this in mind.

TOTAL EQUITIES CARBON RISK METRICS

TABLE 4.4.2.1 DPF TOTAL EQUITIES CARBON RISK METRICS

	PF	BM	%DIFF
Carbon Footprint	110.12	140.59	-21.67%
Financed Emissions	199,563	-	-
% of Financed Emissions in Material Sectors	97.98%	-	-
Weight In Fossil Fuel Reserves	7.02%	7.99%	-0.97%
By Revenue	0.71%	0.82%	-0.10%
Weight in Thermal Coal Reserves	2.46%	3.15%	-0.69%
By Revenue	0.05%	0.09%	-0.04%
Weight in Coal Power	0.65%	1.01%	-0.37%
Weight in Clean Tech	33.21%	34.38%	-1.18%
By Revenue	3.96%	4.15%	-0.18%
% of the Portfolio with NZ Target	38.91%	40.90%	-1.99%
% of Companies in Material Sectors with NZ Target	43.62%	45.49%	-1.87%
% of Financed Emissions with NZ Target	65.29%	-	-

The Total Portfolio is 21.67% more carbon efficient than the Total Portfolio Blended Benchmark. It is also less exposed to all three of our fossil fuel metrics than the blended benchmark. The portfolio has a marginally lower exposure to clean technology and slightly less net zero target coverage.

TOTAL EQUITIES CARBON FOOTPRINT

TABLE 4.4.2.2 TOTAL EQUITY CARBON FOOTPRINT (TCO_2E/$M REVENUE)

	31.07.19	31.03.21	31.03.22	%DIFFERENCE 2019 - 2022
PF	149.20	114.51	102.22	-31.48%
BM	182.8	158.02	137.57	-24.74%
% Diff	-18.38%	-27.54%	-25.69%	

TABLE 4.4.2.3 TOTAL EQUITY FINANCED EMISSIONS (TONNES OF CO_2E PER $1M INVESTED) (ABSOLUTE TONS OF CO_2)

	31.07.19	31.03.22	%DIFF
Financed Emissions	282,355	181,227	-35.82%
of which in material sectors	97.93%	97.97%	

Figure 4.4.2.1 Underlying Portfolio Carbon Footprint

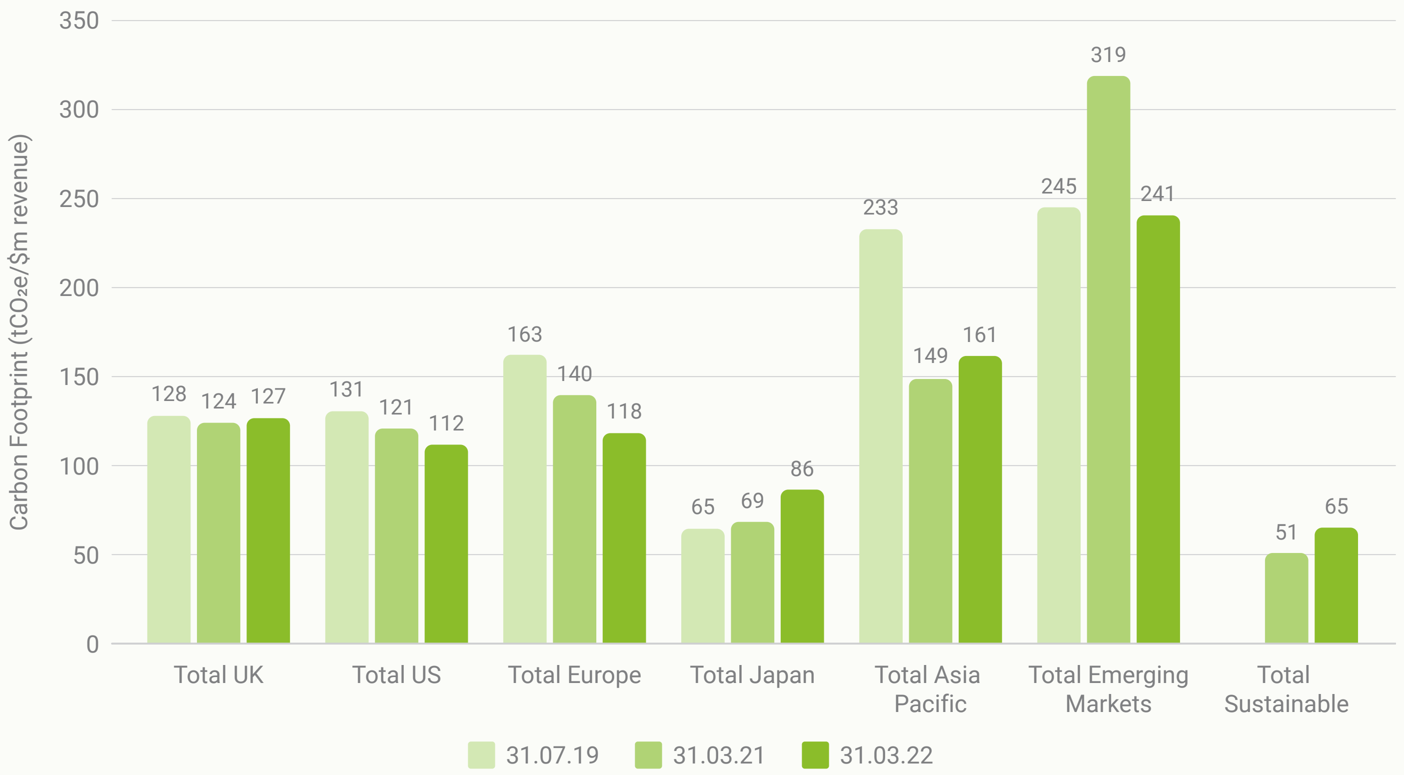


TABLE 4.4.2.4 TOTAL EQUITY LARGEST CONTRIBUTORS TO THE PORTFOLIO CARBON FOOTPRINT

COMPANY	SECTOR	PF WEIGHT	CARBON INTENSITY	CONTRIBUTION TO PF CARBON FOOTPRINT
SHELL	Energy	1.68%	399	6.80%
TAIWAN SEMICONDUCTOR MANUFACTURING	Info Tech	1.71%	216	3.75%
RIO TINTO	Materials	0.71%	490	3.55%
CRH	Materials	0.23%	1,269	3.02%
ANGLO AMERICAN	Materials	0.53%	497	2.68%

TABLE 4.4.2.5 TOTAL EQUITY LARGEST CONTRIBUTORS TO PORTFOLIO FINANCED EMISSIONS

COMPANY	SECTOR	PF WEIGHT	SCOPE 1&2 EMISSIONS	CONTRIBUTION TO PF FINANCED EMISSIONS
SHELL	Energy	1.59%	72,000,000	11.53%
GLENCORE	Materials	0.66%	24,300,000	5.24%
BP	Energy	0.71%	45,500,000	4.86%
CRH	Materials	0.23%	35,000,000	4.32%
RIO TINTO	Materials	0.71%	31,100,000	3.96%

The carbon footprint of the Total Equities portfolio has continued to decrease between March 2021 and March 2022, resulting in a total carbon efficiency improvement of 31.48% versus the baseline of 31st July 2019. Looking between this two year period, portfolios with carbon efficiency improvements include the Total Asia Pacific and Total Emerging Markets portfolios. The Total UK portfolio remained level between July 2019 and March 2022, whilst the Total Japan and Total Sustainable portfolios experienced slight increases to their carbon footprint, though it should be noted that both these portfolios continue to have very low carbon intensities. In fact, they continue to be DPF's most carbon efficient regional strategies.

Echoing the trend observed previously, the portfolio carbon footprint of many strategies remains concentrated in only a handful of companies. Just five companies, listed in Table 4.4.2.5, contribute 19.8% of the Total Equity carbon footprint. Four of these companies are included in the Fund's Climate Stewardship Plan and we recommend that the Fund continues to use this as a tool for monitoring company engagement and manager stewardship activities. Anglo American, which also features as one of the largest contributors to the portfolio's carbon footprint, has accordingly been recommended as an addition to the Climate Stewardship Plan.

The absolute emissions of the Total Equity portfolio have reduced by 35.82% between July 2019 and March 2022, which is a good indication that investee companies are, to an extent, decarbonising their business models. As of 31st March 2022, the portfolio absolute emissions are 181,227tCO_2e. Echoing the trend observed above, just a handful of companies are responsible for a significant proportion of these emissions. Just five names (**Shell**, **Glencore**, **BP**, **CRH and Rio Tinto**) account for 29.91% of the total portfolio financed emissions. Three of these companies are included in the Fund's Climate Stewardship Plan, an indication that engagement is focused on the companies whose decarbonisation will have the greatest impact on the Fund. Furthermore, the other two companies in the top five contributors have been recommended as additions to the Plan.

DPF CLIMATE STRATEGY TARGET

TABLE 4.4.2.6 TOTAL EQUITIES CARBON FOOTPRINT RELATIVE TO THE 2020 WEIGHTED BENCHMARK

	2022 PORTFOLIO	2020 WEIGHTED BENCHMARK	+/-
Total Equities Carbon Footprint (tCO_2e/$m revenue)	102.22	182.80	-44.08%

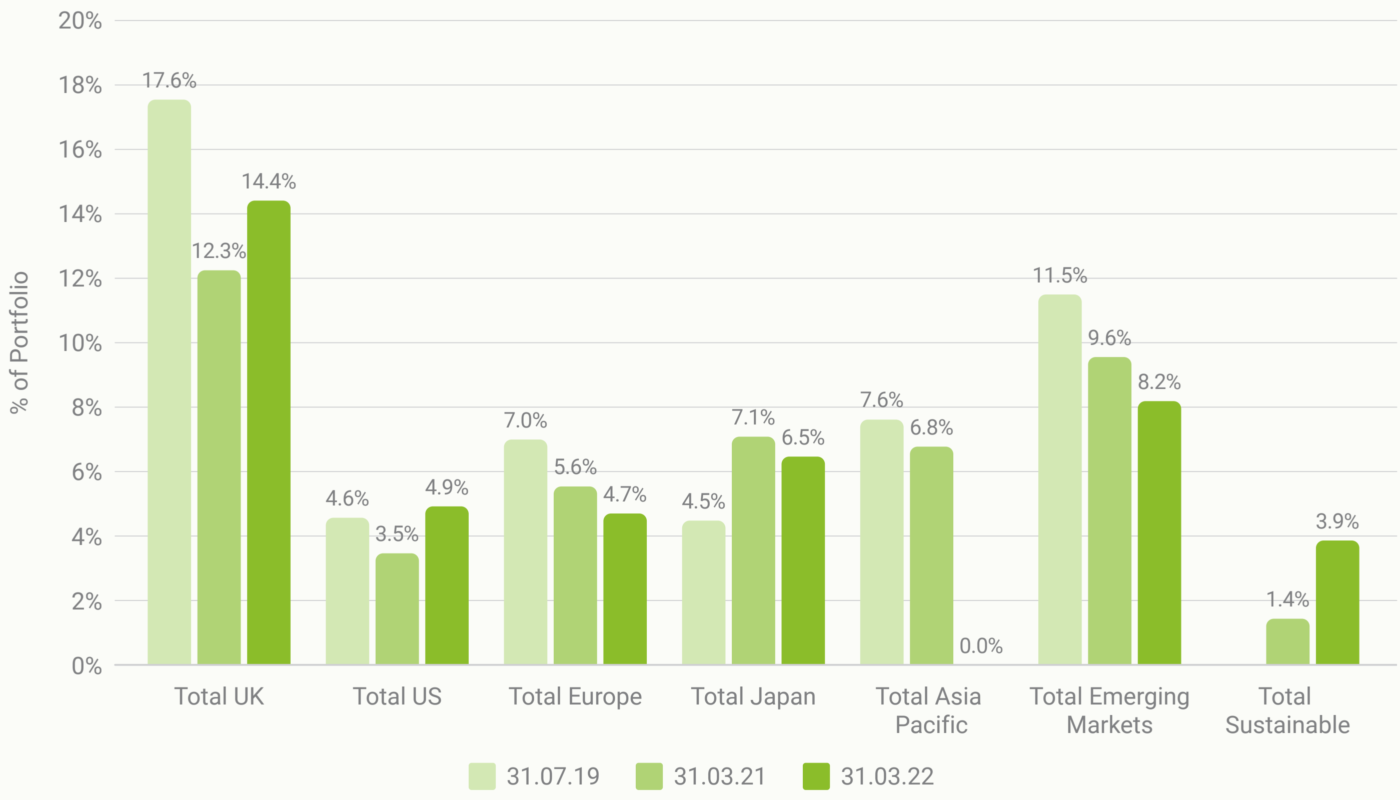
With a view to supporting the Fund in achieving its 2025 climate target of reducing the carbon footprint (Scope 1 and 2) of its listed equity portfolio by at least 30% relative to the weighted benchmark in 2020, we have assessed the Total Equities portfolio carbon footprint against this benchmark. As shown in Table 4.4.2.2, the Total Equities portfolio carbon footprint is 44.08%. As a result, the Fund has commendably met its carbon footprint target four years ahead of plan. While there may be fluctuations in the carbon footprint reflecting market movements, we commend the Fund for continuing to decarbonise despite having met its target in 2021. As of 31st March 2021, the portfolio was 37.45% more carbon efficient than the 2020 weighted benchmark. This means a further 6.63% improvement has been achieved in the past 12 months.

TOTAL EQUITIES WEIGHT IN FOSSIL FUEL RESERVES

TABLE 4.4.2.7 TOTAL EQUITY WEIGHT IN FOSSIL FUEL RESERVES

	31.07.19			31.03.22			% DIFF	
	PF	BM	%DIFF	PF	BM	%DIFF	PF	BM
Weight in Fossil Fuel Reserves	10.30%	11.72%	-1.42%	7.29%	8.30%	-1.01%	-3.02%	-3.43%
By Revenue	-	-	-	0.78%	0.78%	0.00%	-	-
Weight in Thermal Coal Reserves	2.42%	3.23%	-0.81%	2.55%	3.41%	-0.87%	0.13%	0.19%
By Revenue	-	-	-	0.06%	0.10%	-0.04%	-	-
Weight in Coal Power	0.50%	1.17%	-0.67%	0.47%	0.88%	-0.41%	-0.03%	-0.29%

Figure 4.4.2.2 Underlying Portfolio Weight in Fossil Fuel Reserves



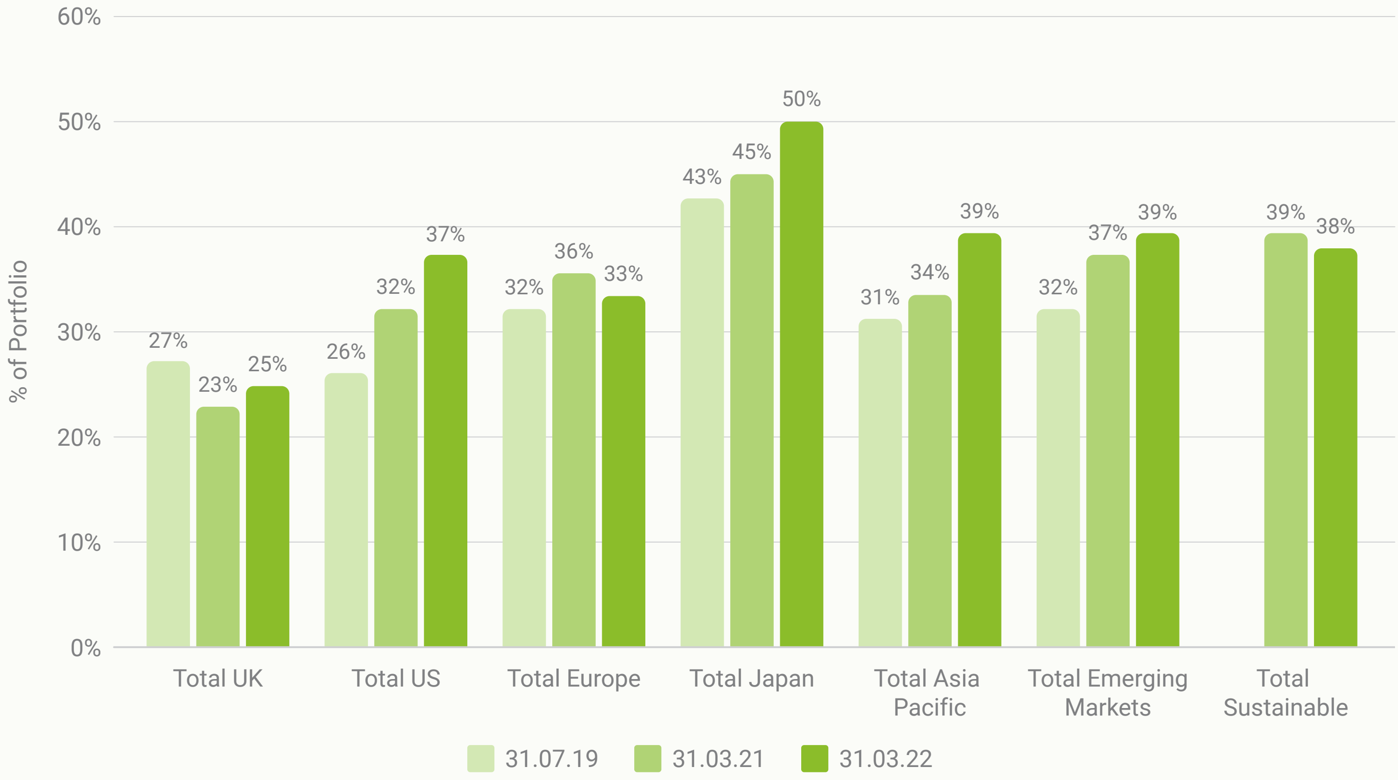
The exposure of the Total Equity portfolio to fossil fuel producers has decreased by 3.02% between 31st December 2019 and 31st March 2022 from 10.30% to 7.29%. The Total Asia Pacific portfolio, Total UK portfolio and Total Emerging Market portfolio experienced reductions of 7.62%, 3.16% and 3.33% respectively. The Total UK portfolio continues to have the largest exposure of 14.42%. The lowest exposure is found in the Total Asia Pacific and Total Sustainable portfolio which have 0.00% and 3.89% exposure to companies with fossil fuel reserves respectively. When apportioned by revenue, only 0.78% of the Total Equities portfolio derives revenue directly from fossil fuel reserves, a suggestion that the majority of investee fossil fuel companies are diversified businesses. In terms of thermal coal, the portfolio's exposure has increased marginally by 0.13%, while only 0.06% of the portfolio is exposed to revenue streams directly attributable to thermal coal production. The Total Equity portfolio remains less exposed than the benchmark in all fossil fuel metrics considered.

TOTAL EQUITIES EXPOSURE TO CLEAN TECH

TABLE 4.4.2.8 TOTAL EQUITY EXPOSURE TO CLEAN TECHNOLOGY

	31.07.19			31.03.22			% DIFF	
	PF	BM	%DIFF	PF	BM	%DIFF	PF	BM
Weight in Clean Technology	30.35%	33.22%	-2.87%	35.76%	36.89%	-1.13%	5.41%	3.67%
By Revenue	-	-	-	4.32%	4.49%	-0.17%	-	-

Figure 4.4.2.3 Underlying Portfolio Exposure to Clean Technology



Following the TCFD Recommendations we have assessed the weight of each listed equity portfolio that is in 'Clean Technology' as of 31st March 2022. The Total Equity portfolio exhibits marginally lower exposure to the types of technologies defined by our data provider as clean when compared with the benchmark. As referenced in Table 4.4.1.2, there are limitations to the Clean Technology metric, and we therefore recommend discussing this year's results with external fund managers during monitoring processes in order to get a more granular view. LGPS Central are currently engaging with data providers in order to reduce these limitations as much as possible.

Between July 2019 and March 2022, the Total Equity weight in clean technology has increased 5.41%. A number of the underlying portfolio have also increased their exposure, including the Total Japan portfolio, Total Asia Pacific portfolio and Total Emerging Markets portfolio. When apportioned by revenue, the total equity portfolio has 4.32% weight in clean technology.

TOTAL EQUITIES CLIMATE GOVERNANCE

TABLE 4.4.2.9 TOTAL EQUITY % OF COMPANIES WITH A NET ZERO TARGET

	PF	BM	%DIFF
% of Total Portfolio	39.86%	42.59%	-2.73%
% of Companies in Material Sectors	42.92%	45.34%	-2.42%
% of Financed Emissions	64.51%	-	-

TABLE 4.4.2.10 TOTAL EQUITY TPI ASSESSMENT

	CATEGORY	31.03.21	31.03.22	%DIFF
Management Quality	4*, 4	48.09%	55.02%	6.94%
	3, 2	44.93%	35.28%	-9.65%
	1, 0	6.98%	9.69%	2.71%
Paris Alignment	1.5 Degrees	0.00%	9.05%	9.05%
	2 Degrees or below	41.58%	32.46%	-9.12%
	International/ National/ Paris Pledges	21.97%	14.83%	-7.15%
	Not Aligned	36.45%	43.67%	7.22%

The Total Equity portfolio's weight in companies that have set a Net Zero target[16] is 36.8%, slightly below that of the benchmark. When based on emissions, 64% of the portfolio's financed emissions are attributable to companies with a net zero target, suggesting the larger emitters (and therefore the ones most in need of robust decarbonisation targets) are the ones committing to Net Zero, which is a positive finding for DPF. We recommend monitoring these statistics, with the view of observing an upward trend in the % of financed emissions covered by net zero targets over the next few years.

The TPI metrics have improved since March 2021; another suggestion that the portfolio is moving in the right direction in terms of carbon risk management. Since March 2021, the number of companies with a management quality of 4 or 4* has increased by 6.94%, whilst the number of companies scoring 0 or 1 has increased by 2.71%. Looking at the Paris Alignment, only 9.05% of companies have committed to a target aligned with a 1.5-degree scenario. While this is a significant improvement from 0% at 31st March 2021, this does indicate that more work is needed on encouraging companies to commit to more ambitious decarbonisation targets.

[16] This metric is calculated taking data from CA100+, CDP, and MSCI.

4.4.3 INVESTMENT GRADE CORPORATE BOND

CARBON FOOTPRINT

TABLE 4.4.3.1 INVESTMENT GRADE CORPORATE BOND CARBON FOOTPRINT METRICS

	2021	2022	%DIFF
PF	135.91	217.38	59.95%
BM	169.99	177.87	4.64%
% Diff	-20.0%	22.2%	

FOSSIL FUEL

TABLE 4.4.3.2 INVESTMENT GRADE CORPORATE BOND FOSSIL FUEL METRICS

	2021			2022			% DIFF	
-	PF	BM	%DIFF	PF	BM	%DIFF	PF	BM
Weight in Fossil Fuel Reserves	4.19%	4.70%	-0.51%	4.80%	4.30%	0.50%	0.61%	-0.40%
By Revenue	-	-	-	0.19%	0.53%	-0.34%	-	-
Weight in Thermal Coal Reserves	0.56%	0.58%	-0.02%	1.77%	0.55%	1.21%	1.20%	-0.03%
By Revenue	-	-	-	0.00%	0.00%	0.00%	-	-
Weight in Coal Power	0.44%	0.92%	-0.48%	2.06%	0.89%	1.18%	1.62%	-0.03%

CLEAN TECHNOLOGY

TABLE 4.4.3.3 INVESTMENT GRADE CORPORATE BOND CLEAN TECH METRICS

	2021			2022			% DIFF	
-	PF	BM	%DIFF	PF	BM	%DIFF	PF	BM
Weight in Clean Tech	9.2%	14.9%	-5.69%	11.64%	14.50%	-2.86%	2.47%	-0.36%
By Revenue	-	-	-	1.00%	2.09%	-1.09%	-	-

5.0 Conclusion

This is DPF's third Climate Risk Report. It follows previous Climate Risk Reports delivered in February 2020 and October 2021. In this report we utilise a variety of analyses to explore the nature and magnitude of the Fund's climate-related risks.

KEY TAKEAWAYS:

The key takeaways from the report are:

1. The climate governance of DPF is to a very high standard. We commend the Fund for committing to Net Zero by 2050 and setting short-term carbon reduction and sustainable investment targets.
2. The Climate Stewardship Plan is a useful tool for tracking the progress of engagement with the most material contributors to the Fund's carbon risk metrics. Progress observed in the last twelve months includes:
    - An improvement against the CA100+ Net Zero Benchmark scores. The number of indicators that have been fully attained has increased by 3%, whilst the number of indicators not being met at all has decreased by 7%.
    - Several companies (including BP, Shell and Rio Tinto) demonstrate a downward trajectory in their scope 1 and 2 emissions across the past decade.
    - 80% of companies in the Climate Stewardship Plan achieve a TPI Management Quality Rating of 4 or 4*.
    - All climate stewardship plan companies have committed to Net Zero by 2050.
3. The updated Carbon Risk Metrics imply that climate-related risks continue to be well-managed by the Fund.
    - The Total Equity portfolio is 44.08% more efficient than the 2020 Weighted Benchmark.
    - The carbon footprint of the Total Equity portfolio has decreased by 31.34% between July 2019 and March 2022.
    - The financed emissions of the Total Equity portfolio have decreased by 35.82% between July 2019 and March 2022.
    - The Total Sustainable portfolio continues to be DPF's most carbon efficient portfolio, whilst the Total Emerging Market Equities is the most carbon intensive. This is in line with other emerging market portfolios, and steps are being taken through the Climate Stewardship Plan to further reduce these impacts.
    - 7.29% of the Total Equity portfolio is invested in companies with fossil fuel reserves.
    - 64.5% of the Total Equity portfolio financed emissions are covered by a Net Zero target.

    We encourage the Fund to repeat its Carbon Risk Metrics analysis annually.

6.0 Glossary

Carbon Risk Management: How well a company is managing ESG risks and opportunities. A higher score is indicative of better management.

Clean Technology/ Weight in Clean Technology: the weight of a portfolio invested in companies whose products and services include clean technology. Products and services eligible for inclusion include Alternative Energy, Energy Efficiency, Green Building, Pollution Prevention, Sustainable Water.

Coal Power Generation/ Portfolio exposure to coal power generation: the weight of a portfolio invested in electricity utilities where more than 30% of the fuel mix derives from coal power.

Coal Reserves/ Portfolio exposure to thermal coal reserves: the weight of a portfolio invested in companies that own thermal coal reserves.

Divestment/exclusion/negative screening: the exclusion, usually on moral grounds, of particular types of investments, possibly affecting in a negative way the risk-return profile of a portfolio.

Engagement: dialogue with a company concerning particular aspects of its strategy, governance, policies, practices, and so on. Engagement includes escalation activity where concerns are not addressed within a reasonable time frame.

ESG factors: determinants of an investment's likely risk or return that relate to issues associated with the environment, society or corporate governance.

Ethical investment: an approach to investment where the moral persuasions of an organisation take primacy over investment considerations.

Fossil Fuel Reserves/ Portfolio exposure to fossil fuel reserves: the weight of a portfolio invested in companies that own fossil fuel reserves.

Interaction effect: The combined impact of sector allocation decisions and stock selection decisions.

Non-financial factors: determinants of an investment's likely risk or return that cannot be, or cannot straightforwardly be, given a monetary value for insertion into an organisation's financial statements.

Physical risk/ climate physical risk: the financial risks and opportunities associated with the anticipated increase in frequency and severity of extreme weather events and other phenomena, including storms, flooding, sea level rise and changing seasonal extremities.

Portfolio Carbon Footprint/ Carbon Footprint: A proxy for a portfolio's exposure to potential climate-related risks (especially the cost of carbon), often compared to a performance benchmark. It is calculated by working out the carbon intensity (Scope 1+2 Emissions / $M sales) for each portfolio company and calculating the weighted average by portfolio weight.

Responsible Investment factor/RI factor: an aspect of an investment which relates to environmental, social or corporate governance issues.

Responsible Investment/RI: the integration of financially material environmental, social and corporate governance ("ESG") factors into investment processes both before and after the investment decision.

Scope 1 Greenhouse Gas Emissions: Direct emissions from owner or sources controlled by the owner, including: on-campus combustion of fossil fuels; and mobile combustion of fossil fuels by institution-controlled vehicles.

Scope 2 Greenhouse Gas Emissions: Indirect emissions from the generation of purchased energy.

Scope 3 Greenhouse Gas Emissions: Indirect emissions that are not controlled by the institution but occur as a result of that institutions activities. Examples include commuting, waste disposal and embodied emissions from extraction.

Sector Allocation Effect: The impact of over or underweighting portfolio sectors relative to a benchmark. Negative value comes from underweighting sectors with carbon footprints higher than the benchmark or overweighting sectors with carbon footprints lower than the benchmark.

Social investing/social impact investing: investments that seek to achieve a positive social impact in addition to a financial return.

Stewardship: the promotion of the long-term success of companies in such a way that the ultimate providers of capital also prosper, using techniques including engagement and voting.

Stock Selection Effect: The impact of specific security selection within a sector relative to the benchmark. A negative value indicates the fund manager is choosing more carbon-efficient assets than the benchmark.

TCFD: Taskforce on Climate-related Financial Disclosures. A body established by Mark Carney in his remit as Chair of the Financial Stability Board whose recommendations have come to be seen as the best practice framework for climate-related disclosures by companies, asset managers, asset owners, banks and insurance companies.

Transition risk/ climate transition risk: the financial risks and opportunities associated with the anticipated transition to a lower carbon economy. This can include technological progress, shifts in subsidies and taxes, and changes to consumer preferences or market sentiment.

Voting: the act of casting the votes bestowed upon an investor, usually in virtue of the investor's ownership of ordinary shares in publicly listed companies.

7.0 References

Climate Action Tracker. "Global CAT Emissions Gaps". Available at: https://climateactiontracker.org/global/cat-emissions-gaps/

Environmental Protection Agency. "Global Greenhouse Gas Emissions Data". Available at: https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

Institutional Investors Group on Climate Change. "Climate Investment Roadmap". Available at: https://www.iigcc.org/resource/climate-investment-roadmap-a-tool-to-help-investors-accelerate-the-energy-transition-through-investment-and-engagement/

Institutional Investors Group on Climate Change. "IIGCC Net Zero Stewardship Toolkit". Available at: IIGCC Net Zero Stewardship Toolkit provides 'systematic framework' for global investors to help prioritise high-impact corporate engagement and hold laggard companies to account – IIGCC

Intergovernmental Panel on Climate Change. "Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

Intergovernmental Panel on Climate Change. "Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change". Available at: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf

Intergovernmental Panel on Climate Change. "Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change". Available at: https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf

Intergovernmental Panel on Climate Change.. Special Report: Global Warming of 1.5°C. Available at: https://www.ipcc.ch/sr15/chapter/spm/

International Energy Agency. "Coal 2021. Analysis and forecast to 2024". Available at: https://iea.blob.core.windows.net/assets/f1d724d4-a753-4336-9f6e-64679fa23bbf/Coal2021.pdf

International Energy Agency. "Net Zero by 2050. A Roadmap for the Global Energy Sector". Available at: https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf

International Energy Agency. "Renewables 2021. Analysis and forecast to 2026". Available at: https://iea.blob.core.windows.net/assets/5ae32253-7409-4f9a-a91d-1493ffb9777a/Renewables2021-Analysisandforecastto2026.pdf

Mercer. Investing in a Time of Climate Change The Sequel 2019. Available at: https://www.mercer.com/our-thinking/wealth/climate-change-the-sequel.html

National Climate Assessment. "Fourth National Climate Assessment". Available at: https://nca2018.globalchange.gov/

Nicholas Stern. 2006. The Economics of Climate Chang: The Stern Review. Available at: https://webarchive.nationalarchives.gov.uk/20100407172811/http://www.hm-treasury.gov.uk/stern_review_report.htm

Task Force on Climate-related Financial Disclosure (TCFD). Available at: https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf

The Law Society. "Reflecting on COP26: what were the key outcomes?". Available at: https://www.lawsociety.org.uk/topics/climate-change/reflecting-on-cop26-what-were-the-key-outcomes

The National Aeronautics and Space Administration. " The Causes of Climate Change". Available at: https://climate.nasa.gov/causes/

The National Aeronautics and Space Administration. "Evidence of Climate Change". Available at: https://climate.nasa.gov/evidence/

The National Aeronautics and Space Administration. "Scientific Consensus: Earth's Climate is Warming". Available at: https://climate.nasa.gov/scientific-consensus/

United Nations Environment Programme. "Emissions Gap Report 2021". Available at: https://www.unep.org/resources/emissions-gap-report-2021

United Nations. "The Glasgow Climate Pact – Key Outcomes from COP26". Available at: https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact-key-outcomes-from-cop26

World Economic Forum. Global Risks Report 2022. Available at: https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf

World Meteorological Society. "State of Global Climate 2021". Available at: https://library.wmo.int/doc_num.php?explnum_id=10859

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FOR PUBLICATION

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

WEDNESDAY, 18 JANUARY 2023

Report of the Interim Director - Finance and ICT

Climate Related Disclosures

1. Purpose

1.1 To present Derbyshire Pension Fund's (the Pension Fund/Fund) third Climate-Related Disclosures Report (Disclosures Report), attached as Appendix 2, which has been prepared in collaboration with LGPS Central Limited (LGPSC), to the Pensions and Investments Committee.

2. Information and Analysis

2.1 Background

The Fund published its first Disclsoures Report in March 2020, followed by a second Disclosures Report in November 2021. This report covers the Fund's third Disclosures Report, prepared in collaboration with LGPSC, which describes the way in which climate-related risks are currently managed by the Fund. It includes the results of climate scenario analysis and carbon risk metrics analysis undertaken on the Fund's assets as part of LGPSC's preparation of an annual Climate Risk Report for the Pension Fund.

The Taskforce on Climate-related Financial Disclosures (The Task Force/TCFD) was commissioned in 2015 by Mark Carney in his remit as Chair of the Financial Stability Board, in recognition of the risks caused by greenhouse gas emissions to the global economy and the impacts that are likely to be experienced across many economic sectors. The Task Force was asked to develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders and insurance underwriters in understanding material climate-related risks.

In 2017, the TCFD released its recommendations for improved transparency by companies, asset managers, asset owners, banks, and insurance companies with respect to how climate-related risks and opportunities are being managed. Guidance was also released to support all organisations in developing disclosures consistent with the recommendations, with supplemental guidance released for specific sectors and industries, including asset owners.

The Task Force divided climate-related risks into two major categories: risks related to the transition to a lower-carbon economy; and risks related to the physical impacts of climate change. The TCFD report noted that climate-related risks and the expected transition to a lower carbon economy affect most economic sectors and industries, however, opportunities will also be created for organisations focused on climate change mitigation and adaptation solutions. The report also highlighted the difficulty in estimating the exact timing and severity of the physical effects of climate change.

The Task Force structured its recommendations around four thematic areas that represent core elements of how organisations operate: governance; strategy; risk management; and metrics and targets. The four overarching recommendations are supported by recommended disclosures that build out the framework with information that will help investors/stakeholders understand how reporting organisations assess climate related risks and opportunities.

Policy frameworks to guide pension funds in their approach to dealing with the potential risks and opportunties of climate change have also been developed by the Local Authority Pension Fund Forum and by the Pensions and Lifetime Savings Association.

2.2 Climate-related Disclosures

The Disclosures Report is aligned with the recommendations of the TCFD, including updated guidance issued in October 2021. It describes the way in which climate-related risks are currently managed by the Fund and includes information on the Fund's governance of climate risk and on the climate-related stewardship activities of the Pension Fund which are an important part of the Fund's approach to managing climate risk. It also includes the results of climate scenario analysis and carbon risk metrics analysis undertaken on the Fund's assets as part of LGPSC's preparation of an annual Climate Risk Report.

2.3 Climate Scenario Analysis

The Disclosures Report includes climate scenario analysis prepared by Mercer LLC. 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; 1.6°C Orderly Transition; and 4°C Failed Transition.

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, reflecting the market wide impact of physical risks.

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 are a directional indicator.

The scenario analysis supports the Fund's ongoing transition to the new final strategic asset allocation benchmark from 1 January 2022.

2.4 Carbon Risk Metrics

The carbon risk metrics analysis on the Fund's listed equities and investment grade bond portfolios from the latest LGPSC Climate Risk Report is included in the Disclosures Report and considers: portfolio carbon footprint (weighted average carbon intensity); financed emissions (absolute emissions); percentage of companies with a net zero target; Transition Pathway Initiative Scores (listed equities only); fossil fuel exposure; thermal coal exposure; and clean technology (portfolio weight in companies whose products and services include clean technology).

The carbon risk metrics analysis reports the current exposure to the above metrics and demonstrates the progress made since the Fund's first Disclosures Report.

2.5 Climate Strategy Targets

The Disclosures Report sets out the targets used by the Fund to manage climate-related risks, which form part of the Pension Fund's Climate Strategy approved by Committee in November 2020 and sets out the performance against the targets.

The following 'top down' targets were agreed by Committee to set direction and appropriate ambition for an investment strategy towards net zero, and to monitor whether that strategy is achieving expected outcomes:

- 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

- invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025.

The table below is included in the Disclosures Report to show the progress to date in respect of the two targets:

Target	Target by end of 2025	Actual at 31 March 2022
(1) 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%)
(2) Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025	30%	Invested: 27% Committed: 29%

2.6 DLUHC TCFD Consultation

At the last meeting of Committee, the Fund reported its submission to the recent Department for Levelling Up, Housing & Communities' (DLUHC) consultation on the proposals to require LGPS administering authorities in England and Wales to assess, manage and report on climate-related risks, in line with the recommendations of the Taskforce on Climate-related Financial Disclosures.

The Disclosures Report has been prepared in line with the current DLUHC proposals, taking into account the carbon metrics data currently available to the Fund.

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 – Disclosures Report

6. Recommendation(s)

That Committee:

a) notes the Climate-Related Disclosures Report attached as Appendix 2.

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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

Derbyshire Pension Fund

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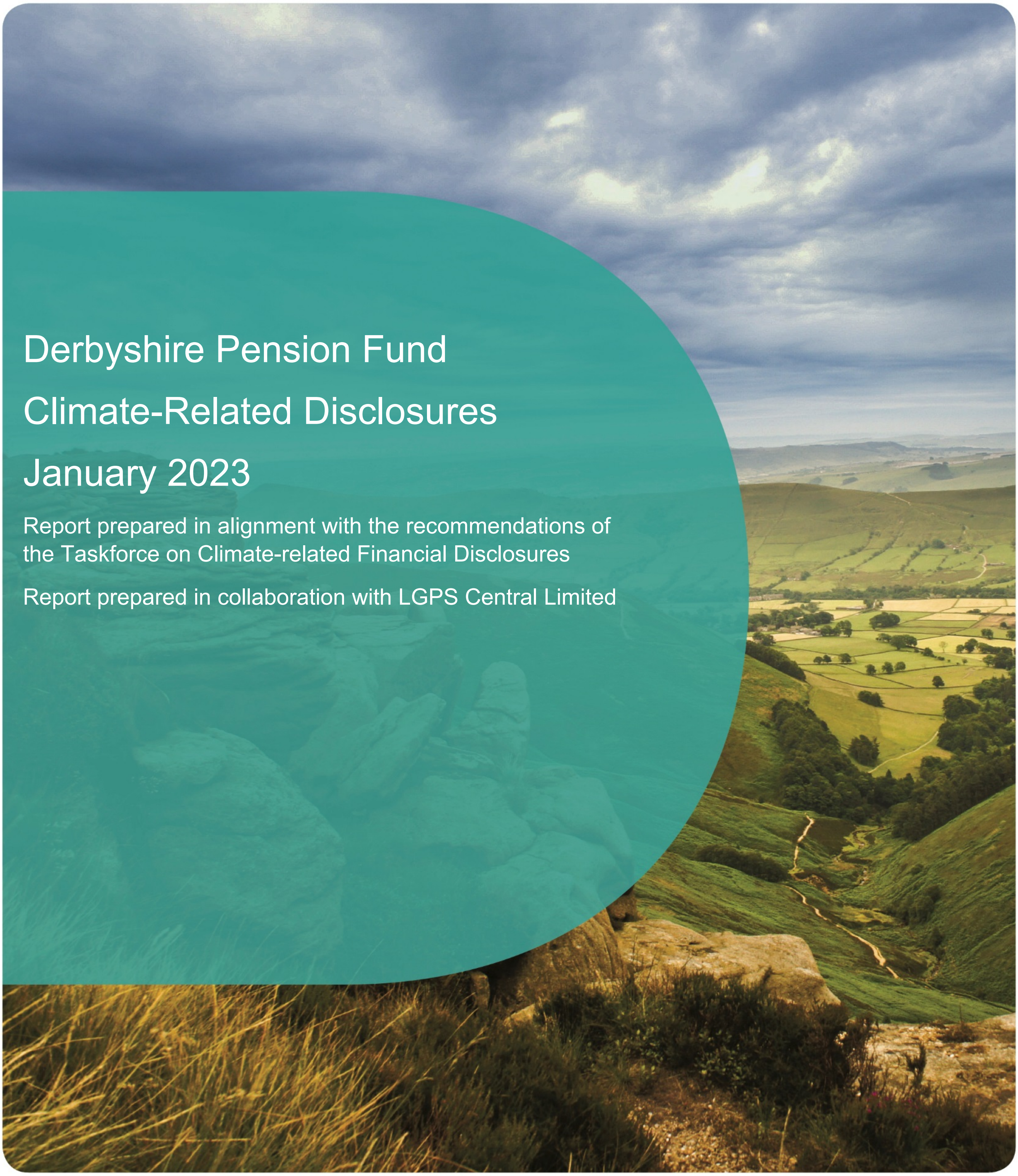


Derbyshire Pension Fund
Climate-Related Disclosures
January 2023

Report prepared in alignment with the recommendations of the Taskforce on Climate-related Financial Disclosures

Report prepared in collaboration with LGPS Central Limited

lgps

Glossary of Terms and Abbreviations

Anthropogenic
Anthropogenic in terms of climate change refers to the impact humans have had on climate change, primarily through emissions of greenhouse gases.

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

Greenhouse Gases
Greenhouse gases are gases in the Earth's atmosphere that are capable of absorbing infrared radiation and thereby trap and hold heat in the atmosphere. The main greenhouse gases are: carbon dioxide; methane; and nitrous oxide.

Scope 1 Greenhouse Gas Emissions
Scope 1 emissions are direct emissions produced by the activities of the emitter.

Scope 2 Greenhouse Gas Emissions
Scope 2 emissions are indirect emissions generated by the electricity, heat, or steam consumed and purchased by the emitter.

Scope 3 Greenhouse Gas Emissions
Scope 3 emissions are indirect emissions that are not controlled by the emitter but occur as a result of the emitters activities.

UNFCCC
The UNFCCC secretariat (UN Climate Change) is part of the United Nations and was established in 1992 when countries adopted the United Nations Framework Convention on Climate Change (UNFCCC).

Abbreviations

CO_2	Carbon Dioxide
Committee	Pensions & Investments Committee
CH_4	Methane
DPF or Fund	Derbyshire Pension Fund
ESG	Environmental, Social & Governance
GHG	Greenhouse Gas
IEA	International Energy Agency
IIGCC	Institutional Investors Group on Climate Change
IPCC	Intergovernmental Panel on Climate Change
LGIM	Legal & General Investment Management
LGPSC	LGPS Central Limited
NDC	Nationally Determined Contribution
TCFD	Taskforce on Climate-related Financial Disclosures
WEF	World Economic Forum

Introduction to the TCFD

The Taskforce on Climate-related Financial Disclosures (The Task Force/TCFD) was commissioned in 2015 by Mark Carney in his remit as Chair of the Financial Stability Board, in recognition of the risks caused by greenhouse gas emissions to the global economy and the impacts that are likely to be experienced across many economic sectors. The Task Force was asked to develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders and insurance underwriters in understanding material climate-related risks.

In 2017, the TCFD released its recommendations for improved transparency by companies, asset managers, asset owners, banks, and insurance companies with respect to how climate-related risks and opportunities are being managed. Guidance was also released to support all organisations in developing disclosures consistent with the recommendations, with supplemental guidance released for specific sectors and industries, including asset owners.

In his introduction to the final TCFD report, Michael Bloomberg (TCFD Chair) noted: ‘it is difficult for investors to know which companies are most at risk from climate change, which are best prepared, and which are taking action. The Task Force’s report establishes recommendations for disclosing clear, comparable and consistent information about the risks and opportunities presented by climate change. Their widespread adoption will ensure that the effects of climate change become routinely considered in business and investment decisions. Adoption of these recommendations will also help companies better demonstrate responsibility and foresight in their consideration of climate issues. That will lead to smarter, more efficient allocation of capital, and help smooth the transition to a more sustainable, low carbon economy.’

The Task Force divided climate-related risks into two major categories: risks related to the transition to a lower-carbon economy; and risks related to the physical impacts of climate change. The TCFD report noted that climate-related risks and the expected transition to a lower carbon economy affect most economic sectors and industries, however, opportunities will also be created for organisations focused on climate change mitigation and adaptation solutions. The report also highlights the difficulty in estimating the exact timing and severity of the physical effects of climate change.

The Task Force structured its recommendations around four thematic areas that represent core elements of how organisations operate: governance, strategy; risk management; and metrics and targets (see Figure 1).

The Task Force updated its implementation guidance in October 2021, and these updates have been reflected in this report to the extent possible.

Figure 1: Core Elements of Recommended Climate-Related Financial Disclosures

The four overarching recommendations are supported by recommended disclosures (see Appendix 1) that build out the framework with information that will help investors/stakeholders understand how reporting organisations assess climate related risks and opportunities. The disclosures are designed to make TCFD-aligned disclosures comparable, but with sufficient flexibility to account for local circumstances.

Derbyshire Pension Fund (the Pension Fund/Fund) supports the TCFD recommendations as the optimal framework to describe and communicate the steps the Fund is taking to manage climate-related risks and incorporate climate risk management into investment processes. The Fund published its first TDFD report in March 2020, followed by a second TCFD report in November 2021. The Fund is a long-term investor, diversified across asset classes, regions and sectors. It is in the Fund's interest that the market is able to effectively price climate-related risks and that policy makers are able to address market failure. The Fund's TCFD reports note the important role that large asset owners have in influencing the organisations in which they invest to provide better climate-related financial disclosures.

As of November 2022, the Task Force had over 4,000 supporters globally. TCFD supporters now span 101 countries and jurisdictions and nearly all sectors of the economy, with a combined market capitalisation of over $27 trillion. Disclosure that aligns with the TCFD recommendations currently represents best practice. The Fund believes TCFD-aligned disclosure from asset owners, asset managers, and corporates, is in the best interest of the Fund's stakeholders.

About this report

This is the third Climate-related Disclosures report issued by the Fund. It has been prepared in collaboration with LGPS Central Limited (LGPSC), and describes the way in which climate-related risks are currently managed by the Fund. It includes the results of climate scenario analysis and carbon risk metrics analysis undertaken on the Fund's assets as part of LGPSC's preparation of an annual Climate Risk Report for the Pension Fund.

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

The Task Force recognised that the use of scenarios in assessing climate-related issues and their potential financial implications is relatively recent and that practices will evolve over time, but believed that such analysis is important for improving the disclosure of decision-useful, climate-related financial information. Carbon risk metrics analysis on the Fund's listed equities and investment grade corporate bond portfolios considers: portfolio carbon footprint (weighted average); financed emissions, percentage of companies with a net zero target, Transition Pathway Initiative scores, fossil fuel exposure; thermal coal exposure; and clean technology (portfolio weight in companies whose products and services include clean technology).

The challenges of measuring the potential impact of climate change on investment portfolios are well recognised. The Fund 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 development of a detailed strategy for integrating climate risk into investment decisions.

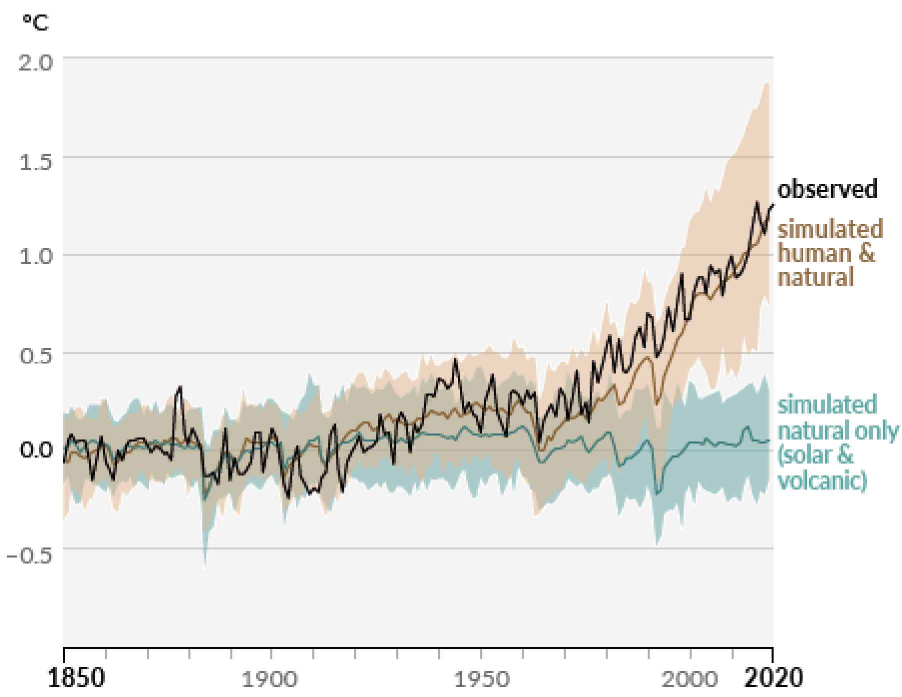
The findings of the Climate Risk Report, together with the Fund's own ongoing climate research, which is structured around the TCFD's four thematic areas of governance, strategy, risk management and metrics and targets, are used to support the development of the Fund's Climate Strategy. In addition, high level climate change risk analysis from the Fund's actuary, Hymans Robertson LLP, which considers the potential effect of climate change on the Fund's liabilities as well as on the assets of the Pension Fund, is used to support the development of the Fund's Climate Strategy. Guidance on implementing the TCFD recommendations for asset owners from the TCFD and the Principles for Responsible Investment is also utilised.

The Fund published its first TCFD report in March 2020, and its second TCFD report in November 2021. The Fund's climate-related disclosures are expected to develop over time and are supported by the Fund's Climate Strategy, which was approved by the Pensions and Investments Committee (the Committee) in November 2020. The Fund's climate-related disclosures are also included in the Pension Fund's Annual Report.

Climate-related risks

Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels. Most of this warming has occurred in the last 35 years, with the five warmest years on record taking place since 2010. In the Intergovernmental Panel on Climate Change (IPCC) Climate Change 2022 Report published in April 2022, the IPCC noted that between 2010 and 2019, the observed global mean surface temperature is 0.8°C to 1.3°C higher than the average over the 1950 to 1990 period, with a best estimate of 1.07°C. Over 97% of climate scientists (Source: NASA) agree that this trend is the result of greenhouse gas (GHG) emissions which are being trapped in the atmosphere and creating a 'greenhouse effect' – a warming that occurs when the atmosphere blocks heat radiating from Earth towards space. These climate scientists have observed that these climactic changes are primarily the result of human activities including electricity and heat production, agriculture and land use change, industry, and transport.

Figure 2: Change in global surface temperature (annual average) as observed and simulated using human and natural and only natural factors. Source: ICPP; Climate Change 2021 Report



The principle source of GHG emissions, particularly carbon dioxide, is the burning of fossil fuels for the production of energy[1]. The second largest contributor is agriculture, forestry and other land use.

[1] British Geological Survey

During the last 250 years, atmospheric concentrations of carbon dioxide (CO_2) and methane (CH_4) have increased by 40% and 150%, respectively. The April 2022 IPCC Climate Change Report noted that the global average concentration of carbon dioxide was 410ppm compared to its pre-industrial equivalent of 280ppm.

Climate scientists believe that in order to mitigate the worst economic impacts of climate change, there should be a globally co-ordinated policy response. The majority of climate scientists anticipate that given the current level of climate action, the world will be between 2°C and 4°C warmer by 2100, with significant regional variations. This is substantially higher than the Paris Climate Change Agreement (see Figure 3 for selected extracts of the Paris Agreement), which reflects a collective goal to hold the increase in the climate's mean global surface temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C.

Figure 3: Selected extracts from the Paris Agreement on climate Change. Source: UNFCCC.

Paris Agreement Article 2(1)a

Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

Paris Agreement Article 2(1)c

Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

Paris Agreement Article 4(1)

In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

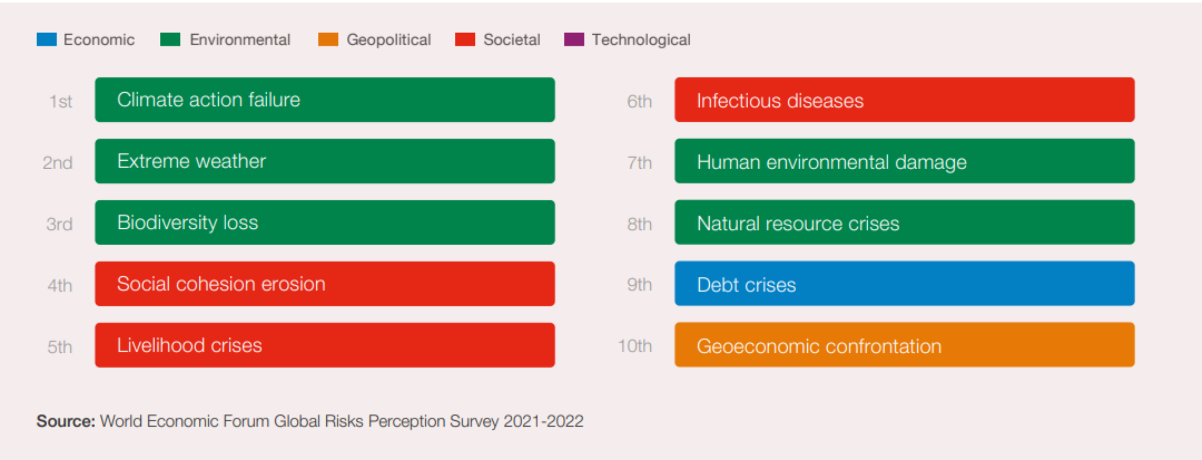
The Paris Agreement commits signatories to the establishment of Nationally Determined Contributions (NDCs), which are intended to be individually equitable and collectively sufficient to achieve Article 2(1)a. It is estimated that under current global policies (and assuming successful implementation), the world is heading towards a warming of 2.6°C by 2100, with a probability of 50%[2], indicating that more remains to be done to meet the ambitions of the Paris Agreement.

[2] Source: LGPSC

The low-carbon transition is already underway, with a number of governments and institutions around the world intensifying their climate change policies, and corporates responding in turn. One example is the UK's declaration to bring all greenhouse gas emissions to Net Zero by 2050, with a target of cutting emissions by 78% by 2035 compared to 1990 levels.

Acknowledgement of the risks posed by climate change among business and government leaders is reflected in the World Economic Forum (WEF) Global Risks Report, which illustrates the increased focus on environmental and social risks (compared with purely economic and political risks) over time. Environmental risks, particularly those associated with climate change, account for three of the five risks of global business leaders.

Figure 4: WEF Top global risks. Source: World Economic Forum; The Global Risks Report 2022



The more attention business leaders pay to managing climate risk, the greater the implications for investors. The WEF's global risks are also highly interconnected. For example, climate change potentially exposes businesses to more natural disasters, extreme weather, water shortages and biodiversity loss. These in turn may lead to involuntary migration or conflict. Taking the interconnectivity of risks into account will continue to be important for long-term investors seeking to anticipate the effects of climate change and prepare their portfolios for a changing global context.

Given its contribution to global GHG emissions, the energy sector is expected to play a significant role in the long-term decarbonisation of the economy, albeit fossil fuels are expected to continue to provide a large proportion of the global energy mix for many years to come. The behaviour of private and state-owned energy companies will be as important as the actions taken by their publicly traded counterparts. It is also important to recognise that the demand for energy, the type of energy demanded, and energy security will also play a crucial role in global decarbonisation.

However, the potential climate-related issues faced by diversified investors (such as pension funds) are not limited to the oil & gas and power generation sectors. Investors focussing exclusively on primary energy suppliers could fail to identify material climate risks in other sectors. There is considerable uncertainty in the crystallisation pathway for climate risk.

Well known concepts such as stranded assets risk are not homogeneous within certain sectors (e.g. oil & gas and power generation), and robust due diligence will be required in order to identify the potential winners and losers. The uncertainty of climate change stems from the complexity and inter-relationship of value and supply chains, the flow through of fossil fuels to by-products and services across multiple sectors and industries, the pass-through cost of carbon, policy fragmentation, and the consideration that certain companies are too big to fail. The likelihood of asset stranding depends on the commodity, the asset quality, the customer base, the rate of technology change, cost curve dynamics, mitigating strategies (e.g. company diversifying portfolio), and the ability of the market to price risk and timing thereof.

The Fund recognises that climate-related risks can be financially material and that the due consideration of climate risk falls within the scope of the Fund's fiduciary duty. Given the Fund's long-dated liabilities and the timeframe in which climate risks could materialise, a holistic approach to risk management covering all sectors and all relevant asset classes is warranted.

Governance

TCFD Recommended Disclosure
a) Describe the board's oversight of climate-related risks and opportunities

Roles and responsibilities at the Fund are clearly set out in the Fund's Governance Policy & Compliance Statement.

The Fund's Committee is responsible for approving the Fund's Investment Strategy Statement, together with the Fund's standalone Responsible Investment Framework and Climate Strategy. The committee meets six to eight times a year. The Committee also receive a quarterly stewardship report setting out the stewardship and voting activities of the Fund's largest investment managers.

The Fund's approach to managing climate risk, including the Fund's beliefs, objectives, metrics and targets is set out in detail in the Fund's Climate Strategy.

The Committee receives an annual Climate Risk Report from LGPSC and receives ongoing training in respect of responsible investment and climate related risks and opportunities.

The Fund also has an independent investment advisor, Mr Anthony Fletcher from MJ Hudson Allenbridge, who provides advice to the Committee and takes Environmental, Social and Governance (ESG) factors, including climate-related risks and opportunities, into account when making recommendations on the Fund's Strategic Asset Allocation Benchmark and on tactical asset allocations.

Derbyshire Pension Board has an oversight role in ensuring the effective and efficient governance and administration of the Fund, including securing compliance with the LGPS Regulations and any other legislation relating to the governance and administration of the Scheme.

In order to support good decision-making, the Fund applies the Myners Principles. Disclosure of the Fund's compliance against the Myners Principles is made annually in the Fund's Annual Report.

TCFD Recommended Disclosure
b) Describe management's role in assessing and managing climate-related risks and opportunities.

The Head of Pension Fund and the Investments Manager have primary day-to-day responsibility for the way in which climate-related investment risks are currently managed. As a largely externally managed fund, the implementation of much of the management of climate-related risk is delegated to portfolio managers. Each manager's approach to ESG factors and how these are integrated into their investment process is assessed as part of the manager selection process. The Fund's external managers are monitored on a regular basis, and a Climate Stewardship Plan has been developed.

Strategy

TCFD Recommended Disclosure
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.

As a diversified asset owner, the range of climate-related risks and opportunities are varied and constantly evolving. A subset of risk factors is presented in Figure 5.

Figure 5: Examples of Short, Medium & Long-Term Risks

	Short & Medium Term	**Long Term**
Risks	Carbon prices Policy change Technological change Geopolitical shocks Consumer preferences Stock selection Timing	Resource scarcity Extreme weather events Sea level rise Geopolitical shocks
Asset class	Listed equities Growth assets Energy-intensity industry Oil-dependent sovereign issuers Carbon-intensive corporate issuers	Infrastructure Property Agriculture Commodities Insurance

Short-term risks include stock price movements resulting from increased regulation to address climate change.

Medium-term risks include technology and policy changes leading to rapid product obsolescence or changes in consumer behaviour (e.g. uptake in electric vehicles), stock selection (there will be winners and losers across all sectors) and timing (being the first adopter does not guarantee success or better returns).

Long-term risks include stranded assets, physical damages to real assets and resource availability. An example includes the risk to coastal infrastructure assets from rising sea levels.

The Fund receives an annual Climate Risk Report from LGPSC, the findings of which, together with the Fund's own ongoing climate research, support the preparation of the Fund's Climate Strategy.

TCFD Recommended Disclosure
b) Describe the impact of climate-related risks and opportunities on the organisation's business, strategy and financial planning.

The Fund believes that diversification across asset classes, regions, and sectors is an important investment risk management tool to reduce risk. The Fund recognises that climate risk is systemic and is unlikely to be eliminated through diversification alone. As part of the last review of the Fund's Investment Strategy Statement, a 29% allocation to Global Sustainable Equities was approved. This allocation targets investments in global companies that are sustainable in financial, environmental, social and governance terms and, where appropriate, that are providing solutions to sustainability challenges. Furthermore, the Fund has invested in several renewable energy opportunities, and continues to assess new opportunities.

The Fund's strategic allocated weighting to the UK equity market has also been reduced from 30% in December 2016 to 12% in January 2022. This has significantly reduced the Fund's exposure to companies with fossil fuel reserves. The Fund's carbon risk metrics analysis indicates that the UK equity market has one of the highest exposures to fossil fuel reserves compared to other regional equity markets, although it should be noted that some of the largest UK companies with fossil fuel reserves are among the most progressive in terms of factoring climate risk into their long-term strategy. In each regional equity portfolio, the Fund has a lower exposure to fossil fuel reserves companies than the benchmark.

The Fund is exploring options to further embed climate-related risks and opportunities into its investment strategy.

TCFD Recommended Disclosure
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Analysis has been carried out by Mercer for LGPSC to understand the extent to which the Fund's risk and return characteristics could come to be affected by a set of climate scenarios, including an estimation of the annual climate-related impact on returns. All asset classes are included in this analysis. The climate scenarios 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 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.

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. 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. For example, annual returns under a 1.5°C Rapid Transition benefit from higher allocations to sustainable equities and sustainable infrastructure, whereas these allocations may have a negative impact under a 4°C Failed Transition because the assets will be subject to increased physical risk.

The results of the climate scenario analysis are shown below:

Figure 6: Annualised climate change impact on portfolio returns to 5, 15 and 40 years[3]

Climate Scenario	Timeframe	Asset Allocation 31 Mar-22		Strategic Asset Allocation Benchmark
Rapid Transition	5 years	(1.4%)		(1.3%)
	15 years	(0.4%)		(0.4%)
	40 years	(0.1%)		(0.1%)
Orderly Transition	5 years	(0.1%)		(0.1%)
	15 years	0.0%		0.0%
	40 years	0.0%		0.0%
Failed Transition	5 years	0.1%		0.1%
	15 years	(0.6%)		(0.7%)
	40 years	(1.0%)		(1.0%)

≤ -10 bps   > -10 bps, < 10bps   ≥ 10 bps

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, reflecting the market wide impact of physical risks.

Over the long-term, Mercer forecast 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.

[3] Extract from Mercer Limited's (Mercer) report "Climate Scenario Analysis" prepared for and issued to LGPS Central Limited for the sole purpose of undertaking climate change scenario analysis for Derbyshire Pension Fund. Other third parties may not rely on this information without Mercer's prior written permission. The findings and opinions expressed are the intellectual property of Mercer and are not intended to convey any guarantees as to the future performance of the investment strategy. Information contained herein has been obtained from a range of third-party sources. Mercer makes no representations or warranties as to the accuracy of the information and is not responsible for the data supplied by any third party.

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.

Translating climate scenario analysis into an investment strategy is a challenge as: there is a wide range of plausible climate scenarios; the probability of any given scenario is hard to determine; and the best performing sectors and asset classes in a 1.5°C Rapid Transition tend to be the worst performers in a 4°C Failed Transition and vice versa. Despite the challenges, the Fund believes it is worthwhile procuring climate-related research in order to support robust decision making.

Risk Management

TCFD Recommended Disclosure
a) Describe the organisation’s process for identifying and assessing climate-related risks.

The Fund seeks to identify and assesses climate-related risks at the total Fund level and at the individual asset level. Both ‘top-down’ and ‘bottom-up’ analysis has been received by the Fund from LGPSC. The Fund recognises that the tools and techniques for assessing climate-related risks in investment portfolios are an imperfect but evolving discipline. The Fund aims to use the best available information to assess climate-related threats to investment performance.

As far as possible climate risks are assessed in units of investment return, in order to compare with other investment risk factors.

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 the integration of climate risks into the portfolio management, and to understand their engagement activities.

Stewardship activity is conducted with investee companies by the Fund. The Fund values the importance of shareholder voting as a stewardship tool and has retained the services of a specialist third party voting service provider. Historically the Fund executed voting activities directly but following the transition of the vast majority of its direct equity holdings into pooled products, voting is executed by the Fund’s appointed fund managers (see below). The Fund has several selected stewardship partners including LGPSC, Hermes EOS, and Local Authority Pension Fund Forum (LAPFF) (see Figure 7 below).

The Fund has developed a Climate Stewardship Plan based on the results of the LGPSC Climate Risk Report in order to focus the Fund's engagement resources.

TCFD Recommended Disclosure
b) Describe the organisation's process for managing climate-related risks.

The Fund manages risk by prioritising those risks which it believes will have the biggest impact on the Fund. For climate-related risks, this will likely depend on analysis including climate scenario analysis and carbon risk metrics. The Fund's approach to climate risk management is set out in detail in the Fund's Climate Strategy.

Stewardship activities will 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.

Either through its own membership or through LGPSC's membership, the Fund has several engagement partners that engage investee companies on climate risk.

Figure 7: The Fund's Stewardship Partners

Organisation	Remit
ISS	Specialist third party voting service provider. ISS' research includes recommendations on casting votes on climate-related shareholder resolutions.
LGPS Central Limited	The Fund is a 1/8th owner of LGPSC. Climate change is one of LGPSC's stewardship themes, with quarterly progress reporting available on the website. The Responsible Investment Team at LGPSC engages companies on DPF's behalf, including via the Climate Action 100+ initiative.
HERMES EOS	Hermes EOS is engaged by LGPSC to expand the scope of the engagement programme, especially to reach non-UK companies.
Local Authority Pension Fund Forum	DPF is a long-standing member of the LAPFF. LAPFF conducts engagements with companies on behalf of local authority pension funds.

The Fund is currently in the process of applying to become a member of the Institutional Investors Group on Climate Change (IIGCC), a leading global membership body and the largest in Europe focussing specifically on climate change. The IIGCC has around 400 members, representing around $60trillion of assets under management. The IIGCC's mission is to support and enable the investment community in driving significant and real progress by 2030 towards a net zero and resilient future.

The Fund recognises that outcomes of engagement are of greater importance than the volume of engagement. The outcomes of engagement activities of the Fund's stewardship partners are published on each provider's website.

The instruction of shareholder voting opportunities is an important part of climate stewardship. Following the transition of the vast majority of its direct equity holdings into pooled products, voting activity is largely carried out by external fund managers. Legal & General Investment Management (LGIM) currently manage a sizeable proportion of the Fund's assets on a passive basis. The votes in respect of these assets are cast by LGIM. LGIM has a robust approach to incorporating climate change factors in its voting decisions, including on specific climate-related shareholder resolutions. The Fund's direct US Equity portfolio is managed by an external manager, and the manager is responsible for casting the votes in line with their policies, which include specific consideration of climate change factors.

The stewardship and voting activities of the Fund's largest investment managers are reported to Committee on a quarterly basis. Furthermore, the Fund is aiming to become a signatory to the 2020 UK Stewardship Code in 2023.

Based on analysis prepared by LGPSC, the Fund has developed a Climate Stewardship Plan which, alongside the wide-scale engagement activity undertaken by LGPSC, Hermes EOS, and LAPFF, will include targeted engagement at investee companies of particular significance to the Fund's portfolio.

Figure 8: Holdings included in the Fund's forward Climate Stewardship Plan

Holding	Sector	Net Zero Target	TPI Climate Risk Management Quality	TPI Carbon Performance To 2025	TPI Carbon Performance To 2035	TPI Carbon Performance To 2050
Anglo American	Materials	✓	4	1.5°C	1.5°C	National Pledges
BP	Energy	✓	4*	Not Aligned	Not Aligned	Not Aligned
CRH	Materials	✓	4	Below 2°C	1.5°C	1.5°C
Glencore	Materials	✓	4	1.5°C	Below 2.0°C	National Pledges
Rio Tinto	Materials	✓	4	Paris Pledges	Paris Pledges	Below 2°C
Shell	Energy	✓	4	Not Aligned	National Pledges	National Pledges
TSMC	IT	✓	-	-	-	-

All of the companies on the forward Climate Stewardship plan have committed to net zero by 2050.

The Transition Pathway Initiative (TPI) is a global, asset owner led initiative which assesses companies' preparedness for the transition to a low carbon economy. The TPI Framework evaluates companies based on: 1) climate risk management quality; 2) and carbon performance.

Climate risk management quality includes an assessment of policies, strategy, risk management and targets, and results in the awarding of a quality level ranging from 0 – unaware of, or not acknowledging climate change to 4* - satisfies all management quality criteria.

Carbon performance relates to an assessment of the level of alignment with the Paris Agreement. The TPI measures each company's carbon performance against three sector pathways: 1.5°C; Below 2°C; and 3) National Pledges. Each pathway is determined by the required global carbon reduction to hit 1.5°C, 1.65°C and 2.6°C, which is the current aggregate national pledges. TPI considers regional and sectoral challenges to plot these sector pathways.

The holdings included in the Fund's forward Climate Stewardship Plan accounted for 22.7% of the Fund's Total Quoted Equity carbon footprint at 31 March 2022 on a weighted average carbon intensity basis, and 33.5% of the Fund's Total Quoted Equity financed emissions at the same date.

TCFD Recommended Disclosure
c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.

Both ‘mainstream’ risks and climate-related risks are discussed by the Pensions & Investments Committee. While specific macro-economic risks are not usually included in isolation, the Fund includes climate risk as a separate risk on the Fund’s Risk Register.

Climate risk is further managed through the Fund’s Climate Strategy and the Climate Stewardship Plan.

Metrics and Targets

TCFD Recommended Disclosure
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

The Fund has to date received three LGPSC Climate Risks Reports covering the carbon metrics of its listed equities and investment grade bond investments at the following dates:

- 31 July 2019 (the 2020 benchmark) (listed equities only);
- 31 March 2021; and
- 31 March 2022.

The poor availability of data in asset classes other than listed equities and investment grade bonds prevents a more complete analysis at the present time. Notwithstanding the lack of carbon metrics in respect of these other asset classes (i.e. Infrastructure; Property, Sovereign Bonds, Private Equity, etc) at the present time, a table setting out an overview of the Fund’s approach to managing the climate related risks and opportunities of these other asset classes is set out later at Figure 19.

The Fund 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 Fund 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.

Carbon risk metrics aid the Fund in assessing the potential climate-related risks to which the Fund is exposed, and identifying areas for further risk management, including company engagement and fund manager monitoring. The Fund additionally monitors stewardship data (see above).

TCFD Recommended Disclosure
b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

The Fund provides below the carbon metrics of the Fund's listed equity portfolio and investment grade bond portfolio at 31 March 2022, which represented 51.3% and 6.2%, respectively, of the Fund's total investment assets at that date.

The carbon metrics comprise:

- Carbon Footprint
- Financed Emissions
- Percentage of Holdings with a Net Zero Target
- Transition Pathway Initiative Scores (listed equity only)
- Fossil Fuel Exposure
- Thermal Coal Exposure
- Exposure to Clean Technology

The carbon footprint analysis set out in this report has been calculated on a weighted average carbon intensity (WACI) basis. This method of normalising emissions is recommended by the Task Force and is calculated by working out the carbon intensity (Scope 1 & 2 Emissions / $m Sales) for each portfolio company and calculating the weighted average by portfolio weight.

The carbon footprint analysis includes Scope 1 and 2 emissions (those emitted either directly by a company or indirectly through its procurement of electricity and steam) but does not include Scope 3 emissions (those emitted by a company's suppliers and customers). This means that for some companies the assessment of their carbon footprint could be considered an 'understatement'. Examples could include an online retailer whose logistics emissions are not included in Scope 1 or 2.

The Fund has chosen not to include Scope 3 emissions in the carbon footprint metrics for two reasons: (1) the rate of Scope 3 disclosure remains insufficient to use reliably in carbon foot-printing analysis; and (2) the inclusion of Scope 3 emissions leads to double-counting at the portfolio level. To overcome the risk of 'understating' carbon risk, the Fund additionally assesses its exposure to fossil fuel reserves (see Figure 14).

The combined carbon metrics of the Total Quoted Equity and Investment Grade Bond portfolios relative to the benchmark at 31 March 2022 are set out below.

Figure 9: Combined Total Quoted Equity & Investment Grade Bonds Carbon Metrics[4]

Carbon Metric	DPF 31 March 2022	Benchmark 31 March 2022	% Variance
Carbon Footprint	110.12	140.59	(21.7%)
Financed Emissions	199,563	n/a	n/a
% of Companies with a Net Zero Target	43.6%	45.5%	(4.2%)
Weight in Fossil Fuel Reserves	7.0%	8.0%	(12.1%)
Weight in Thermal Coal Reserves	2.5%	3.2%	(21.9%)
Weight in Clean Technology	33.2%	34.4%	(3.5%)

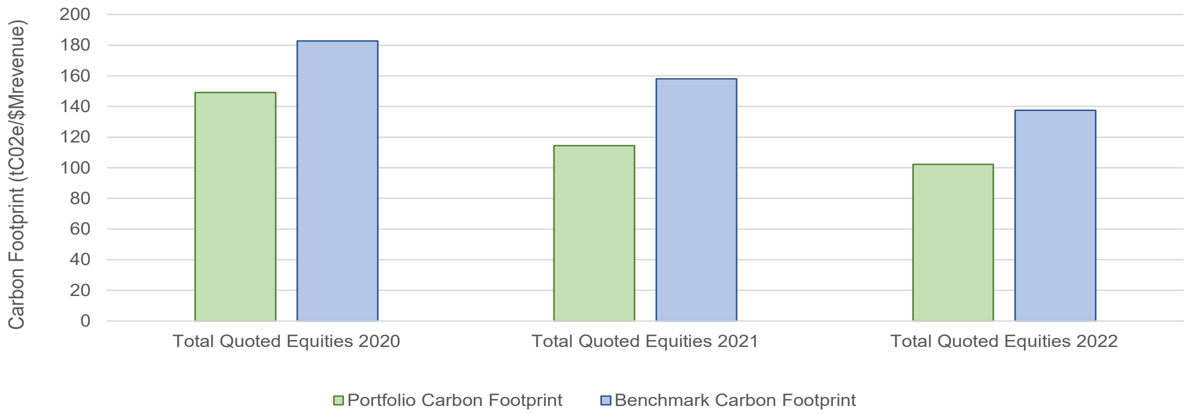
Further details in respect of both the Total Quoted Equity and Investment Grade Bond portfolios are set out below.

Total Quoted Equities

The Fund's Total Quoted Equity portfolio at 31 March 2022, which represented 51.3% of total investment assets at that date.

Figure 10 below shows that compared to the weighted Base Benchmark, the Fund's Total Quoted Equities portfolio at 31 March 2022 was around 44% less carbon intensive than the weighted Base Benchmark. This means that, on average, for every $m of economic output companies produce, the Fund's investee companies emit 44% fewer GHG emissions than the companies in the weighted Base Benchmark.

Figure 10: Total Quoted Equity Carbon Footprint[5]



Note: The blended benchmark comprises the underlying regional benchmarks, weighted in proportion to the current GBP amount in each equity region

In addition to the reduction in the WACI carbon footprints noted above, Figure 11 below, shows the Fund's Total Equity Financed Emissions (Tonnes of Co2e per $1m invested) at 31 July 2019 and 31 March 2022.

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Figure 11: Total Quoted Equity Financed Emissions[6]

Financed Emissions	31 March 2019	31 March 2022	% Variance
Financed Emissions	282,355	181,227	(35.8%)
of which in material sectors (1)	97.9%	98.0%	n/a

(1) The selection of companies in material sectors is based on EU taxonomy, where sectors are chosen based on two factors, high emitting macro sectors, and enabling sectors where economic activities have the potential to enable substantial greenhouse gas emissions reductions in other sectors.

Financed Emissions estimates the absolute tonnes of Co2, by each investee company, for which an investor is responsible. The Fund believes that the measure has limited usefulness for benchmarking and comparison purposes because it is has no link to either portfolio size or composition. Notwithstanding these limitations, the analysis indicates that the Fund's absolute Financed Emissions fell by 35.8% between 31 March 2019 and 31 March 2022.

It is also possible to show the proportion of the Fund's Total Equity portfolio at 31 March 2022 which relates to companies with a Net Zero Target.

Figure 12: Total Quoted Equity % of Companies with a Net Zero Target[7]

At 31 March 2022	Actual	Benchmark	% Variance
% of Companies with Net Zero Target	39.9%	42.6%	(6.3%)

The Fund's Total Equity portfolio weight in companies which have set a Net Zero Target is 39.9%, slightly lower than the benchmark of 42.6%. 65% of the Fund's Financed Emissions relate to companies with a Net Zero Target, indicating that larger emitters, and therefore the ones most in need of decarbonisation targets, have set out a net zero target. The measure does not provide any insight into how likely the companies are to meet their net zero targets.

Figure 13 below, shows the Total Quoted Equity TPI scores at 31 March 2021 and 31 March 2022.

Figure 13: Total Quoted Equity TPI Scores[8]

TPI Measure	Category	31 Mar-21	31 Mar-22
Management Quality	4*, 4	48.1%	55.0%
	3, 2	44.9%	35.3%
	1, 0	7.0%	9.7%
Paris Alignment	1.5 Degrees	0.0%	9.1%
	2 Degrees or below	41.6%	32.5%
	National Pledges	22.0%	14.8%
	Not Aligned	36.4%	43.6%

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The Fund's TPI scores have generally improved between 31 March 2021 and 31 March 2022. Since March 2021, the number of companies with a management quality score of 4 or 4* has increased by 6.9%, albeit the number of companies with a management quality score of 0 or 1 has also increased by 2.7%. In terms of Paris Alignment, the number of companies which have committed to a target aligned with a 1.5°C scenario has increased from 0.0% to 9.1%. However, the number of companies which are not aligned with the Paris Agreement has also increased from 36.4% to 43.6%, indicating that further work is required to encourage companies to commit to more ambitious decarbonisation targets.

Figure 14: Total Quoted Equity Exposure to Fossil Fuel reserves[9]

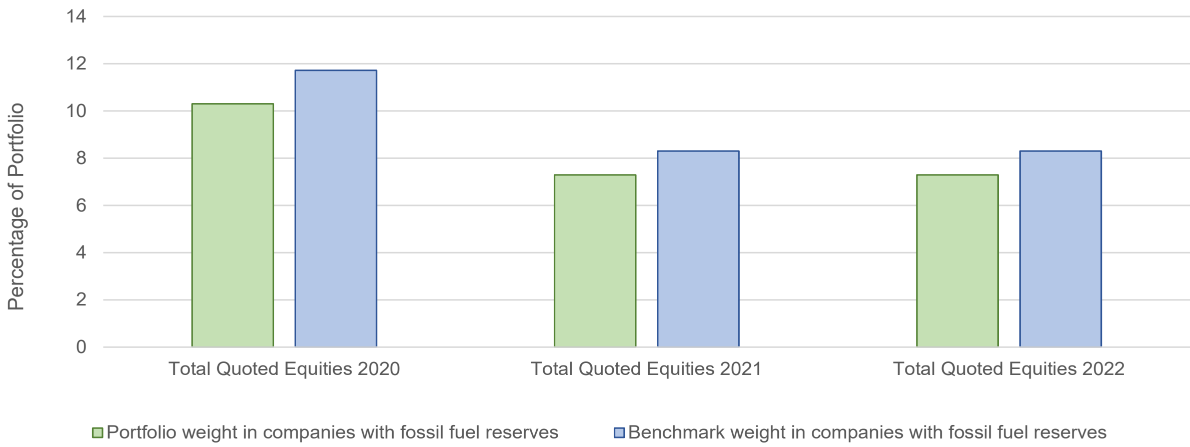

Figure 14 above shows the Fund's Total Quoted Equities portfolio at 31 March 2022 had a lower weight in companies with fossil fuel reserves than the weighted Base Benchmark (38% lower than the weighted Base Benchmark).

The full weight of a company is included in the companies with fossil future reserves measure, regardless of how much of that company's activities relate to those reserves. 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 Fund's weight in thermal coal reserves was also 21% lower than the weighted Base Benchmark (Figure 15 below). On a revenue basis, only 0.1% of the Total Quoted Equities portfolio is exposed to revenue streams attributable to thermal coal production.

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Figure 15: Total Quoted Equity Exposure to Thermal Coal Reserves[10]

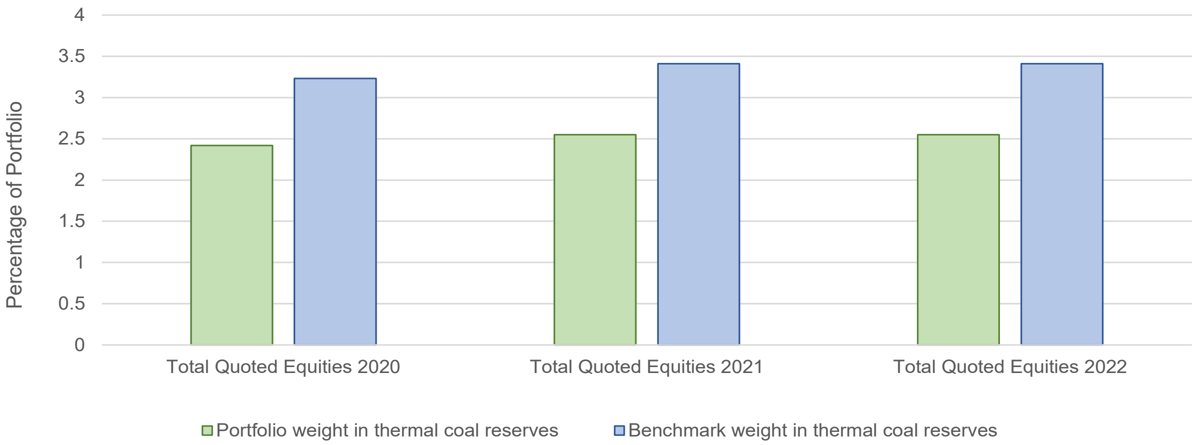
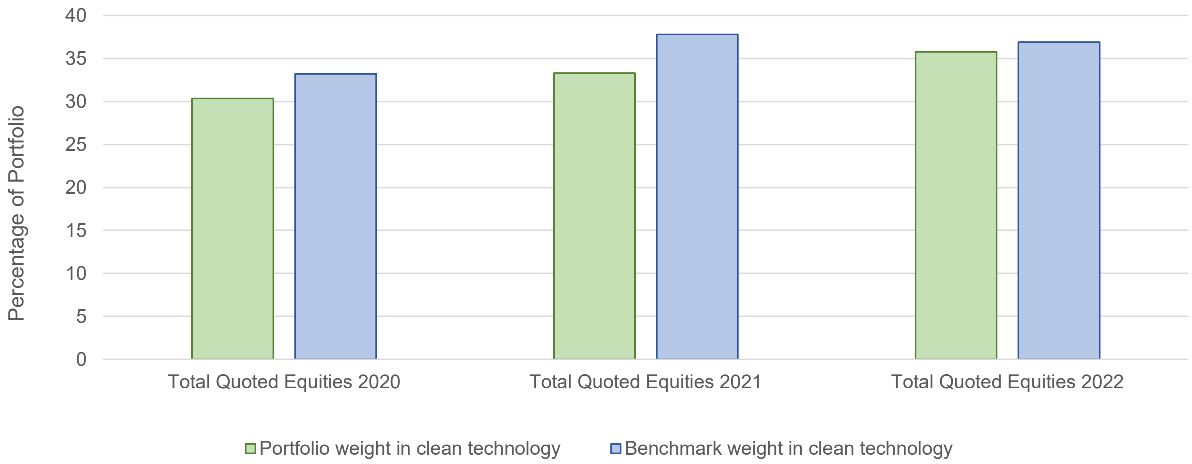


Figure 16 below indicates that the Fund's Total Quoted Equities portfolio exposure to clean technology is 8% higher than the weighted Base Benchmark, albeit it is 3.0% lower than the weighted 2022 Benchmark. The Fund notes that this measure should be viewed with some caution as there appears to be a moderate positive correlation in the dataset between sectors that have a high carbon intensity (or a higher weight in fossil fuel reserves) and those that have a higher weight in clean technology. For example, the Utilities and Oil & Gas sectors have some of the highest weights in clean technology. This correlation means that it may be difficult to have a diversified portfolio that is simultaneously carbon efficient, is underweight fossil fuels, and overweight clean technology. The analysis takes no account of the Fund's quoted and unquoted onshore & offshore, solar and hydro renewable energy infrastructure investments. These were in excess of £250m on a committed basis at 31 March 2022, equating to 4.2% of total net investment assets.

Figure 16: Exposure to Clean Technology in each regional equity portfolio[11]



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Investment Grade Bonds

Figure 17 below sets out the carbon metrics in respect of the Fund's investment grade bond investments at 31 March 2022, which represented 6.2% of total investment assets at that date.

Figure 17: Carbon Metrics in respect of the Fund's Investment Grade Bond Portfolio[12]

Carbon Metric	Portfolio	Benchmark	% Variance
Carbon Footprint	217.4	177.9	22.2%
Financed Emissions	18,336	n/a	n/a
% of Companies with Net Zero Target	30.5%	27.5%	10.9%
Weight in Fossil Fuel Reserves	4.8%	4.3%	11.6%
Weight in Thermal Coal Reserves	1.77%	0.55%	221.8%
Weight in Clean Technology	11.6%	14.5%	(20.0%)

The table indicates that the Fund's investment grade bonds portfolio is around 22% less carbon efficient than the benchmark (20% more efficient than the benchmark at 31 March 2021), together with higher weights in fossil fuel reserves and thermal coal reserves relative to the benchmark. Comparable with the total quoted equity portfolio, the weight in clean technology is lower than the benchmark.

TCFD Recommended Disclosure
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

The Fund developed a standalone Climate Strategy which was approved by Committee in November 2020. The Fund's approach to addressing the risks and opportunities related to climate change.

The Fund believes that portfolio-wide 'top down' targets are an important means to set direction and appropriate ambition for an investment strategy towards net zero, and to monitor whether that strategy is achieving expected outcomes. However, a focus on just a single top-down portfolio emissions reduction target can incentivise a shift of assets within a portfolio from high to already lower carbon assets and sectors, rather than driving additional 'real world' emissions reductions from increasing investments in climate solutions that contribute to the achievement of the net zero goal. As a result, the Fund will aim to:

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- 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
- Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025.

The targets will be reviewed at least every three years, with the next scheduled review expected to take place in 2023, and are expected to increase in line with the stated ambition of achieving a portfolio of assets with net zero carbon emissions by 2050.

Figure 18 below, shows the progress to date in respect of the two targets.

Figure 18: DPF Climate Strategy Targets

Target	Target by end of 2025	Actual 31 March 2021	Actual 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%)	(37%)	(44%)
Invest at least 30% of the Fund portfolio in low carbon & sustainable investments by the end of 2025	30%	19%	Invested: 27% Committed: 29%

The Fund expects to make continued progress in respect of the second target in 2022-23, albeit the Fund notes that as the consistency, comparability and quality of climate-related data, including the identification and measurement of companies' Scope 3 emissions, improves, this could have a material impact on the Fund's carbon metrics relative to the targets noted above.

The carbon metrics set out in this report relate to the Fund's listed equity and investment grade bond investments. These accounted for 57.5% of the Fund's total investment assets at 31 March 2022. Whilst it is not currently possible to quantify, and present, comparable carbon metrics in respect of the Fund's other asset classes, Figure 19 below, sets out an overview of the Fund's approach to managing the climate related risks and opportunities in respect of these assets.

Figure 19: Other Asset Classes – Approach to Managing Climate Related Risks & Opportunities

Asset Class	Asset Class Weight 31 Mar-22	Comments
Sovereign Bonds	10.2%	• The Fund's Sovereign Bond investments relate entirely to UK or US conventional or index-linked bonds. It is not possible to measure the carbon metrics for a sovereign bond but it is possible to assess whether the borrower (i.e. the national government) has made suitable net zero commitments. Both the UK and US Governments have committed to being net zero by 2050. • The Fund made its first investment in respect of the recently launched UK Government 'Green Gilt' programme in 2022. UK Green Gilts are used by the UK Government to finance expenditure in clean transportation, energy efficiency, renewable energy, pollution prevention and control, living and natural resources, and climate change adaptions. Subject to performance and debt security, the Fund expects to make further investments in green bonds moving forward.
Infrastructure	8.2%	• The vast majority of the Fund's Infrastructure assets are in low carbon sectors such as renewable energy assets (on and offshore wind, solar and hydro, together with associated supporting infrastructure including battery storage and energy transition), critical business services, telecommunications, transportation assets (e.g. rail rolling stock, ferries, etc) and Private Public Partnerships (e.g. social infrastructure, including hospitals and schools). • The Fund notes that around 37% of the Fund's committed infrastructure allocation at 31 March 2022 relates to renewable energy assets and most of the Fund's underlying infrastructure managers have made net zero commitments. For example, Macquarie Asset Management, which accounted for around 22% of the Fund's committed infrastructure allocation at 31 March 2022, has committed to investing and managing its portfolio in line with global net zero emissions by 2040. • The Fund expects an increasing proportion of its Infrastructure allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).
Property	7.9%	• Most the Fund's Property assets relates to a portfolio of directly owned UK commercial properties (e.g. Retail; Office; Industrial; and Alternatives). The portfolio is managed by Colliers Global Investors on a discretionary arrangement. • Colliers Global Investors integrates ESG considerations, including climate related risks and opportunities, into its investment and on-going asset management process. • Over 78% of the Fund's directly owned UK commercial properties have an Energy Performance Certificate (EPC) of C or above. The Fund has no directly owned UK commercial properties with an EPC of F or below.

		Colliers Global Investors is targeting that the Fund's entire directly owned UK commercial properties will have an EPC of C or above by 2027, rising to B or above by 2030.
Private Equity	4.9%	• The Private Equity asset class typically lends itself to low carbon high growth business such as business services, healthcare, Information Technology and Consumer Discretionary. • The typical Private Equity investment period is between four and six years and the Fund's expects its underlying investment managers to fully integrate ESG considerations, including climate related risks and opportunities, into their investment processes. • The Fund expects an increasing proportion of its Private Equity allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).
Cash	4.5%	• The Fund's Cash balance is managed through a portfolio of cash deposits in accordance with the Fund's approved Treasury Management Strategy. • The Fund's main operational bank account is with Lloyds Bank. Lloyds Bank states that it supports the transition to a low carbon economy and recognises the importance of transitioning to net zero by 2050 or sooner. Lloyds Bank has committed to achieving net zero across the activities that it finances by 2050 or sooner.
Diversified Multi-Asset Credit	4.3%	• The Fund's Diversified Multi-Asset Credit allocation is managed through two third party managers: CQS and Janus Henderson. The Fund expects both managers to fully integrate ESG considerations, including climate related risks and opportunities into their investment process. • CQS is a signatory to the Net Zero Asset Managers Initiative. In doing so, CQS is part of the collective goal to engage and, through investment, achieve net zero greenhouse gas emissions by 2050 or sooner. • Janus Henderson states that it believes in the spirit and goals of a net zero economy and the need for a transition to a low carbon world. • Both managers are currently in the process of designing and implementing systems which will allow them to report on the carbon metrics of their respective portfolios.
Private Debt	2.5%	• The Fund's Private Debt assets are currently managed by four managers. Each of these managers integrates ESG considerations, including climate related risks and opportunities, into their investment processes. Furthermore, several of the managers, actively incentivise the underlying debt borrowers to reduce carbon emission through interest rate discounts linked to carbon reduction targets. • Most of the debt funding relates to private equity transactions, which typically lends itself to low carbon high growth business such as business services, healthcare, Information Technology and Consumer Discretionary. • The Fund expects an increasing proportion of its Private Debt allocation to be managed by LGPSC (the Fund's investment pooling investment management company) moving forward. LGPSC has a stated net zero ambition across its internally and externally managed portfolios by 2050 (or sooner).

Appendix 1

TCFD Recommendations for Asset Owners

Governance

Recommended Disclosure (a) Describe the board's oversight of climate-related risks and opportunities.

Recommended Disclosure (b) Describe management's role in assessing and managing climate-related risks and opportunities.

Strategy

Recommended Disclosure (a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.

Recommended Disclosure (b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

Recommended Disclosure (c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Risk Management

Recommended Disclosure (a) Describe the organisation's processes for identifying and assessing climate-related risks.

Recommended Disclosure (b) Describe the organisation's processes for managing climate-related risks.

Recommended Disclosure (c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

Metrics and Targets

Recommended Disclosure (a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

Recommended Disclosure (b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Recommended Disclosure (c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

Important Information

Extract above from Mercer Limited's (Mercer) report "Climate Scenario Analysis" prepared for and issued to LGPS Central Limited for the sole purpose of undertaking climate change scenario analysis for Derbyshire Pension Fund. Other third parties may not rely on this information without Mercer's prior written permission. The findings and opinions expressed are the intellectual property of Mercer and are not intended to convey any guarantees as to the future performance of the investment strategy. Information contained herein has been obtained from a range of third-party sources. Mercer makes no representations or warranties as to the accuracy of the information and is not responsible for the data supplied by any third party.

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FOR PUBLICATION

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

WEDNESDAY, 18 JANUARY 2023

Report of the Interim Director - Finance and ICT

GOVERNANCE POLICY AND COMPLIANCE STATEMENT

1. Purpose

To seek approval for the draft updated Governance Policy and Compliance Statement for Derbyshire Pension Fund (the Fund) attached as Appendix 2.

2. Information and Analysis

2.1 Background

Regulation 55 of The Local Government Pension Scheme Regulations 2013 requires an administering authority, after consultation with such persons as it considers appropriate, to prepare, publish and keep under review, a written statement setting out:

- whether it delegates its functions, or part of its functions under these Regulations to a committee, a sub-committee or an officer of the authority
- the terms, structure and operational procedures of any such delegations
- the frequency of any committee or sub-committee meetings
- whether such a committee or sub-committee includes representatives of Scheme employers or members, and if so, whether these representatives have voting rights

- the extent to which a delegation, or the absence of a delegation, complies with guidance given by the Secretary of State and, to the extent that it does not so comply, the reasons for not complying
- details of the terms, structure and operational procedures relation to the local pension board

The Governance Policy and Compliance Statement (the Statement) sets out the governance arrangements for Derbyshire Pension Fund and records the extent to which the Fund complies with the statutory guidance issued by the Secretary of State in respect of these matters.

2.2 Update included in the draft Statement

A minor update has been included in the draft Statement to reflect the reappointment of the two members representing Derby City Council following the City Council's Annual General Meeting on 25 May 2022. As there are no material changes to the Statement, consultation with stakeholders is not proposed.

2.3 Review of the composition of the Pensions and Investments Committee

At the Pensions and Investments Committee meeting on 20 October 2021, it was noted that an area for future consideration was the extension of member and employer representation on Committee.

In February 2021, the LGPS Scheme Advisory Board (SAB) published the final report of its Good Governance Review and provided an action plan for consideration by the Ministry of Housing, Communities and Local Government (now the Department of Levelling Up, Housing and Communities - DLUHC).

A response to the action plan has not yet been provided, however, it is anticipated that DLUHC will release a formal consultation on the governance of LGPS funds early in 2023 and, subject to the outcome of the consultation, issue amendments to the LGPS regulations and statutory guidance with respect to the implementation of the recommendations set out in the Good Governance review.

The review of scheme member and employer representation in the Fund's governance structure will be finalised following publication of the statutory guidance from DLUHC.

In respect of current representation within the governance structure of the Fund, Derbyshire Pension Board (which includes scheme member and employer representatives) assists the Committee in the administration of the Fund.

As part of plans to increase member involvement in the governance of the Fund, a Members' Forum is due to be established later in 2023 when the My Pension Online service has settled in as the main route of engagement between the Fund and its members.

3 Implications

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

4 Background Papers

Background papers are held by the Head of Pension Fund.

5 Appendices

5.1 Appendix 1 – Implications
5.2 Appendix 2 – Draft Governance Policy and Compliance Statement

6 Recommendation(s)

That Committee approves the draft Derbyshire Pension Fund Governance Policy and Compliance Statement attached as Appendix 2.

7 Reasons for Recommendation(s)

The Pension Fund is required to have a written statement of its governance arrangements. The current version of the Fund's Governance Policy and Compliance Statement was approved by Committee on 20 October 2021 and is subject to annual review.

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Appendix 1

Implications

Financial

1.1 All costs related to the operation and implementation of this Policy will be met directly by Derbyshire Pension Fund.

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

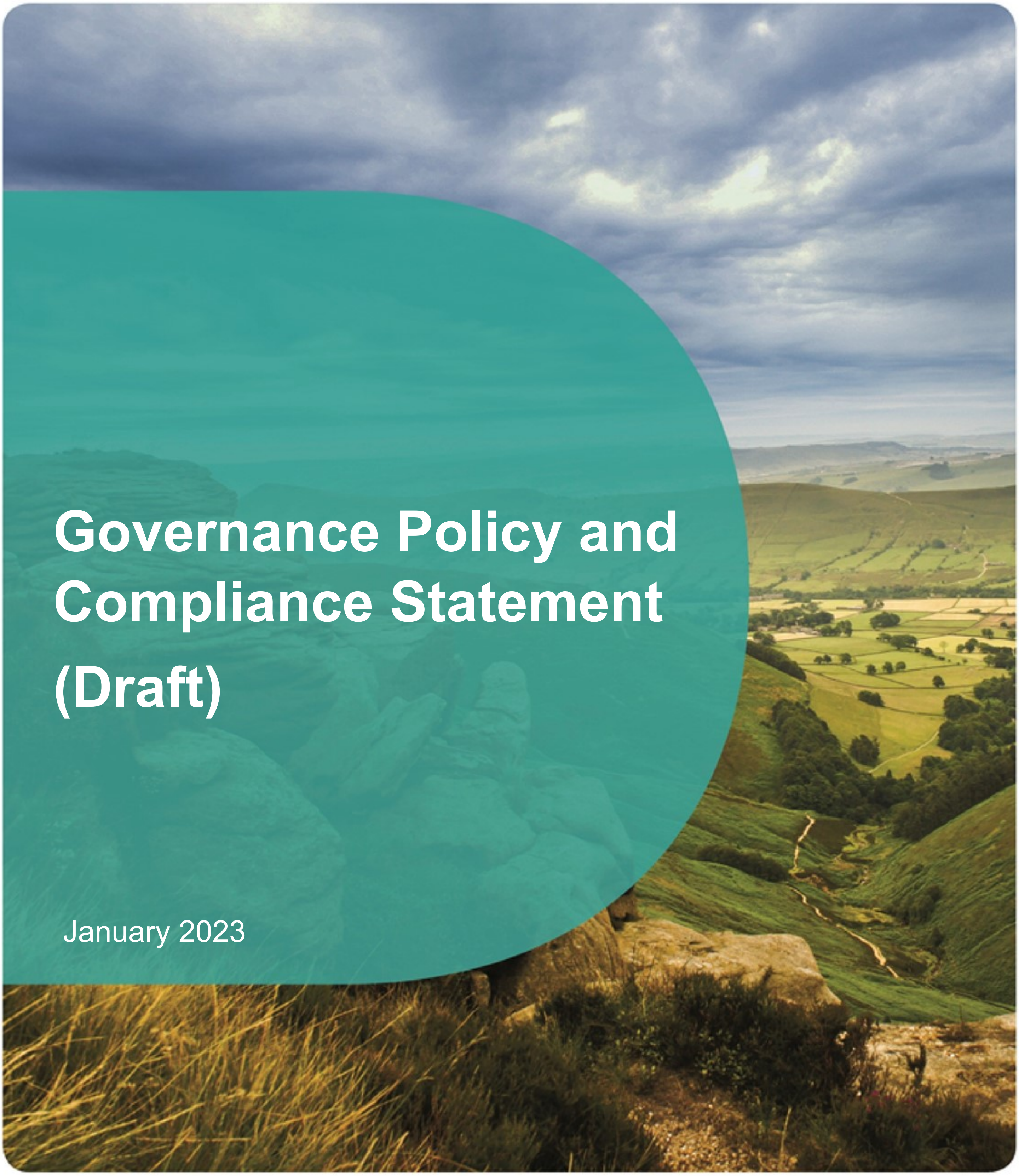
Other (for example, Health and Safety, Environmental Sustainability, Property and Asset Management, Risk Management and Safeguarding)

7.1 None

Derbyshire Pension Fund

Appendix 2

Tel. 01629 538900
derbyshirepensionfund.org.uk



Governance Policy and Compliance Statement (Draft)

January 2023

County Hall, Matlock, Derbyshire, DE4 3AH
Administered by Derbyshire County Council

lgps

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Introduction

This is the Governance Policy and Compliance Statement (the Statement) for Derbyshire Pension Fund (the Fund) which is part of the Local Government Pension Scheme (the LGPS). The Fund is managed and administered by Derbyshire County Council (the Council) in accordance with the Local Government Pension Scheme Regulations 2013 (2013 Regulations). At a national level, the LGPS is governed by the Department of Levelling Up, Housing and Communities (DLUHC), formerly known as the Ministry of Housing, Communities and Local Government (MHCLG) and the LGPS Scheme Advisory Board.

The 2013 Regulations require an administering authority, after consultation with such persons as it considers appropriate, to prepare, publish and keep under review, a written statement setting out:

- whether it delegates its functions, or part of its functions under these Regulations to a committee, a sub-committee or an officer of the authority;
- the terms, structure and operational procedures of any such delegations;
- the frequency of any committee or sub-committee meetings;
- whether such a committee or sub-committee includes representatives of Scheme employers or members, and if so, whether these representatives have voting rights;
- the extent to which a delegation, or the absence of a delegation, complies with guidance given by the Secretary of State and, to the extent that it does not so comply, the reasons for not complying; and
- details of the terms, structure and operational procedures relation to the local pension board.

Governance Objectives

The Pension Fund's governance objectives are to:

- Meet the highest standards of good governance through the application of the key principles of openness and transparency, accountability, integrity, clarity of purpose and effectiveness.
- Ensure robust governance arrangements are in place to facilitate informed decision making supported by appropriate advice, policies and strategies, which do not unreasonably favour one group of stakeholders over another.
- Ensure the Pension Fund is managed and its services delivered by people who have the appropriate knowledge and expertise.
- Comply with all appropriate legislation and statutory guidance, and to act in the spirit of other relevant guidelines and best practice guidance.

The identification and management of conflicts of interest is integral to the Fund achieving its governance objectives. A Conflicts of Interest Policy has, therefore, been developed for the Pension Fund and it was approved by the Pensions and Investments Committee on 4 November 2020.

Governance Arrangements

Under the terms of the Council's Constitution, responsibility for the functions of the Council as the administering authority of Derbyshire Pension Fund is delegated to the Pensions and Investments Committee. A Local Pension Board, set up in 2015 in accordance with the Local Government Pension Scheme (Amendment) (Governance) Regulations 2015, assists the Council with the governance and administration of the Fund.

The day to day management of the Pension Fund is delegated to the Director of Finance & ICT who is supported by the Head of Pension Fund and in-house investment and administration teams. A proportion of the Fund's investment assets are managed by LGPS Central Limited (the Fund's pooling company) and by other external fund managers.

Pensions and Investments Committee
The Committee comprises eight voting Councillors representing the County Council and two voting Councillors representing Derby City Council. The County Council members of the Committee reflect the political balance of the Council. The Councillors representing Derby City Council were reappointed to the Committee at the Annual General Meeting of Derby City Council on 25 May 2022.

Two trade union representatives are also entitled to attend meetings of the Pensions and Investments Committee as non-voting members.

Officers of the Council and an independent investment adviser also attend meetings to provide advice and support to members of the Committee. Other experts attend Committee to provide advice as required.

Members of Derbyshire Pension Board are invited to attend the Committee's meetings as observers.

The Committee meets eight times a year (six formal committee meetings and two training sessions) and its responsibilities include reviewing and approving the Fund's:

- Governance Policy and Compliance Statement
- Investment Strategy Statement
- Funding Strategy Statement
- Treasury Management Strategy
- Quarterly tactical asset allocation
- Other statutory policies required by the Local Government Pension Scheme Regulations and strategy/policy statements in line with best practice

The Committee also receives and considers the Fund's:

- Triennial actuarial valuation report and annual funding reports
- Annual Report
- Administration and investment performance reports
- Risk Register

The Committee ensures arrangements are in place for:

- Communicating with the Fund's stakeholders
- Considering admission body applications
- The adjudication of applications under the Application for Adjudication of Disagreements Procedure (AADP) (including the appointment of adjudicators)

The Committee is responsible for appointing the Fund's:

- Actuary
- Independent investment adviser
- External fund managers for segregated mandates in advance of the management of the investment assets transitioning to the investment pool
- AVC providers

To oversee the Fund's involvement in investment pooling, the Committee:

- Ensures that the Fund is effectively represented in the Pool's governance structure.
- Determines what is required from the Pool to enable the Fund to deliver its Investment Strategy.
- Is responsible for the selection, appointment and dismissal of an investment pooling operator (the Operator) to manage the Fund's assets.
- Monitors the performance and effectiveness of the Operator both as a shareholder in the Operator and as an investor in the Operator's products.
- Ensures that appropriate measures are in place to monitor and report on the ongoing costs and cost savings of investment pooling.
- Ensures that the responsible investment, corporate governance and voting policies of the Fund are delivered effectively.
- Receives and considers reports and recommendations from the Pool's Joint Committee, Shareholders' Forum and Practitioners' Advisory Forum.

Derbyshire Pension Board

The Public Service Pensions Act 2013 introduced a framework for regulatory oversight by the Pensions Regulator and introduced a new governance structure for the LGPS which came into effect in April 2015 and included the requirement for administering authorities to establish Local Pension Boards.

Derbyshire Pension Board (the Board) consists of two Scheme Member representatives and two Scheme Employer representatives together with a non-voting Independent Chair.

Officers of the Council attend Pension Board meetings to provide advice and support to members of the Board.

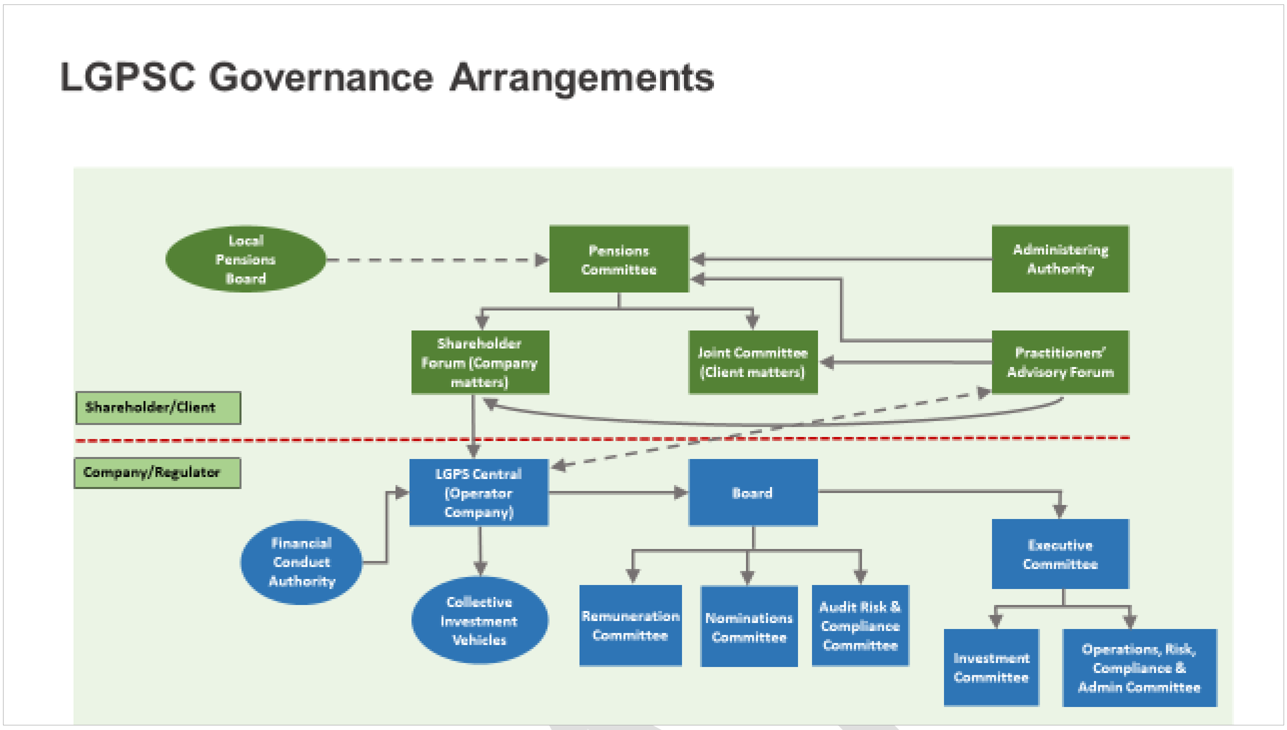
The role of the Pension Board is to assist the administering authority to ensure the effective and efficient governance and administration of the LGPS, including:

- Securing compliance with the LGPS Regulations and any other legislation relating to the governance and administration of the Scheme
- Securing compliance with any requirements imposed by the Pensions Regulator in relation to the Scheme

Members of the Pension Board are invited to attend meetings of the Pensions and Investments Committee as observers and receive all papers ahead of each meeting.

LGPS Central Pool

Derbyshire Pension Fund has partnered with the LGPS pension funds of Cheshire, Leicestershire, Nottinghamshire, Shropshire, Staffordshire, Worcestershire and West Midlands to form a collective investment pool, known as LGPS Central (the Pool), in accordance with Government requirements for the pooling of LGPS investment assets.



The governance arrangements of the Pool include the following bodies:

Joint Committee: to provide oversight of the delivery of the objectives of the Pool, the delivery of client service, the delivery against the LGPS Central business case and to deal with common investor issues. The Joint Committee provides assistance, guidance and recommendations to the individual Councils, taking into consideration the conflicting demands and interests of the participants within the Pool. The Joint Committee does not have delegated authority to make binding decisions on behalf of the participating Councils.

Membership of the Joint Committee consists of one elected member from each participating council. The Chair of the Pensions and Investments Committee, or his/her nominee, represents Derbyshire County Council on the LGPS Central Joint Committee.

Shareholders' Forum: to oversee the operation and performance of LGPS Central Ltd and to represent the ownership rights and interests of the shareholding councils with the LGPS Central Pool. Collective shareholder discussions take place in the Shareholders' Forum and aim to ensure that the Councils act in a unified way in company meetings, having agreed to a common set of principles. Unanimous decisions are required for certain reserved company matters. Shareholder Forum meetings are distinct from LGPS Central Ltd company meetings, however members of the Shareholders' Forum also represent the councils at company meetings.

Membership of the Shareholders' Forum consists of one representative from each shareholding council. The Director of Finance & ICT, or his/her nominee, represents Derbyshire County Council at the Shareholders' Forum and at LGPS Central Ltd company meetings, with delegated authority to make decisions on any matter which requires a decision by the shareholders of LGPSC.

Practitioners' Advisory Forum: a working group of officers appointed by the shareholding councils within the Pool to support the delivery of the objectives of the Pool and to provide support for the Pool's Joint Committee and Shareholders' Forum. The Director of Finance and ICT, the Head of

Pension Fund and the Investments Manager represent Derbyshire on the Practitioners' Advisory Forum as required. PAF is supported by four individual working groups: Finance Working Group; Governance Working Group; Investment Working Group; and Responsible Investment Working Group.

Review and Compliance with Best Practice

This Governance Policy and Compliance Statement will be reviewed annually and will be revised following any material change in the governance arrangements of the Pension Fund.

The 2013 Regulations require Administering Authorities to prepare and publish a statement which sets out the extent to which the governance arrangements of the Fund comply with statutory guidance issued by the Secretary of State which is based on best practice principles. The Fund's statement is set out below:

Structure

Principle	Compliance
The management of the administration of benefits and strategic management of fund assets clearly rests with the main committee established by the appointing council.	Compliant The Pensions and Investments Committee is responsible for these functions under the Terms of Reference included in the Council's constitution.
The representatives of participating LGPS employers, admitted bodies and scheme members (including pensioner and deferred members) are members of either the main or secondary committee.	Partially Compliant Membership of the Pensions and Investments Committee includes two representatives from Derby City Council and two non-voting Trade Union representatives as well as eight representatives from the administering authority (also the largest employing body). In practice the Trade Union representatives tend to represent the interests of all scheme members. Membership and employer representation will be kept under review.
That where a secondary committee or panel has been established, the structure ensures effective communication across both levels.	Not applicable
That where a secondary committee or panel has been established, at least one seat on the main committee is allocated for a member from the secondary committee or panel.	Not applicable

Representation

Principle	Compliance
That all key stakeholders are afforded the opportunity to be represented within the main or secondary committee structure. These include: Employing authorities (including non-scheme employers e.g. admitted bodies) Scheme members (including deferred and pensioner scheme members) Where appropriate, independent professional observers Expert advisors (on an ad-hoc basis)	Partially Compliant Membership of the Pensions and Investments Committee includes two representatives from Derby City Council and two non-voting Trade Union representatives, as well as eight representatives from the administering authority (also the largest employing body). In practice the Trade Union representatives tend to represent the interests of all scheme members. Membership and employer representation will be kept under review. The Fund's Independent Investment Advisor attends investment related Pensions and Investments Committee meetings. Other independent experts attend meetings of the Committee as required e.g. the Fund's Actuary attends to discuss the triennial valuation. Derbyshire Pension Board (the Board) includes two employer representatives (currently from Bolsover District Council and the University of Derby) and two member representatives. The Board has an independent Chair.
That where lay members sit on a main or secondary committee, they are treated equally in terms of access to reports, meetings and training and are given full opportunity to contribute to the decision making process, with or without voting rights.	Compliant All members of the Pensions and Investments Committee, the Pension Board and trade union representatives receive the same Committee meeting reports and have access to the same training. All voting and non-voting members of the Committee are given full opportunity to contribute to the decision making process.

Selection and Role of Lay Members

Principle	Compliance
That committee or panel members are made fully aware of the status, role and function they are required to perform on either a main or secondary committee.	Compliant All members of the Pensions and Investments Committee receive training on the status, role and function they are required to perform when they join the Committee.
That at the start of any meeting, committee members are invited to declare any financial or pecuniary interest related to specific matters on the agenda.	Compliant Declarations of interest are required at each Pensions and Investments Committee meeting and recorded in the minutes of the meeting.

Voting

Principle	Compliance
The policy on voting rights is clear and transparent, including the justification for not extending voting rights to each body or group represented on main LGPS committees.	Compliant The policy on voting rights is clear and transparent. All elected members on the Pensions and Investments Committee have voting rights. The elected members represent employers, local taxpayers and scheme beneficiaries.

Training / Facility Time / Expenses

Principle	Compliance
That in relation to the way in which statutory and related decisions are taken by the administering authority, there is clear policy on training, facility time and reimbursement of expenses in respect of members involved in the decision making process.	Compliant The Fund has a training policy which applies to all members of the Pensions and Investments Committee and the Pension Board. A training plan has been developed based on self-assessment forms completed by the members of both bodies and a log of all training is maintained. The reimbursement of member expenses is in line with the County Council's policy of member reimbursement.
That where such a policy exists, it applies equally to all members of committees, sub-committees, advisory panels or any other form of secondary forum.	See above.
That the administering authority considers the adoption of annual training plans for committee members and maintains a log of all such training undertaken.	See above.

Meetings

Principle	Compliance
That an administering authority's main committee or committees meets at least quarterly.	Compliant The Pensions and Investments Committee meets eight times a year (six formal meetings and two training sessions).
That an administering authority's secondary committee or panel meets at least twice a year and is synchronised with the dates when the main committee sits.	Not applicable
That an administering authority who does not include lay members in their formal governance arrangements, must provide a forum outside of those arrangements by which the interests of key stakeholders can be represented.	Not applicable

Access

Principle	Compliance
That subject to any rules in the Council's constitution, all members of the main and secondary committees or panels have equal access to committee papers, documents and advice that falls to be considered at meetings of the main committee.	Compliant All members of the Pensions and Investments Committee (and the Pension Board) have the same access to committee papers, documents and advice to be considered at the Pensions and Investments Committee.

Scope

Principle	Compliance
That administering authorities have taken steps to bring wider scheme issues within the scope of their governance arrangements.	Compliant The Pensions Committee and the Investments Committee have been combined into the Pensions and Investments Committee which covers all aspects of investment, administration and governance. The Committee is now also supported by the Pension Board which assists with governance and administration matters.

Publicity

Principle	Compliance
That administering authorities have published details of their governance arrangements in such a way that stakeholders with an interest in the way in which the scheme is governed can express an interest in wanting to be part of those arrangements.	Compliant The Governance Policy and Compliance Statement is published on the Pension Fund's website. Vacancies for Derbyshire Pension Board are advertised on the website.

FOR PUBLICATION

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

WEDNESDAY, 18 JANUARY 2023

Report of the Interim Director - Finance and ICT

Derbyshire Pension Fund Risk Register

1. Purpose

To consider the Derbyshire Pension Fund (the Fund) Risk Register.

2. Information and Analysis

2.1
The Risk Register identifies:

- Risk item
- Description of risk and potential impact
- Impact, probability and overall risk score
- Risk mitigation controls and procedures
- Proposed further controls and procedures
- Risk owner
- Target risk score
- Trend risk scores

The Risk Register is kept under constant review by the risk owners, with quarterly review by the Director of Finance & ICT. Derbyshire Pension Board (the Board) also undertakes a detailed review of the Risk Register on an annual basis. The Board reviewed the Risk Register at its February 2022 meeting and is due to carry out a further review in the first quarter of 2023. The identification of any new or increased risks facing the Pension Fund is discussed at meetings of the Pension Board. A copy of both the Summary and Main Risk Registers are attached to this report as Appendix 2 and Appendix 3 respectively. Changes from the Committee's last consideration of the Risk Register are highlighted in blue font.

2.2 Risk Score
The risk score reflects a combination of the risk occurring (probability) and the likely severity (impact). Probability scores range from 1 (rare) to 5 (almost certain) and impact scores range from 1 (negligible) to 5 (very high). A low risk classification is based on an overall risk score of 4 or less; a medium risk score ranges between 5 and 11; and a high risk score is anything with a score of 12 and above.

The Risk Register includes a target score which shows the expected risk score once the proposed additional risk mitigation controls and procedures have been implemented. The difference between the actual and target score for each risk item is also shown to allow users to identify those risk items where the proposed new mitigation and controls will have the biggest effect. Trend risk scores going back to the first quarter of 2020-21 provide additional context.

2.3 High Risk Items
The Risk Register currently has the following five high risk items:

(1) Systems failure/Lack of disaster recovery plan/Cybercrime attack (Risk No.13)

(2) Fund assets insufficient to meet liabilities (Risk No.20)

(3) LGPS Central Limited related underperformance of investment returns (Risk No.31)

(4) Insufficient cyber-liability insurance relating to the pensions administration system (Risk No.42)

(5) Impact of McCloud judgement on administration (Risk No.46)

2.4 Systems failure/Lack of disaster recovery plan/Cybercrime attack & Insufficient cyber-liability insurance relating to the pensions administration system.
The National Cyber Security Centre warned of a heightened cyber threat following Russia's attack on Ukraine and advised organisations to bolster their online defences. Pension schemes hold large amounts of personal data and assets which can make them a target for cybercrime attacks. The trusted public profile of pension funds also makes them vulnerable to reputational damage.

Robust procedures are in place for accessing the systems used by the Fund and the Pension Fund's Business Continuity Plan includes the Business Continuity Policy and Business Continuity Incident Management Plan of Aquila Heywood (the provider of the Fund's pension administration system, Altair).

Detailed Data Management Procedures have been developed for the Fund which set out why members' data needs to be protected, how it should be protected (including a section on protecting against cybercrime) and what to do when things go wrong. These procedures have been rolled out to the Pension Fund team in a number of briefing sessions providing the opportunity for discussion and feedback.

The Fund's data mapping project is ongoing to map and document the Fund's data to ensure that it is understood where it is held, on what systems, how it is combined and how, and where, it moves; the related activities are being risk assessed as part of this process and a review of the information security arrangements of relevant suppliers to the Fund is being undertaken.

The contract with Aquila Heywood limits a cyber liability claim to a specified limit, unless a claim is based on an event caused by the contractor performing its services in a negligent manner. Separately, the Pension Fund is included in the Council's self-insurance arrangements with respect to managing cyber security risks, while the Council's cyber liability cover is being reviewed.

Given the heightened cybercrime threat and the review of the Council's cyber liability cover, the probability scores for both of the cyber related risks were increased in April 2022 from 2 (unlikely) to 3 (possible). The impact scores for both risks remained at 4 (high), giving total risk scores for both risks of 12.

2.5 Fund assets insufficient to meet liabilities

There is a risk for any pension fund that assets may be insufficient to meet liabilities; funding levels fluctuate from one valuation to the next, principally reflecting external risks around both market returns, and the discount rate used to value the Fund's liabilities. Every three years, the Fund undertakes an actuarial valuation to determine the expected cost of providing the benefits built up by members at the valuation date in today's terms (the liabilities) compared to the funds held by the Pension Fund (the assets), and to determine employer contribution rates.

Work is currently ongoing on the 31 March 2022 actuarial valuation. The preliminary whole fund results reported an improvement in the funding level of the Pension Fund from 97% at 31 March 2019 to 100% at 31 March 2022, with the 2019 deficit of £163m moving to a small positive surplus of £3m. The funding level provides a high-level snapshot of the funding position at a particular date and could be very different the following day on a sharp move in investment markets.

Whilst the Fund has a significant proportion of its assets in growth assets, the last two reviews of the Strategic Asset Allocation Benchmark have introduced a lower exposure to growth assets and a higher exposure to income assets with the aim of protecting the improvement in the Fund's funding position.

As part of the valuation exercise, the Pension Fund's Funding Strategy Statement (FSS) is reviewed, to ensure that an appropriate funding strategy is in place. The FSS sets out the funding policies adopted, the actuarial assumptions used, and the time horizons considered for each category of employer. A consultation on the Fund's draft updated FSS was launched in December 2022 and closes on 31 January 2023.

2.6 LGPS Central Limited
The Fund is expected to transition the management of a large proportion of its investment assets to LGPS Central Limited (LGPSC), the operating company of the LGPS Central Pool (the Pool), over the next few years. The Fund has so far transitioned around 10% of its assets into LGPSC active products and a further 5% into an LGPSC enhanced passive product. By March 2024, the Fund is forecast to have transitioned around 40% of its assets into LGPSC products.

The performance of LGPSC's active funds against their benchmarks has been mixed since the company launched its first investment products in April 2018. There is a risk that the investment returns delivered by the company will not meet the investment return targets against the specified benchmarks.

The Fund continues to take a role in the development of LGPSC and has input into the design and development of the company's product offering to try to ensure that it will allow the Fund to implement its investment strategy. The company's manager selection process is scrutinised by the Pool's Partner Funds and the Fund will continue to carry out its own due diligence on selected managers as confidence is built in the company's manager selection skills.

The performance of LGPSC investment vehicles is monitored and reviewed jointly by the Partner Funds under the Investment Working Group (a sub-group of the Partner Funds' Practitioners' Advisory Forum) and by the Pool's Joint Committee.

The Fund is also likely to maintain a large exposure to passive investment vehicles in the long term which will reduce the risk of total portfolio underperformance against the benchmark.

2.7 McCloud Judgement
The McCloud case relates to transitional protections given to scheme members in the judges' and firefighters' schemes which were found to be unlawful by the Court of Appeal on the grounds of age discrimination. The Department for Levelling Up, Housing and Communities (DLUHC, formerly MHCLG) published its proposed remedy related to the McCloud judgement in July 2020.

The proposed remedy involves the extension of the current underpin protection given to certain older members of the Scheme when the LGPS benefit structure was reformed in 2014. The underpin will give eligible members the better of the 2014 Scheme CARE or 2008 final salary benefits for the eligible period of service.

The changes will be retrospective, which means that benefits for all qualifying leavers since 1 April 2014 will need to be reviewed to determine whether the extended underpin will produce a higher benefit. This will have a significant impact on the administration of the Scheme. Analysis by Hymans Robertson (the Fund's actuary) suggested that around 1.2m members of the LGPS, roughly equivalent to a quarter of all members, may be affected by the revised underpin. Locally it has been estimated that around 26,000 members of the Fund would likely fall into the scope of the proposed changes to the underpin.

An amendment included in the Public Service Pensions and Judicial Offices Act 2022 (received Royal Assent in March 2022), the enabling legislation for the implementation of the McCloud remedy, has subsequently increased the number of records that will need to be reviewed. It brought the LGPS into line with the other public service pension schemes by extending the scope of the McCloud remedy to include members who were not active on 31 March 2012 but who have LGPS membership before that date and returned within five years and meet all other qualifying criteria. The criteria for a disqualifying break in service was also relaxed.

The uncertainty caused by the McCloud judgement is reflected on the Risk Register under two separate risks for clarity, one under Funding & Investments and one under Administration, although the two risks are closely linked.

The risk score for the impact of the McCloud judgement on funding was reduced to 9 in October 2022 following confirmation of the treatment of the McCloud remedy in the March 2022 triennial valuation. The administration risk relates to the enormous challenge that will be faced by administering authorities and employers in backdating scheme changes over such a significant period and remains a high risk; this risk has been recognised by the LGPS Scheme Advisory Board.

Whilst the Fund already requires employers to submit information about changes in part-time hours and service breaks, the McCloud remedy may generate additional queries about changes since 1 April 2014; employers have, therefore, been asked to retain all relevant employee records. Information has also been requested from employers on the data supplied to the Fund since 2014 with respect to changes in part-time hours and service breaks.

Aquila Heywood has provided the Fund with McCloud related tools for testing on the Altair pension administration system which would be used to identify, and subsequently bulk load, any required additional service history. Aquila Heywood has also completed and released a number of further McCloud related developments although the delay in the release of full statutory guidance from DLUHC has caused a knock-on delay to the completion of all the required development work. A consultation on draft updated regulations to implement the McCloud remedy in the LGPS is expected to be launched in Q1 2023, with regulations expected to come into force on 1 October 2023.

A McCloud Project Board has been set up to formalise the governance of this major project. The Fund will continue to keep up to date with news related to the McCloud remedy from the Scheme Advisory Board, the Local Government Association, the Government Actuary's Department and the Fund's actuary and with the development of relevant tools by Aquila Heywood.

2.8 New & Removed Risks/Changes to Risk Scores/Updated Risk Narratives

No risks have been added to or removed from the Risk Register since it was last presented to Committee in October 2022 and there have been no changes to existing risk scores. The narratives for a number of risks have been updated with updates highlighted on the Risk Register in blue.

3. Implications

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

4. Background Papers

Papers held by the Pension Fund.

5. Appendices

5.1 Appendix 1 – Implications

5.2 Appendix 2 – Summary Risk Register

5.3 Appendix 3 – Main Risk Register

6. Recommendation(s)

That Committee notes the risk items identified in the Risk Register.

7. Reasons for Recommendation(s)

One of the roles of Committee is to receive and consider the Fund's Risk Register.

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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

Derbyshire Pension Fund Risk Register

Date Last Updated **09-Jan-23** Changes highlighted in blue font.

Objectives

The objectives of the Risk Register are to:

- identify key risks to the achievement of the Fund's objectives;
- consider the risk identified; and
- access the significance of the risks.

Risk Assessment

- Identified risks are assessed separately and assigned a risk score. The risk score reflects a combination of the risk occurring (probability) and the likely severity (financial impact).

- A low risk classification is based on a score of 4 or less; a medium risk score ranges between 5 and 11; and a high risk score is anything with a score of 12 and above.

- The Risk Register also includes the target score; showing the impact of the risk occurring once the planned risk mitigations and controls have been completed.

Risk Assessment	Impact	Probability
Level 1	Negligible	Rare
Level 2	Low	Unlikely
Level 3	Medium	Possible
Level 4	High	Probable
Level 5	Very High	Almost certain

Officer Risk Owners	
DoF	Director of Finance & ICT
HoP	Head of Pension Fund
TL	Team Leader
IM	Investments Manager

Summary of Risk Scores	
Low Risk	5
Medium Risk	39
High Risk	5
Total Risks	**49**

Risk Score	
0 - 4	Low Risk
5 - 11	Medium Risk
12 and above	High Risk

Summary of Risk Scores Greater Than Eight

Risk Ranking	Main Risk Register No	Identification: Risk Area	Identification: High Level Risk	Current score: Impact	Current score: Probability	Current score: Current Score	Target Score: Risk Owner	Target Score: Impact	Target Score: Probability	Target Score: Target Score	Target Score: Actual Minus Target Score
1	13	Governance & Strategy	Systems failure/Lack of disaster recovery plan/Cybercrimeattack	4	3	12	HoP/IM/TL	4	2	8	4
2	20	Funding & Investments	Fund assets insufficient to meet liabilities / Decline in funding level / Fluctuations in assets & liabilities	4	3	12	HoP/IM	4	2	8	4
3	31	Funding & Investments	LGPS Central related underperformance of investment returns - failure to meet investment return targets against specified benchmarks	4	3	12	HoP/IM	4	2	8	4
4	42	Pensions Administration	Insufficient cyber-Liability Insurance relating to the pensions administration system	4	3	12	HoP	4	2	8	4
5	46	Pensions Administration	Impact of McCloud judgement on administration	3	4	12	HoP	2	4	8	4
6	1	Governance & Strategy	Failure to implement an effective governance framework	5	2	10	DoF/HoP	5	1	5	5
7	2	Governance & Strategy	Failure to recruit and retain suitable Pension Fund staff/Over reliance on key staff	3	3	9	HoP	3	2	6	3
8	4	Governance & Strategy	Pensions & Investments Committee (PIC)/Pension Board (PB) members lack of understanding of their role & responsibilities leading to inappropriate decisions.	3	3	9	HoP	3	2	6	3
9	14	Governance & Strategy	Failure to comply with General Data Protection Regulations (GDPR)	3	3	9	HoP/IM/TL	3	2	6	3
10	15	Governance & Strategy	Failure to communicate with stakeholders	3	3	9	HoP/IM/TL	3	2	6	3
11	17	Governance & Strategy	Risk of challenge to Exit Credits Policy/Determinations	3	3	9	HoP	3	2	6	3
12	19	Governance & Strategy	Failure to meet accessibility requirements	3	3	9	HoP/TL	3	2	6	3
13	25	Funding & Investments	Covenant of new/existing employers. Risk of unpaid funding deficit	3	3	9	HoP/TL	3	2	6	3
14	30	Funding & Investments	LGPS Central Ltd fails to deliver the planned level of long term cost savings	3	3	9	HoP/IM	3	2	6	3
15	38	Funding & Investments	Impact of McCloud judgement on funding	3	3	9	HOP	3	3	9	0
16	41	Pension Administration	Insufficient controls relating to the governance of the pension administration system	3	3	9	HoP/TL	3	2	6	3
17	44	Pensions Administration	Delayed Annual Benefit Statements and/or Pension Savings Statements (also know as Annual Allowance Statements)	3	3	9	HoP/TL	3	2	6	3
18	3	Governance & Strategy	Failure to comply with regulatory requirements for governance	4	2	8	HoP	4	1	4	4
19	5	Governance & Strategy	An effective investment performance management framework is not in place	4	2	8	HoP/IM	4	2	8	0
20	10	Governance & Strategy	Pension Fund financial systems not accurately maintained	4	2	8	HoP	4	1	4	4
21	16	Governance & Strategy	Failure of internal/external suppliers to provide services to the Pension Fund due to business disruption	4	2	8	HoP/IM	4	2	8	0
22	18	Governance & Strategy	Risks arising from a potential significant acceleration of the academisation of schools.	2	4	8	HoP/TL	2	4	8	0
23	21	Funding & Investments	Mismatch between liability profile and asset allocation policy	4	2	8	HoP/IM	4	2	8	0
24	22	Funding & Investments	An inappropriate investment strategy is adopted/Investment strategy not consistent with Funding Strategy Statement/ Failure to implement adopted strategy and PIC recommendations	4	2	8	HoP/IM	4	2	8	0
25	23	Funding & Investments	Failure to correctly assess the potential impact of climate change on investment portfolio and on funding strategy	4	2	8	HoP/IM	4	2	8	0
26	24	Funding & Investments	Failure to consider the potential impact of Environmental, Social and Governance (ESG) issues on investment portfolio	4	2	8	HoP/IM	4	2	8	0
27	28	Funding & Investments	The LGPS Central investment offering is insufficient to allow the Fund to implement its agreed investment strategy	4	2	8	HoP/IM	4	1	4	4
28	29	Funding & Investments	The transition of the Fund's assets into LGPS Central's investment vehicles results in a loss of assets/and or excessive transition costs	4	2	8	HoP/IM	4	1	4	4
29	49	Pensions Administration	Administration issues with AVC provider	2	4	8	HOP/TLs	2	2	4	4

Risk Ranking	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
1	8	8	8	8	8	8	8	8	12	12	12
2	12	12	12	12	12	12	12	12	12	12	12
3	12	12	12	12	12	12	12	12	12	12	12
4	8	8	8	8	8	8	8	8	12	12	12
5	12	12	12	12	12	12	12	12	12	12	12
6	N/A	10	10	10	10	10	10	10	10	10	10
7	N/A	9	9	9	9	9	9	9	9	9	9
8	9	9	9	9	9	9	9	9	9	9	9
9	9	9	9	9	9	9	9	9	9	9	9
10	9	9	9	9	9	9	9	9	9	9	9
11	N/A	9	9	9	9	9	9	9	9	9	9
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	9	9
13	9	9	9	9	9	9	9	9	9	9	9
14	8	8	8	8	9	9	9	9	9	9	9
15	12	12	12	12	12	12	12	12	12	12	9
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	9	9
17	9	9	9	9	9	9	9	9	9	9	9
18	4	4	4	4	8	8	8	8	8	8	8
19	6	6	6	6	8	8	8	8	8	8	8
20	6	6	6	6	8	8	8	8	8	8	8
21	N/A	8	8	8	8	8	8	8	8	8	8
22	N/A	N/A	N/A	N/A	N/A	8	8	8	8	8	8
23	8	8	8	8	8	8	8	8	8	8	8
24	8	8	8	8	8	8	8	8	8	8	8
25	N/A	12	12	12	8	8	8	8	8	8	8
26	N/A	N/A	N/A	N/A	8	8	8	8	8	8	8
27	8	8	8	8	8	8	8	8	8	8	8
28	8	8	8	8	8	8	8	8	8	8	8
29	N/A	N/A	N/A	N/A	8	8	8	8	8	8	8

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Derbyshire Pension Fund Risk Register

Date Last Updated **09-Jan-23**

Changes highlighted in blue font.

Governance & Strategy

Risk Number	Description: High Level Risk	Description of risk and potential impact	Current score: Impact	Current score: Probability	Current score: Current Score	Risk Mitigation Controls & Procedures: Current	Risk Mitigation Controls & Procedures: Proposed	Risk Owner	Target Score: Impact	Target Score: Probability	Target Score: Target Score	Target Score: Actual Minus Target Score	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
1	Failure to implement an effective governance framework	Failure to provide effective leadership, direction, control and oversight of Derbyshire Pension Fund (DPF) leading to the risk of poor decision making/lack of decision making, investment underperformance, deterioration in service delivery and possible fines/sanctions/reputational damage . This risk could be amplified during a period of business disruption.	5	2	10	Derbyshire County Council (DCC) is the administering authority for the Pension Fund, responsible for managing and administering the Fund. Responsibility for the functions of the Council as the administering authority of DPF is delegated to the Pensions & Investments Committee (PIC). A Local Pension Board assists the Council with the governance and administration of the Fund (PB). Day to day management of the Fund is delegated to the Director of Finance & ICT (DoF) who is supported by the Head of Pension Fund (HOP) and in house investment and administration teams. The governance arrangements for the Fund are clearly set out in the Fund's Governance Policy and Compliance Statement which is reviewed each year. Both PIC & PB have detailed Terms of Reference. The Commissioning, Communities & Policy Scheme of Delegation sets out authorising levels for officers. The management team (POM) of the Pension Fund meets weekly and a Pension Fund Plan documents the ongoing workload of the Fund. A Pension Fund performance Dashboard has been developed to provide performance management information for POM; it is also reviewed on a quarterly basis by the Finance & ICT Management Team and at meetings of the Pension Board. A detailed Business Continuity Plan sets out the arrangements for maintaining the critical activities of the Fund during a period of business disruption. Arrangements have been developed to facilitate virtual PIC and virtual PB meetings for occasions when physical meetings are not possible. As part of DCC's Modern Ways of Working (MWW), the Fund has been allocated a Team Zone which will accomodate approximately 60% of the team on a daily basis. Following discussions with the Team, it has been agreed that staff will spend at least half of their working hours in the office to support the ongoing development of a cohesive team to efficiently deliver services to members and employers and to support both the structured and unstructured knowledge share/learning	The structure of the Pension Fund Team is being reviewed to enable it to support an agile, customer focussed operating model and to ensure appropriate management and stewardship of the Fund's investments assets, with the aim of providing development opportunities which will build the skills and resilience required for the future.	DOF/HoP	5	1	5	5	N/A	10	10	10	10	10	10	10	10	10	10
2	Failure to recruit and retain suitable Pension Fund staff/Over reliance on key staff.	Lack of planning, inadequate benefits package, remote location leads to failure to recruit and retain suitable investment and pension administration staff leading to the risk of inappropriate decision making, investment underperformance, deterioration in service delivery, over reliance on key staff and possible fines/sanctions/reputational damage. The risks related to over-reliance on key staff are amplied during a period of business disruption.	3	3	9	Knowledge sharing takes place through Pension Fund governance groups including: Pension Officer Managers (POM); Regulation Update Meeting (RUM); Data Management; and Performance & Backlog Management, targeted internal training sessions, team briefings, internal communications and My Plans. The Fund also works with the LGA to support the development of Fund training and utilizes Heywood's TEC online training facilities. A Pension Fund Plan is available to all members of POM and includes a brief summary of the main onoing and forecast activities of the Fund. The investment staffing structure was reviewed post the implemenation of investment pooling. Market supplements for the HOP and the IM were extended from December 2019. A new Assistant Fund Manager joined the Fund at the beginning of May 20. Following the lifting of Covid restrictions, members of the Fund's team are working flexibly (partly at home and partly in the office) and managers are in regular contact with their teams.	The Fund will continue to identify and meet staff training needs and will consider further staff rotation to increase resilience. The Pension Fund staffing structure is currently being reviewed (see above).	HoP	3	2	6	3	N/A	9	9	9	9	9	9	9	9	9	9
3	Failure to comply with regulatory requirements for governance	Failure to match-up to recommended best practice leads to reputational damage, loss of employer confidence or official sanction.	4	2	8	DPF maintains current PIC approved versions of: Administering Authority Discretions; Admission, Cessation & Bulk Transfer Policy; Communications Policy; Exit Credits Policy; Governance Policy & Compliance Statement, Funding Strategy Statement, Investment Strategy Statement, Pension Administration Strategy. Detailed Data Management Procedures in place together with procedures to deal with statutory breaches. Lessons learnt from any breaches discussed at relevant governance group. Governance framework includes PIC and Pension Board. Appointment of third party advisor and actuary. Annual Report and Accounts mapped to CIPFA guidance. Fund membership of LAPFF. Internal and External Audit. Member training programme.	Regular review / Maintainence of central log of governance policy statements for the whole Fund. Ensure lesssons learnt from any breaches are considered by appropriate governance group and any resulting changes in procedures are implemented.	HoP	4	1	4	4	4	4	4	4	8	8	8	8	8	8	8
4	PIC / Pension Board members lack of knowledge & understanding of their role & responsibilities leading to inappropriate decisions	Change of membership (particularly following elections), lack of adequate training, poor strategic advice from officers & external advisors leads to inappropriate decisions being taken.	3	3	9	Implementation of Member Training Programme including induction training for new members of PIC & PB / Attendance at LGA training program / Advice from Fund officers & external advisors. Annual issuance of skills self-assessment forms to members of PIC & PB. Subsequent training plan based on responses.	On-going roll out of Member Training Programme in line with CIPFA guidance. Training for 2023 will be based on responses to skills self-assessment questions issued to members of PIC & PB in Oct 22.	HoP	3	2	6	3	9	9	9	9	9	9	9	9	9	9	9
5	An effective investment performance management framework is not in place	Poor investment performance goes undetected / unresolved.	4	2	8	PIC training; external performance measurement is reported to committee on a quarterly basis; Pension Board oversight of the governance of investment matters; My Plan Reviews. Review of the Pension Fund performance Dashboard.		HoP/IM	4	2	8	0	6	6	6	6	8	8	8	8	8	8	8
6	An effective pensions administration performance management framework is not in place	Poor pensions administration performance / service goes undetected / unresolved.	3	2	6	PIC training; Half year pension administration KPI reporting in line with Disclosure Regulations reviewed by PIC and PB; My Plan Reviews. A Pension Fund performance Dashboard has been developed to provide performance management information for POM; it wii also be reviewed on a quarterly basis by the Finance & ICT Management Team and at meetings of the Pension Board.		HoP/TL	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
7	An effective PIC performance management framework is not in place	Poor PIC performance goes undetected / unresolved.	3	2	6	Defined Terms of Reference; PIC training ;Support from suitably qualified officers and external advisor; Monitoring of effectiveness of PIC by Pension Board. A Pension Fund performance Dashboard has been developed to provide performance management information for POM; it will also be reviewed on a quarterly basis by the Finance & ICT Management Team and at meetings of the Pension Board.	Training as above (Risk No. 4).	HoP/IM	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
8	Failure to identify and disclose conflicts of interest	Inappropriate decisions for personal gain.	3	1	3	Members' Declaration of Interests. Officer disclosure of personal dealing and hospitality.Investment Compliance incorporated into updated Investments Procedures & Compliance Manual. Fund Conflicts of Interest Policy (COI) approved by PIC in November 2020 and fully implemented.		HoP	3	1	3	0	3	3	3	3	3	3	3	3	3	3	3
9	Failure to identify and manage risk	Failure to prepare and maintain an appropriate risk register results in poor planning, financial loss and reputational damage.	3	2	6	Risk Register maintained, reviewed on a regular basis, discussed at formal and informal POMs and reported to PIC and to PB. Risk Register subject to annual 'deep dive' by the Pension Board.		HoP/IM	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6

Risk Number	Description: High Level Risk	Description of risk and potential impact	Current score: Impact	Probability	Current Score	Risk Mitigation Controls & Procedures: Current	Proposed	Risk Owner	Target Score: Impact	Probability	Target Score	Actual Minus Target Score	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
10	Pension Fund financial systems not accurately maintained	Increased risk of fraud, financial loss and reputational damage if financial systems are not accurately maintained.	4	2	8	Creation and documentation of Internal controls; internal/external audit; monthly key control account reconciliations; on-going training & CIPFA updates.	Development of Fund-wide Procedures Manual.	HoP	4	1	4	4	6	6	6	6	8	8	8	8	8	8	8
11	Pension Fund accounts not properly maintained	Unfavourable audit opinion, financial loss, loss of stakeholder confidence and reputational damage.	3	2	6	Compliance with SORP; Compliance with DCC internal procedures (e.g. accounts closedown process); Dedicated CIPFA qualified Pension Fund Accountant; Support from Technical Section; Internal Audit; External Audit.		DoF/HoP	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
12	Lack of robust procurement processes leads to poor supplier selection and legal challenge	Breach of Council Financial Regulations & reputational damage.	3	1	3	Database of external contracts maintained; Compliance with Financial Regulations; Procurement due diligence; Procurement advice; Quarterly review of contracts.		HoP	3	1	3	0	3	3	3	3	3	3	3	3	3	3	3
13	Systems failure / Lack of disaster recovery plan / Cybercrime attack	Service failure, loss of sensitive data, financial loss and reputational damage.	4	3	12	Robust system maintenance; Password restricted to IT systems; IGG Compliance; Business continuity plan. Fund's Data Management Procedures include a section on cyber crime/cyber risk. Mapping exercise commenced to map and document the Fund's data to ensure that it is understood where it is held, on what systems, how it is combined and how, and where, it moves.	Review of Cyber Security Arrangements/Policies. Data mapping exercise to be completed and risks to be assessed and reviewed. Review of the information security arrangements of 3rd party suppliers to the Fund to be undertaken.	HoP/IM/TL	4	2	8	4	8	8	8	8	8	8	8	8	12	12	12
14	Failure to comply with General Data Protection Regulations (GDPR)	Breaches in data security requirements could result in reputational damage and significant fines.	3	3	9	Privacy Notices and Memorandum of Understanding completed and published. GDPR requirements included in the Data Improvement Plan. Document Retention Schedule review completed (Oct 21); Pension Fund's updated information included in V6 of the Finance Retention Schedule published in Dec 21. The Fund's GDPR Working Group has been widened out to become a Data Management Working Group. Detailed Data Management Procedures have been developed, incorprating lessons learnt from previous data breaches, setting out: why the Fund needs to protect members' data; how the Fund should protect members' data; and what to do when things go wrong. The document includes pratical guidance for Fund officers to be applied in day to day working practices when processing personal data. Any data breaches are considered by the Fund's Data Management Group and any lessons learnt/required changes to procedures agreed. The procedures have been rolled out to all of the Team.	GDPR matters will be reviewed as part of the ongoing consideration of the Fund's Data Improvement Plan.	HoP/IM/TL	3	2	6	3	9	9	9	9	9	9	9	9	9	9	9
15	Failure to communicate with stakeholders	Employers being unaware of employer responsibilities could impact service levels to members or lead to statutory/data breaches. Employees being unaware of how the Fund is governed, the benefits of the scheme, how the Fund's assets are invested invested, the risk of breaching the annual pension savings allowance, the risk of pension scams and the importance of keeping contract details up to date could lead to disengagment between members and the Fund, financial impacts for members, and reputational damage to the Fund.	3	3	9	Communications Policy approved by PIC - April 2021. The Pension Administration Strategy (PAS) which sets out employer responsibilities is reviewed annually and highlighted to employers. For any material proposed changes to the PAS, employers will be consulted. Stakeholders receive information and guidance in line with best practice discussed at the national LGPS Comms Forum, delivered by a fully resourced, specialist team. The Pension Fund website and clear Pension Fund branding helps stakeholders to be clear about the role of the Fund. The Fund's member self-service system 'My Pension Online' went live in June 2021. It gives registered members access to their Derbyshire LGPS pension information and allows them to carry out future benefit calculations.	Increase registrations to My Pension Online enabling more members to gain access to their Derbyshire LGPS information to improve their general understanding and support them with pension planning.	HoP/IM/TL	3	2	6	3	9	9	9	9	9	9	9	9	9	9	9
16	Failure of internal/external suppliers to provide services to the Pension Fund due to business disruption.	The Pension Fund is reliant on other DCC Sections for: the provision and support of core IT; treasury management of Fund cash; CHAPs & VIM & Standard SAP BACs payments; pensioner payroll; and legal advice and administration support to PIC & PB. The Fund is reliant on external providers for: the pension administration system; provision of custodial services; hedging services; performance measurement and actuarial services. External fund managers are responsible for management of a large proportion of the Fund's assets on both a passive and an active basis. Business continuity failures experienced by any of these providers could have a material impact on the Fund.	4	2	8	The business continuity arrangements of all of these providers have been sought and received by the Pension Fund. During the COVID 19 outbreak, continuity arrangements worked well.	The Fund will keep up to date with the continuity arrangments of these providers and will continue to assess the risk of exposure to particular organisations/providers.	HoP/IM	4	2	8	0	N/A	8	8	8	8	8	8	8	8	8	8
17	Risk of challenge to Exit Credits Policy/Determinations.	Exit credit payments were introduced into the LGPS in April 2018. Amending legislation came into force on 20 March 2020 allowing administering authorities to exercise their discretion in determining the amount of any exit credit due having regard to certain listed factors plus 'any other relevant factors'. This discretion is open to wide interpretation and potential challenge from employers.	3	3	9	Legal and actuarial advice was sought in the forumulation of the Fund's Exit Credit Policy and has been sought to assist the Fund's first exit credit determination. The outcome of a recent judical review (published May 2021) on the LGPS Amendment Regulations 2020 has been considered.	The Fund will keep up to date with developments with respect to exit credits. Further legal and actuarial advice will be sought where necessary.	HoP	3	2	6	3	N/A	9	9	9	9	9	9	9	9	9	9
18	Risks arising from a potential significant acceleration of the academisation of schools.	Any further division of LGPS members into an increasingly wider pool of employers will increse pressure on: employer onboarding; collection of data & contributions; employer training; & actuarial matters. Also likely to lead to an increasing in the outsourcing of functins and services involveing LGPS members which in turn would lead to a further increase in the number of employers in the Fund. The evolving landscape of multi-academy trusts is alsp introducing increased administrative and funding challenges as academies move between trusts and trusts consolidate their academies into single LGPS funds.	2	4	8	The Fund has a robust effective procedure for admitting new academies to the Fund, treating them as individual participating employoers backed by robust administrative and actuarial arrangements; this helps to mitigate some of the issues that arise when academies move between trusts.	The Fund will continue to monitor local developments on academisation and the administrative resource required by the Fund to support any increase in participating employers. The funding implications of any academies consolidating in another LGPS fund will also be kept under review.	HoP/TL	2	4	8	0	N/A	N/A	N/A	N/A	N/A	8	8	8	8	8	8
19	Electronic Information delivered or made available in formats which fail to meet accessibility requirements.	The Fund is subject to the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018. Compliance with the regulations is monitored by the Central Digital and Data Office (CDDO). Failure to adhere to the regulations could result in breaches of the law and enforce action from the Equality and Human Rights Commission. Risk of complaints from scheme members and other stakeholders about the accessibility of electronic information. Publication of a decision by CDDO confirming failure to meet accessibility standards would be reputationally damaging.	3	3	9	Regular liaison with specialist Digital Communications colleagues within DCC towards ensuring that the Fund's electronic platforms are accessible to as many people as possible, whatever their individual needs are. Use of web accessibility testing software from Silktide, a specialist provider. The Fund's website and My Pension Online both include an accessibility statement.	Regular reviews of accessibility issues on the Fund's electronic platforms via internal checks and use of Silktide software, and continued liaison with specialist colleagues. Feedback to Aquila Heywood (AH) of any accessibility issues with AH content on My Pension Online.	HoP/TL	3	2	6	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	9	9

Funding & Investments

Risk Number	Description		Current score			Risk Mitigation Controls & Procedures			Target Score				Trend Scores										
	High Level Risk	Description of risk and potential impact	Impact	Probability	Current Score	Current	Proposed	Risk Owner	Impact	Probability	Target Score	Actual Minus Target Score	Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
20	Fund assets insufficient to meet liabilities / Decline in funding level / Fluctuations in assets & liabilities	Objectives not defined, agreed, monitored and outcomes reported / Incorrect assumptions used for assessing liabilities / Investment performance fails to achieve expected target / Changes in membership numbers / VR & VER leading to structural problems in Fund / Demographic changes / Changes in pension rules and regulations (e.g. auto-enrolment and Freedom & choice). These factors could contribute to a decline in the funding level of the Fund and result in employers (funded in the majority of cases by taxpayers) needing to make increased contributions to the Fund.	4	3	12	Actuarial valuations and determination of actuarial assumptions; Funding Strategy Statement; Setting of contribution rates; Regular review of the Investment Strategy Statement (ISS) and the Strategic Asset Allocation Benchmark; Quarterly reviews of tactical asset allocation; Due diligence on new investment managers; Monitoring of investment managers' performance; Maintenance of key policies on ill health retirements; early retirements etc.	Continued implementation of the Fund's Strategic Asset Allocation Benchmark which aims to reduce investment risk following the improvement in the Fund's funding level.	HoP/IM	4	2	8	4	12	12	12	12	12	12	12	12	12	12	12
21	Mismatch between liability profile and asset allocation policy	Inaccurate forecast of liabilities / inappropriate Strategy leading to cashflow problems.	4	2	8	Actuarial reviews; Funding Strategy Statements; Annual funding assessment; Review by PIC; ISS ; Asset allocation reviews; Cash flow forecasting.	The Fund's actuary is due to undertake a cashflow foreasting exercise for the Fund alongside the work on the 2022 actuarial valuation.	HoP/IM	4	2	8	0	8	8	8	8	8	8	8	8	8	8	8
22	An inappropriate investment strategy is adopted / Investment strategy not consistent with Funding Strategy Statement /Failure to implement adopted strategy and PIC recommendations	Failure to set appropriate investment strategy / monitor application of investment strategy leading to possible impact on the funding level/investment underperformance/reputational damage.	4	2	8	The ISS, which includes the Fund's Strategic Asset Allocation Benchmark is formulated in line with LGPS Regulations and takes into account the Fund's liabilities/information from the Fund's actuary/advice from the Fund's external investment adviser. The ISS was approved by PIC in November 2020 following consultation with the Fund's stakeholders. A separate RI Framework and a separate Climate Strategy were also approved by PIC in November 2020 following consultation with the Fund's stakeholders. Quarterly review of asset allocation strategy by PIC with PIC receiving advice from Fund officers and external investment adviser.		HoP/IM	4	2	8	0	8	8	8	8	8	8	8	8	8	8	8
23	Failure to correctly assess the potential impact of climate change on investment portfolio and on funding strategy.	Failure to correctly assess potential financially material climate change risks when setting the investment and the funding strategy leading to possible impact on the funding level/investment underperformance/reputational damage. The outcome for global warming and the transition to net-zero is highly uncertain. Climate scenario analysis is a relatively new discipline and caution is required when using the output of such analysis to inform strategic asset allocation and funding decisions.	4	2	8	Inaugural Climate Risk Report received from LGPS Central Ltd (LGPSC)in February 2020, included carbon metrics data and climate scenario analysis. Taskforce on Climate-related Financial Disclosures (TCFD) report developed to set out the Fund's approach to managing climate related risks and opportunities, structured round: governance; strategy; risk management; and metrics and targets. Inaugural climate Risk Report and TCFD report presented to PIC in March 2020. Climate scenarios analysis carried out as part of contribution rate modelling by the Fund's actuary as part of the triennial valuation process. Climate Strategy setting out the Fund's approach to addressing the risks and opportunities related to climate change forumulated and approved by PIC in Nov 20 following consultation with stakeholders. The first phase of the transitions to the increased allocation to Global Sustainable Equities took place in January 2021 and the second phase began in in January 2022 and is ongoing. The transitions support the delivery of the targets included in the Climate Strategy. A measured approach has been taken to the interpetation of climate related data and the setting of climate related targets recognising the relative immaturity of much of the data and the need to monitor the impact of significant transitions on portfolio performance and risk. The 2022 Climate Risk Report from LGPSC showed that the Fund had reduced the the carbon footprint of the listed equity portfolio by 44% relative to the weighted benchmark in 2020 (target reduction of 30% by end of 2025) and had invested 27% of the Fund portfolio in low carbon & sustainable investments (target 30% by end of 2025); 29% including commitments. Updated TCFD reports were published in December 2021 and January 2023.	The second phase of the transitions to increase the allocation to Global Sustainable Equities is expected to be completed by the end of Q1 2023, subject to market conditions and the availability of suitable products. The carbon footprint & the low carbon and sustainable investment targets will be reviewed in 2023. The Fund will receive an annual Climate Risk Report from LGPS Central Ltd and will update its TCFD report on an annual basis. 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.	HoP/IM	4	2	8	0	N/A	12	12	12	8	8	8	8	8	8	8
24	Failure to consider the potential impact of Environmental, Social and Governance (ESG) issues on investment portfolio.	Failure to consider financially material ESG risks when making investment decisions leading to possible investment underperformance/reputational damage.	4	2	8	Actuarial reviews; Funding Strategy Statements; Annual funding assessment; Review by PIC; ISS ; Asset allocation reviews; Cash flow forecasting.	Develop an application for acceptance by the Financial Report Council as a signatory of the UK Stewardship Code (2020).	HoP/IM	4	2	8	0	N/A	N/A	N/A	N/A	8	8	8	8	8	8	8
25	Covenant of new/existing employers. Risk of unpaid funding deficit.	Failure to agree, review and renew employer guarantees and bonds/ risk of wind-up or cessation of scheme employer with an unpaid funding deficit which would then fall on other employers in the Fund. This risk could be amplified during a period of widespread business disruption/extreme market volatility. Failure to correctly assess covenant/put in place appropriate security as part of any debt spreading arrangement/Deferred Debt Agreement could increase the risk of an unpaid funding deficit falling on the other employers in the Fund.	3	3	9	Employer database holds employer details, including bond review dates. The information on the database is subject to ongoing review. Commenced contacting existing employer where bond or guarantor arrangement has lapsed, to renew arrangements. Four members of the team have attended employer covenant training and the Fund has liaised closely with other LGPS on this matter. An Employer Risk Management Framework has been developed and Health Check questionnaires were initially issued to all Tier 3 employers (those employers that do not benefit from local or national tax payer backing or do not have a full guarantee or other pass-through arrangement) in May 2019 and updated Covenant questionaires have been issued to Admission Bodies in June 2022.	Processes are being developed to ensure that new contractors are aware of potential LGPS costs at an early stage. The Employer Risk Management Framework will continue to be developed. Analysis will continue to be carried out on the information received via the completed Health Check/Covenant Questionnaires and outstanding information will continue to be sought from relevant employers. Employers who are close to cessation will be monitored and discussions with the Fund's Actuary will take place to determine if any further risk mitigation measures are necessary with respect to the relevant employers. Robust procedures will be developed to consider any requests for the Fund to enter into debt spreading arrangements /Deferred Debt Agreements. Covenant, actuarial and legal considerations will be taken into consideration in any decisions regarding debt spreading arrrangements/Deferred Debt Agreements and appropriate security will be obtained where necessary.	HoP/TL	3	2	6	3	9	9	9	9	9	9	9	9	9	9	9
26	Unaffordable rise in employers' contributions	Employer contribution rates could be unacceptable/unaffordable to employers leading to non-payment/delayed payment of contributions.	3	2	6	Consideration of employer covenant strength / scope for flexibility in actuarial proposals. The circumstances which the Fund would consider as potential triggers for a review of contribution rates between actuarial valuations are included in the Pension Fund's Funding Strategy Statement. The Fund's approach to employer flexibilities on cessation i.e. the potential for cessation debt to be spread over an agreed period (subject to certain conditions) as an exception to the default position of cessation debt being paid in full as a single lump sum and the potential for the Fund to enter into a Deferred Debt Agreement where a ceasing employer is continuing in business (subject to certain conditions), are set out in the Fund's Admission, Cessation & Bulk Transfer Policy (approved by PIC Dec 22).		HoP/TL	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6

Risk Number	Description: High Level Risk	Description of risk and potential impact	Current score: Impact	Probability	Current Score	Risk Mitigation Controls & Procedures: Current	Proposed	Risk Owner	Target Score: Impact	Probability	Target Score	Actual Minus Target Score	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
27	Employer contributions not received and accounted for on time	Late information and/or contributions from employers could lead to issues with completing the year end accounts, satisfying audit requirements, breaches of regulations, and, in extreme cases, could affect the Fund's cashflow. This risk could be amplified during a period of widespread business disruption.	3	2	6	The Fund ensures that employers are clearly and promptly informed about their contribution rates. Monitoring of the provision of employer information and the payment of contributions takes place within Pensions Section and performance is monitored by POM and disclosed in the half yearly pensions administration performance report to PIC & PB. The Fund has developed a late payment charging policy.	Late payment charges applied to underperforming employers will be disclosed via PIC Reports and Employer Newsletters.	HoP/TL	3	1	3	3	3	9	9	9	9	9	6	6	6	6	6
28	The LGPS Central Ltd investment offering is insufficient to allow the Fund to implement its agreed investment strategy	Failure to provide sufficient and appropriate product categories results in inability to deliver investment strategy and increases the risk of investment underperformance.	4	2	8	Continue to take a meaningful role in the development of LGPS Central; On-going HoP/IM involvement design and development of the LGPS Central product offering and mapping to the Fund's investment strategy; Participation in key committees including PAF, Shareholders' Forum and Joint Committee.	LGPS Central Partner Funds have agreed their priorities for determining the timetable for sub-fund launches: Projected level of cost savings; LGPSC/Partner Fund resource; Asset allocation/investment strategy changes; Number of parties to benefit; Net performance; Ensuring every Partner Fund has some savings; Risk of status quo & surfacing opportunities. Ensure the priorities are regularly assessed and applied.	HoP/IM	4	1	4	4	8	8	8	8	8	8	8	8	8	8	8
29	The transition of the Fund's assets into LGPS Central Ltd.'s investment vehicles results in a loss of assets and/or avoidable or excessive transition costs	Failure to fully reconcile the unitisation of the Fund's assets and charge through of transition costs could have a financial impact on the Fund.	4	2	8	Reconcile the transition of the Fund's assets into each collective investment vehicle, including second review and sign-off. All costs and charges reconciled back to the agreed cost sharing principles. All transition costs to be signed off by HoP.	Obtain robust forecasts of transition cost as part of business case for transitioning into an LGPSC sub-fund. Continue to update control procedures now that LGPS Central has been launched and reporting structures have been established. Continue to take a meaningful role in PAF and support the Chair and Vice-Chair of the PIC to enable them to participate fully in the Joint Committee.	HoP/IM	4	1	4	4	8	8	8	8	8	8	8	8	8	8	8
30	LGPS Central Ltd fails to deliver the planned level of long term cost savings	LGPS Central Ltd fails to deliver the planned level of cost savings either through transition delays, poor management of its cost base or failure to launch appropriate products at the right price could delay the point at which the Fund breaks even (with costs savings outweighing the costs of setting up and running the company).	3	3	9	Review and challenge annual budget and changes to key assumptions; Review, challenge and validate LGPS Central product business cases; Reconcile charged costs to the agreed cost sharing principles; Terms of Reference agreed for PAF, Shareholders Forum and Joint Committee. The DOF & ICT will represent DCC on the Shareholders' Forum with delegated authority to make decisions on any matter which required a decision by the shareholders of LGPC Central Ltd. A new simplified Cost Savings Model has been developed for the LGPS Central Pool which will enable actual and forecast savings to be monitored more easily and on a more regular basis. The Cost Savings Model is accompanied by a detailed Guidance Note which provides assurance on the derivation of the model's inputs and outputs.	Continue to take a meaningful role in PAF. Support the Chair of the PIC to enable full participation in the Joint Committee.	HoP/IM	3	2	6	3	8	8	8	8	9	9	9	9	9	9	9
31	LGPS Central Ltd related underperformance of investment returns	LGPS Central Ltd related underperformance of investment returns against targets could lead to the Fund failing to meet its investment return targets.	4	3	12	Continuing to take a meaningful role in the development of LGPS Central Ltd; On-going HoP/IM involvement in design and development of the LGPS Central Ltd product offering and mapping to the Fund's investment strategy; Quarterly performance monitoring reviews by DPF and half yearly by Joint Committee. Monitor and challenge LGPS Central product development, including manager selection process, through the Joint Committee and PAF/IWG participation. Initially carry out due diligence on selection managers internally as confidence is built in the manager selection skills of the company.	Ensure the Partner Funds priorities for determining the sub-fund launch timetable listed under 28. are regularly assessed and applied. Hold LGPS Central Ltd to account for the investment performance of its products. Investigate alternative options if any underperformance is not addressed.	HoP/IM	4	2	8	4	12	12	12	12	12	12	12	12	12	12	12
32	The UK's withdrawal from the EU results in high levels of market volatility or regulatory changes	Failure to identify and mitigate key risks caused by outcome of the UK's decision to withdrawal from the EU.	3	2	6	Continual monitoring of asset allocation and performance by investment staff and quarterly monitoring by PIC. Keep up to date with developments with respect to the UK's relationship with the EU and the implications for the Fund's investment strategy. There are no proposed or imminent amendments to proposed LGPS Investment Pooling as a result of the UK's withdrawl from the EU.	Monitor regulatory changes, and continually monitor asset allocation.	HoP/IM	3	2	6	0	9	9	9	9	6	6	6	6	6	6	6
33	Failure to maintain liquidity in order to meet projected cash flows	Failure to maintain sufficient liquidity to meet projected cashflows, due to either poor cashflow forecasting or the failure of counterparties to make timely repayments, which could lead to financial loss from the inappropriate sale of assets to generate cash flow and/or lead to reputational damage. The risk is amplified during periods of market volatility/dislocation.	3	2	6	The Fund carries out internal cash flow forecasting and works closely with DCC's Senior Accountant Treasury Management who manages the Fund's cash balances.	The Fund's actuary is due to undertake a cashflow foreasting exercise for the Fund. DPF Investment Manager to have monthly catch ups with DCC's Treasury Management Accountant.	HoP/IM	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
34	The introduction of The Markets in Financial Instruments Directive II (MiFID II) in January 2018 results in the investment status of the Fund being downgraded	Fund being unable to access a full range of investment opportunities and assets being sold at less than fair value should an external investment manager not opt-up the Fund to professional status.	4	1	4	Opt-up process complete; no issues identified.	Monitor ability to maintain opt-up status.	HoP/IM	4	1	4	0	4	4	4	4	4	4	4	4	4	4	4
35	Inadequate delivery and reporting of performance by internal & external investment managers	Could lead to expected investment returns not being achieved.	3	2	6	Rigorous manager selection; Quarterly PIC performance monitoring; Asset class performance reported to PIC; Internal Investments Manager performance reviewed by HoP; My Plan reviews.	Updating the Investment Compliance Manual & Procedures Manual.	HoP/IM	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
36	Investments made in complex inappropriate products and or unauthorised deals	Could lead to loss of investment return/assets.	4	1	4	Clear mandate for internal and external Investment Managers; Compliance Manual; HoP signs off all new investment; PIC approval required for unquoted investments in excess of £25m; PIC quarterly reports; On-going staff training and CPD; My Plans.	Updating Investment Compliance Manual & Procedures Manual	HoP/IM	4	1	4	0	4	4	4	4	4	4	4	4	4	4	4
37	Custody arrangements are insufficient to safeguard the Funds investment assets	Could lead to loss of investment return/assets.	4	1	4	Use of reputable custodian. Regular internal reconciliations to check custodian records / Regular review of performance / Periodic procurement exercises.		HoP/IM	4	1	4	0	4	4	4	4	4	4	4	4	4	4	4

Risk Number	Description: High Level Risk	Description of risk and potential impact	Current score: Impact	Probability	Current Score	Risk Mitigation Controls & Procedures: Current	Proposed	Risk Owner	Target Score: Impact	Probability	Target Score	Actual Minus Target Score	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
38	Impact of McCloud judgement on funding	The proposed McCloud remedy involves the extension of the current underpin protection given to certain older members of the Scheme when the LGPS benefit structure was reformed in 2014. It removes the condition that requires a member to have been within ten years of their 2008 Scheme normal pension age on 1 Apr 2012 to be eligible for underpin protection. It is proposed that the McCloud remedy will be backdated to the commencement of transitional protections (April 2014). It is also proposed that underpin protection will apply where a members leaves with either a deferred or an immediate entitlement to a pension (previously it was just immediate). The underpin will give the member the better of the 2014 Scheme CARE or 2008 final salary benefits for the eligble period of service (between 1 Apil 14 and 31 March 2022).All leavers since 2014 will need to be checked against the new underpin. LGPS regulations to implement the remedy are expected to be laid in 2022 and expected to come into force in late 2023. There is, therefore, uncertainty regarding the level of benefits earned by members from 1st April 14 to 31st March 2022. The Government Actuary's Department (GAD) has estimated that the cost of implementing the McCloud remedy for the LGPS over the next several decades will be £1.8bn (down from an intital estimate of £2.5bn). The ultimate cost of the McCloud remedy will depend on confirmation of the proposed remedy and the future path of pay growth/promotion. The funding risk relates to the risk of there being insufficient assets within the Fund to meet the increased liabilities. In the short term, the impact of this uncertainty is greatest for exit payments and credits as at a cessation event, the cost of benefits is crystallised.	3	3	9	Keeping up to date with news from the Scheme Advisory Board, the LGA, the Government Actuary's Department and the Fund's Actuary. The Actuary made an estimate of the potential impact of the judgement on the Fund's liabilities reflecting the Fund's local assumptions, particularly salary increases and withdrawal rates. The estimate as it applied to Derbyshire Pension Fund was that total liabilities (i.e. the increase in active members' liabilities expressed in terms of the employer's total membership) could be around 0.5% higher (as at 31 March 2020), an increase of approximately £31.1m. The impact on employers' funding arrangements will likely be dampened by the funding arrangements they have in place. A paper was procured from the Fund's actuary to inform a discussion on the how the Fund should allow for McCloud in funding decisions. In line with advice issued by SAB, the 2019 valuation calculations were based on the current benefit structure. No allowance was made for the possible outcome of the cost cap mechanism or the McCloud case, although an extra level of prudence was introduced in the setting of employer contribution rates to allow for the potential impact of the McCloud case. This was clearly communicated to employers in the 2019 valuation letters.	The Fund's actuary will follow the March 22 guidance from DLUHC on how the McCloud remedy should be allowed for when valuing past service liabiilities and setting employer contribution rates at the March 22 triennial valuation. Contribution rates may need to be revisited once the McCloud/cost cap uncertainty is resolved.	HOP	3	3	9	0	12	12	12	12	12	12	12	12	12	12	9
Pensions Administration																							
39	Failure to adhere to HMRC / LGPS regulations and reflect changes therein	LGPS benefits calculated and paid inaccurately and/or late leading to possible fines/reputational damage.	3	2	6	Management processes, calculation checking, dedicated technical and training resource, working with the LGA and other Pension Funds regarding accurate interpretation of legislation, implemented more robust pensions administration system in March 19.	Consider additional sources of technical resource.	HoP	3	1	3	3	6	6	6	6	6	6	6	6	6	6	6
40	Failure of pensions administration systems to meet service requirements/information not provided to stakeholders as required	Replacement pensions administration system leads to implementation related work backlogs, diminished performance and complaints.	3	2	6	The Altair system has achieved 'Business as Usual' status. SLAs are in place with the provider as well an established fault reporting system, regular client manager meetings and a thriving User Group (CLASS). The provider has a robust business continuity plan.	Ensure the company's Business Continuity Plan is subject to regular review and continue to take an active part in the CLASS user group.	HoP/TL	3	1	3	3	9	6	6	6	6	6	6	6	6	6	6
41	Insufficient controls relating to the governance of pension administration system	Risk that insufficient controls relating to the governance of the pension administration system undermines confidence in the integrity of the system and increases the opportunity for erroneous transactions.	3	3	9	To access Altair, the pensions administration system, a user needs to be set up on PingOne and also on Altair, both require the user to successfully log on with a password. Monthly reports are run to monitor access to Altair, and any suspicious logons would be investigated. The same access controls are applied to the test environment. If a team member leaves the authority, access is removed promptly. On receipt of a new release of Altair the Fund completes rigorous testing of any updated calculations and new functionality detailed in the relevant Altair Release Guide. The Fund also regression test a varied sample of calculations. This testing is completed in the test environment prior to any update into the live environment. If any part of the release is deemed unsatisfactory then the update to live will not be authorised. In some exceptional circumstances, it is necessary to create a test record in the live system to provide additional assurance and to support the efficient and accrurate delivery of the service. Any test record is documented on a spreadsheet and deleted at the earliest opportunity. Data from any test records is deleted from performance information. Procedures have been developed to strengthen the controls related to the creation and use of test records in the live environment. A review of user profiles has been undertaken, with member copy functionality removed where appropriate. On an annual basis the Fund completes a year end exercise for active members which checks the data reasonableness in comparison to the previous year, and also identifies any records which have not had any pay or contributions posted for the current year. These records are referred back to the employer for further investigation.	Procedures will be developed to strengthen the controls related to the creation and use of test records in the live system. The number of test records in the live system will be limited to one which will be clearly documented and its test status will be easily idenfitiable. Only certain documented members of the team will be able to edit this record. In addition, a review of user profiles will be completed to access whether roles need 'member copy' functionality. User roles will be amended accordingly following the review.	HoP/TL	3	2	6	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	9	9
42	Insufficient cyber-liability insurance relating to the pensions administration system	The contract with the system supplier limits a cyber liability claim to a specified amount, unless a claim is based on an event caused by the contractor performing its services in a negligent manner. A catastrophic breach where scheme members' data is used fraudulently could lead to a claim in excess of the insurance cover.	4	3	12	DCC Internal Audit has carried out detailed testing of the supplier's data security arrangements. Liability cover in place via the supplier and separately the Pension Fund is included in DCC's self-insurance arrangements with respect to managing cyber security risks. The supplier is required to carry £5m of professional indemnity insurance as part of the contract.	Ongoing feedback to the new supplier on the level of supplier liability insurance. Further enhancement of procedures to protect against cyber risk.	HoP	4	2	8	4	8	8	8	8	8	8	8	8	12	12	12
43	Data quality inadequate	Incorrect benefit calculations, inaccurate information for funding purposes leading to possible complaints/ fines/reputation damage/uninformed decision making.	3	2	6	Apply current and short term measures in the Data Improvement Plan. A Data Management Working Group has been formed, and Terms of Reference agreed, with responsibility for the ongoing consideration and implementation of the Data Improvement Plan.	Continue to cleanse data; implement longer term measures in the Data Improvement Plan. Maintain regular meetings of the Data Management Group.	TL	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6
44	Delayed Annual Benefit Statements and/or Pension Savings Statements (also know as Annual Allowance Statements)	Risk of complaints,TPR fines or other sanctions/reputational damaged caused by delays in issuing Annual Benefit Statements/Pensions Savings Statement. Possible delays caused by late employer returns, systems bulk processing issues, administration backlogs, and the roll-out of the member-self service system 'My Pension Online' (MPO).	3	3	9	Improved processes, clear messages to support employers to provide prompt accurate information, more efficient processing of ABSs on replacement system, exercise to trace addresses for missing deferred beneficiaries. Robust roll out plan for member self service system and back up plans in place for printing paper ABSs.	Continue work with employers to ensure better data quality, complete address checking exercise and reduce additional backlogs caused by migration. Improve process for identifying non-standard cases of annual pension savings breaches. Achieve MPO roll out targets.	HoP/TL	3	2	6	3	9	9	9	9	9	9	9	9	9	9	9
45	Insufficient technical knowledge	Failure to develop, train suitably knowledgeable staff leading to risk of negative impact on service delivery and risk of fines/sanctions together with risk of reputational damage.	3	2	6	Updates from LGA/LGPC, quarterly EMPOG meetings/on-site training events. The Fund has procured an additional service from the provider of the new pension administration system which provides flexible learning on demand.	Skills gap audit / formal training programme / Staff Development group/My Plan reviews.	HoP	3	2	6	0	6	6	6	6	6	6	6	6	6	6	6

Risk Number	Description: High Level Risk	Description of risk and potential impact	Current score: Impact	Probability	Current Score	Risk Mitigation Controls & Procedures: Current	Proposed	Risk Owner	Target Score: Impact	Probability	Target Score	Actual Minus Target Score
46	Impact of McCloud judgement on administration	The LGPS SAB recognises the enormous challenge that could be faced by administering authorities and employers in potentially backdating scheme changes over a significant period. A full history of part time hour changes and service break information from 1st Apr 14 will be needed in order to recreate final salary service. Implementation of the remedy could divert Fund resources and affect service deliivery levels. See Risk No. 37 for further information on the McCloud judgement.	3	4	12	Keeping up to date with news from the Scheme Advisory Board, the LGA, the Government Actuary's Department and the Fund's Actuary. Liasing with the provider of the Fund's pension administration system as they develop their bulk processes for implementing the McCloud remedy. Although the Fund has continued to require employers to submit information about changes in part-time hours and service breaks, the McCloud remedy may generate additional queries about changes since 1 Apr 14; employers have, therefore, been asked to retain all relevant employee records. A McCloud Project Team has been set up with initial workstreams of: governance; case identification; staffing/resources; & communications. The Fund has identified the likely members in scope of the proposed remedy. A response to the MHCLG (now DLUHC) consultation on Amendements to the Statutory Underpin was submitted by the Fund. Tools have been provided by Aquila Heywood for testing on Altair which would be used to identify and subsequently bulk load any required additional service history.	Formulate a detailed plan of how to deal with the scheme changes as soon as they are confirmed and it is clear what bulk processes developed by the provider of the pension administration system will be utilized.	HoP	2	4	8	4
47	Lack of two factor authentication for Member Self Service	The Fund is implementing a member self-service solution (MSS) to improve the quality and efficiency of the service it provides to its members. MSS will allow members to view certain parts of their pension information (including Annual Benefit Statements), to undertake a restricted number of data amendments and to carry out benefit projections on-line. The member self-service solution provided by Aquila Heywood does not currently utilise a two-factor authentication method.	3	2	6	Robust registration and log-on procedures have been developed which have been approved by the Council's Information Governance Group (IGG). A further report on the setting of security questions has been taken to IGG for noting.	The Fund will continue to encourage Aquila Heywood to introduced two factor authentication for MSS (it has been introduced for the core Altair product).	HoP/TLs	3	2	6	0
48	Implications of Goodwin ruling.	Following the Walker v Innospec Supreme Court ruling, the government decided that in public service schemes, surviving male same-sex and female same-sex spouses and civil partners of public service pension scheme members will, in certain cases, receive benefits equivalent to those received by widows of opposite sex marriages. A recent case brought in the Employment Tribunal (Goodwin) against the Secretary of State for Education highlighted that these changes may lead to direct sexual orientation discrimination within the Teachers' Pension Scheme, where male survivors of female scheme members remain entitled to a lower survivor benefit than a comparable same-sex survivor. The government concluded that changes are required to the TPS to address the discrimination and believes that this difference in treatment will also need to be remedied in those other public service pension schemes, where the husband or male civil partner or a female scheme member is in similar circumstances. A consultation will take place on the required regulatory changes for the LGPS. It is expected that the fund will need to investigate the cases of affected members, going back as far as 5 December 2005 when civil partnerships were introduced which will provide administration challenges.	2	3	6	The Fund is keeping up to date with developments on the implications of this ruling for the LGPS.	Further mitigating controls/procedures will be developed when more is known about this recently emerged risk.	HoP/TLs	2	3	6	0
49	Administration issues with AVC provider.	Following the implementation of a new system, the Fund's AVC provider, Prudential, has experienced delays in processing contributions, providing valuations and paying out claims which could lead to knock-on delays for the Fund in processing members' retirements. There is also a risk of associated reputational damage for the Fund which has appointed Prudential as its AVC provider.	2	4	8	The Fund is in regular correspondence with Prudential regarding the outstanding issues and is working with the company to try to ensure that any issues which could delay members' retirement dates are dealt with first. This matter is also on the agenda of the officer group of local LGPS funds' (EMPOG).	The Fund will continue to work closely with Prudential to support the resolution of outstanding issues.	HoP/TLs	2	2	4	4

Risk Number	Trend Scores: Q1 20-21	Q2 20-21	Q3 20-21	Q4 20-21	Q1 21-22	Q2 21-22	Q3 21-22	Q4 21-22	Q1 22-23	Q2 22-23	Q3 22-23
46	12	12	12	12	12	12	12	12	12	12	12
47	N/A	N/A	6	6	6	6	6	6	6	6	6
48	N/A	N/A	6	6	6	6	6	6	6	6	6
49	N/A	N/A	N/A	N/A	8	8	8	8	8	8	8

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