

## **CLIMATE CHANGE AND CARBON FOOTPRINT**

Report of the Director of Finance and Public Value

Please note that the following recommendations are subject to consideration and determination by the Committee before taking effect.

Recommendation: (1) that the Committee notes the climate scenario analysis and the anticipated future requirements of the Taskforce for Climate-related Financial Disclosures (TCFD)  
(2) that the Committee notes the results of the carbon footprint analysis undertaken as at 31 December 2021 and progress against targets.  
(3) that the Committee consider any feedback they would like to provide at this stage to the Brunel climate change policy review.

~~~~~

### **1. Introduction**

- 1.1 Climate change continues to be a significant concern nationally and internationally. Locally, Devon County Council has declared a climate emergency and continues to be lobbied to do more. The Devon Pension Fund believes climate change poses significant risks to global financial stability and could thereby create climate-related financial risks to the Fund's investments, unless action is taken to mitigate these risks.
- 1.2 The Investment and Pension Fund Committee's policies on the climate change impact of its investments include the following commitments:
- That its portfolio of investments will be net-zero by 2050 at the latest.
  - That the Weighted Average Carbon Intensity (WACI) of the Fund's investments will be reduced by a minimum of 7% per annum, and by between 50-75% by 2030, based on the March 2019 calculation of the WACI.
  - That 5% of the Fund will be invested in renewable energy infrastructure by 2025.
  - To review these policies in partnership with Brunel during 2022 with a view to the Committee approving a revised policy in early 2023.
- 1.3 In the near future it is expected that the Fund will need to report annually in line with the requirements of the Taskforce for Climate-related Financial Disclosures (TCFD). This report outlines the expected timeframes around that requirement.

1.4 A key element towards achieving the net zero target will be continued monitoring of the Fund's carbon footprint and exposure to extractive industry and potential stranded assets. A full analysis of the Fund's carbon footprint is carried out on an annual basis, and this report provides details of the assessment as at 31 December 2021.

## **2. Taskforce for Climate-related Financial Disclosures (TCFD)**

2.1 The Task Force on Climate-Related Financial Disclosures (TCFD) was created in 2015 by the international Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures for use by companies, banks, and investors in providing information to stakeholders.

2.2 Increasing the amount of reliable information on financial institutions' exposure to climate-related risks and opportunities aims to strengthen the stability of the financial system, contribute to greater understanding of climate risks and facilitate financing the transition to a more stable and sustainable economy.

2.3 The UK Government has already enacted legislation to implement mandatory TCFD-aligned disclosures across the private sector, but the requirements do not currently apply to LGPS funds. It is anticipated that the Department of Levelling Up, Housing and Communities (DLUHC) will be issuing a consultation by the end of the Summer on how TCFD requirements will be built into the LGPS regulations.

2.4 The reporting that the Fund already does on its climate change policies and carbon footprint will form a key part of meeting the TCFD requirements. We will need to wait for the consultation for the precise detail around what disclosures are required.

2.5 It is likely that one requirement will be to undertake scenario analysis with regard to the investment portfolio. As part of the investment strategy review carried out by Mercer earlier in the year they undertook a scenario analysis, comparing the Fund's previous strategy with an alternative more climate focused strategy. This was presented at the recent training day, and is appended at Appendix 1 to this report.

2.6 The scenario analysis will support the Fund's investment strategy in the following ways:

- The climate scenario analysis will form an important part of TCFD reporting under the "strategy" pillar.
- Supporting risk management - from an investment perspective, understanding the risks involved helps investors to make more informed decisions when setting investment strategy, i.e. to mitigate climate risks and take advantage of climate opportunities.
- Holding Brunel to account for how they are addressing climate risk, as part of the ongoing monitoring and engagement process.

2.7 While the scenario analysis compares how the pre-existing investment strategy compares to an alternative sustainable portfolio in terms of how the

different portfolios would be impacted by climate change under different scenarios, it should be noted that there are also other non-climate risks which will impact on the strategies being compared which are not part of the analysis. Compared to the previous strategy analysed, the Committee has agreed to increase the allocation to Sustainable Equities from 5% to 10% of the Fund. However moving the Fund's entire equity portfolio to Sustainable Equities would introduce significant concentration risk and lose the desired Emerging Market and Small Cap exposures recommended by Mercer to be retained.

### 3. Carbon Footprint

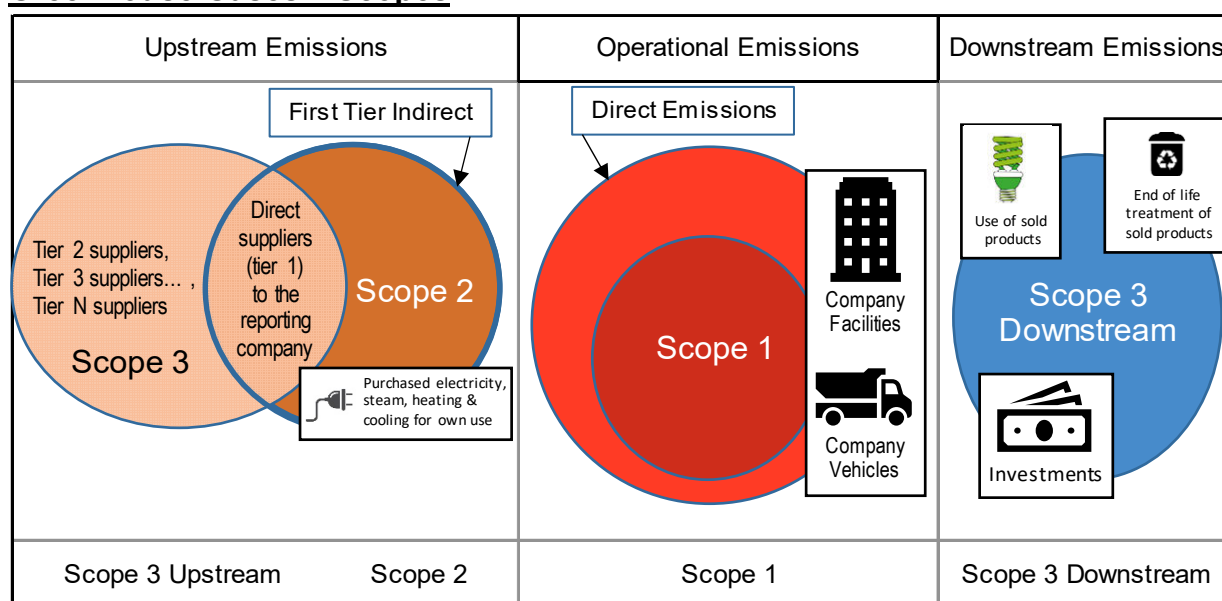
3.1 Brunel in partnership with Trucost have analysed the Devon Fund's carbon footprint as at 31 December 2021. The Devon Fund total figures provided in this report are provisional, as the initial report from Trucost weighted the Devon investment in the individual portfolios incorrectly. The figures for the individual portfolios are therefore correct, but the Devon Fund total figures may change in the final report, although any difference is expected to be immaterial. The final figures will be confirmed before publication in the Fund Annual Report.

3.2 Calculating the impact of a company's emissions involves looking not only at the operations of the company itself, but also looking at the impact of the products that it sells and the impact of its supply chain. Emissions are therefore split into scope 1, scope 2 and scope 3 emissions:

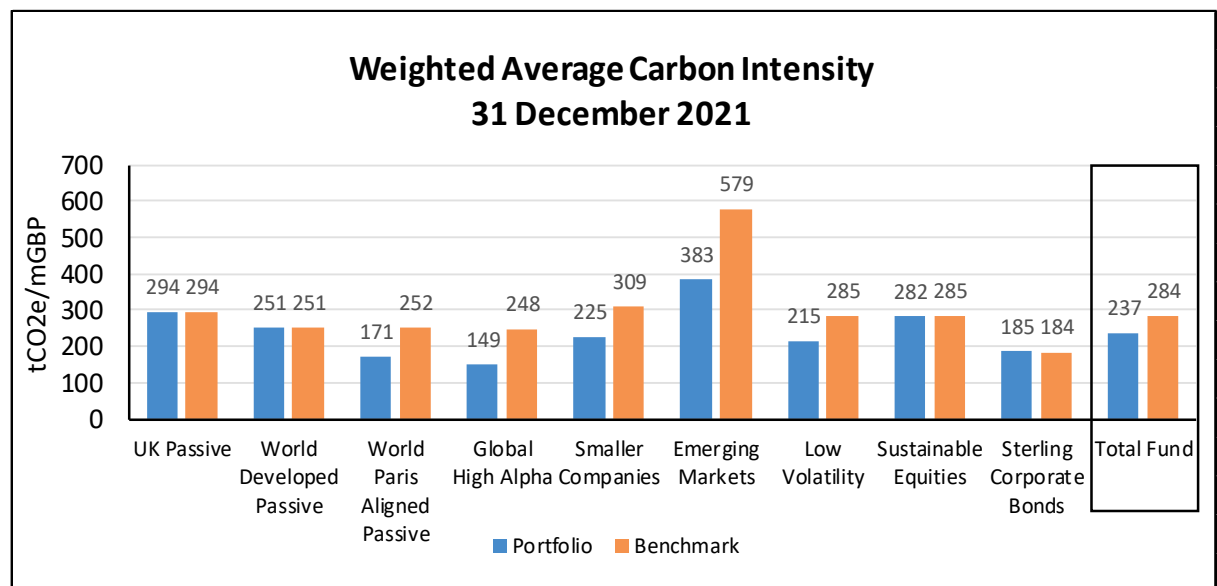
- Scope 1 – The direct emissions of the company's own operations.
- Scope 2 – The emissions related to the purchase of electricity, steam, heating and cooling for the company's use.
- Scope 3 Upstream – The emissions of the company's supply chain.
- Scope 3 Downstream – The emissions associated with the companies' products as they are consumed by customers.

These are illustrated in the following diagram.

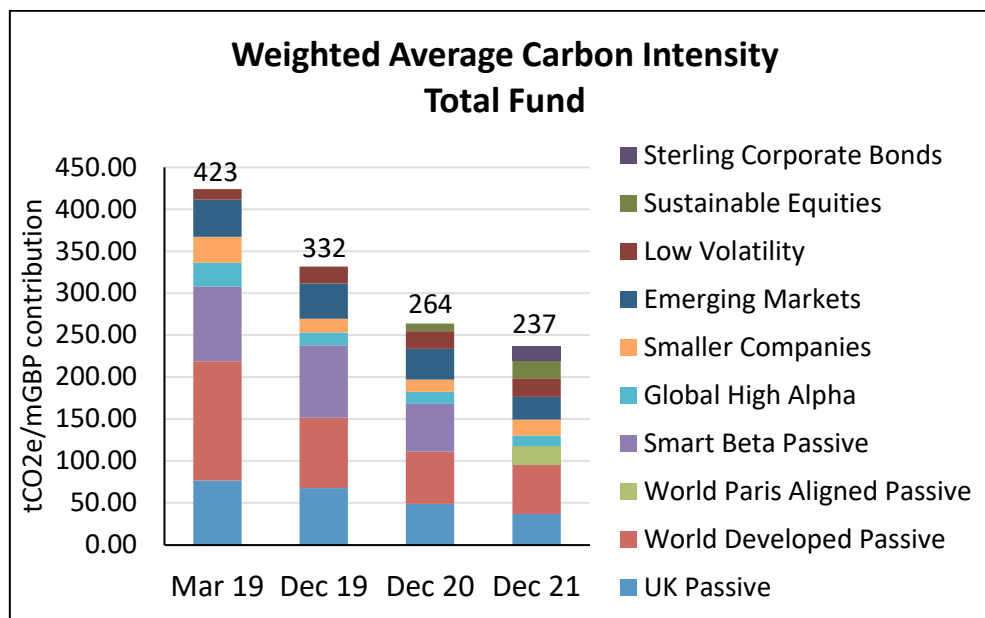
#### Greenhouse Gases – Scopes



- 3.3 In analysing a portfolio of investment companies, there is the danger of double counting, where the scope 1 direct emissions of one company are the scope 3 downstream emissions of another company in the portfolio. However, from an investment risk perspective it is useful to know both the attribution of carbon risk (what is in the company's direct control) and also the aggregate risk, from carbon risk within the supply chain. The Brunel/Trucost analysis of the Devon Pension Fund's equity investments therefore takes into account Scope 1 direct emissions, Scope 2 (e.g. purchased power) and the first tier Scope 3 (immediate supply chain) emissions of investee companies, as shown in the diagram above.
- 3.4 The analysis undertaken quantifies greenhouse gas emissions (GHG) embedded within a portfolio, presenting these as tonnes of carbon dioxide equivalents (tCO<sub>2</sub>e). Comparing the total GHG emissions of each holding, relative to either revenues generated or capital invested, gives a measure of carbon exposure that enables comparison between companies, irrespective of size or geography. The weighted average carbon intensity (WACI) of each portfolio is measured by summing the product of each holding's weight in the portfolio with the company level carbon/environmental revenue intensity.
- 3.5 The WACI for each portfolio and for the Fund's total equity and sterling corporate bond holdings as at 31 December 2021 is shown in the graph below. The total Fund WACI has fallen from 264 tCO<sub>2</sub>e/mGBP in December 2020 to 237 tCO<sub>2</sub>e/mGBP in December 2021, a reduction of 10.2%. The WACI in December 2020 was below the benchmark and in December 2021 is further below the benchmark of 284 tCO<sub>2</sub>e/mGBP.



- 3.6 This is the fourth annual assessment of the Fund's carbon footprint. Progress since March 2019 is shown in the following chart, with the proportionate contribution from each equity portfolio also highlighted.



3.7 The chart shows an overall reduction of 44% in the Fund’s WACI since March 2019, which is good progress towards the target of a 50-75% reduction by 2030, and well ahead of the 7% per year target. Progress over the last year has been slower, as economic activity has increased following the end of Covid restrictions in much of the world, and several of the portfolios have seen a small increase in their WACI. The reduction in the Fund WACI has almost entirely resulted from the Committee decision to move the investment in the Smart Beta passive fund to the World Developed Paris Aligned passive fund.

3.8 Other points to note include:

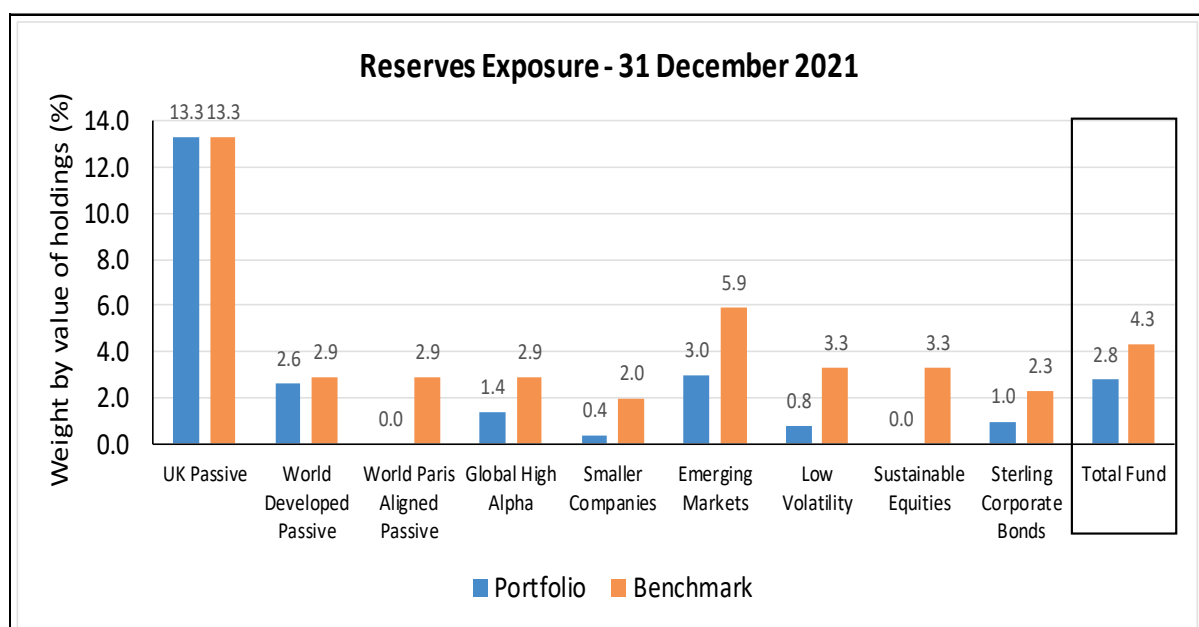
- The UK Passive allocation transferred to the new UK Climate Transition Fund at the end of February 2022, so that change will not be factored into the analysis.
- The Emerging Markets portfolio has the highest WACI. Emerging economies may find it more difficult to transition their economies, and this also raises the issue of securing a just transition that does not penalise those countries with a poorer standard of living.
- The Sustainable Equities portfolio has a relatively high WACI compared to some of the active portfolios. This demonstrates that the numbers only tell half the story. The Sustainable Equities portfolio is focused on solutions, so may include companies who have higher emissions from processes that support the transition, for example the manufacture of wind turbines.
- The analysis now includes the Sterling Corporate Bonds portfolio in addition to the equity portfolio. Any difference to the overall Fund WACI from the inclusion of the bonds portfolio is marginal, and it results in wider coverage of the Fund’s total assets.

#### 4. Reserves Exposure

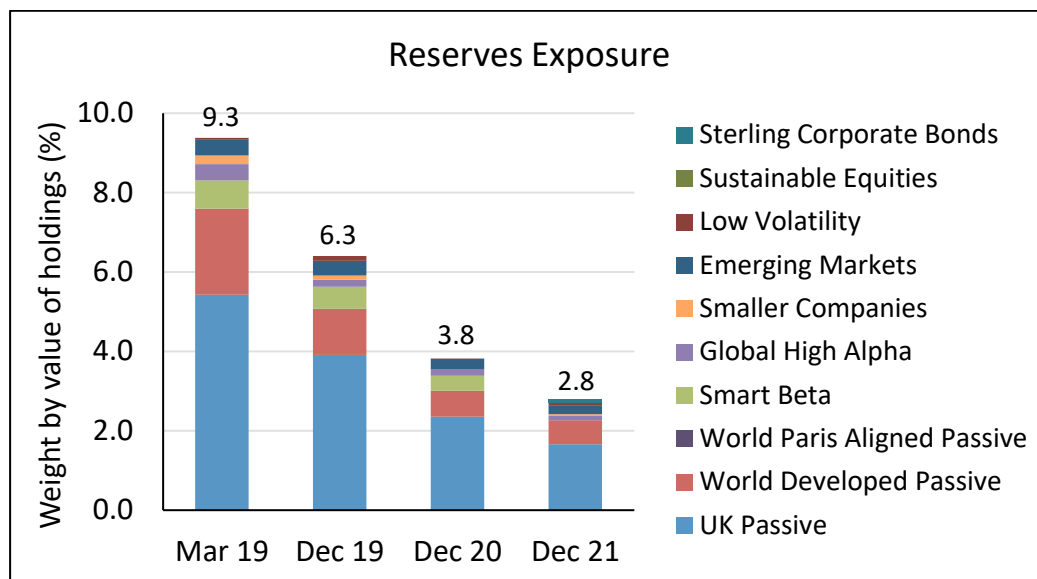
4.1 One of the issues with the WACI measurement is that it does not capture the downstream tier 3 emissions. Downstream Scope 3 emissions based on

product in use (or disposal) are not widely calculated by companies or reported. However, downstream Scope 3 are critical when looking at the impact / investment risk of car manufacturers and fossil fuel companies.

- 4.2 This is linked with the risk involved in stranded assets, where companies may have large reserves of fossil fuels that will not be usable if we are to achieve carbon reduction targets across the economy and so become “stranded”. Exposure to reserves data is therefore a useful proxy for downstream emissions.
- 4.3 The reserves exposure for each portfolio and for the Fund’s total equity and sterling corporate bond holdings as at 31 December 2021 is shown in the graph below. The figures shown are on a value of holdings basis, which means the value of any company with fossil fuel reserves is included in full in the analysis, regardless of what proportion of their business relates to extraction. Between December 2020 and December 2021, the reserves exposure fell from 3.8% to 2.8%. This equates to just under 2% of total assets.



- 4.4 The analysis shows the significant exposure of the UK Passive allocation, and was undertaken before the UK allocation was transferred to the new UK Climate Transition passive fund. The UK Passive Fund analysed tracks the FTSE All Share Index, which has a high proportion of resource companies (fossil fuels companies) including Royal Dutch Shell and diversified mining companies. The significant contribution of the UK passive portfolio to the overall reserves exposure is further emphasised in the following graph which also shows the progress to date since March 2019.



- 4.5 In December 2021, the UK Passive allocation accounted for around 60% of the reserves exposure. The transition of that allocation to the UK Climate Transition passive fund at the end of February 2022 resulted in significant divestment from companies such as Royal Dutch Shell, Anglo American and Glencore, and therefore if the Fund’s reserves exposure were to be re-assessed as at the end of March the exposure would be much reduced.

## 5. Climate Change Policy Review

- 5.1 When Brunel launched their climate change policy in 2019, it stated an intention to carry out a full review and “stocktake” in 2022, with a review to agreeing an updated and revised policy in early 2023. The Committee and Pension Board received a presentation from Brunel on the stocktake at the recent training day.
- 5.2 The core purpose of the Brunel Climate Stocktake is threefold:
- Establish what different key stakeholder groups think of Brunel’s approach to climate change, and identify their expectations and priorities
  - Demonstrate engagement with the feedback, and how different elements have been integrated into a revised Climate Change Policy – or, where relevant, why specific feedback has not been acted upon.
  - Ensure that all stakeholders are fully aware of the approach to Climate Change, the work that has been done, the constraints they operate under, and ambitions for the next stage.
- 5.3 The Devon Fund and the other 9 LGPS authorities that are shareholders in Brunel are key stakeholders in this process. The Committee will therefore need to consider:
- What are the Fund’s key priorities in addressing climate change through its investment policies, and how we would want to see them incorporated into Brunel’s policy.
  - Whether specific new portfolios or amendments to existing portfolios are required to take forward those priorities.
  - Are there specific climate-related topics/issues/sectors that should receive greater attention in Brunel’s engagement activities.

- What additional reporting is required to demonstrate how those policies are being implemented.
- 5.4 It is suggested that the Devon Fund will want to see continued progress in reducing the carbon footprint of our investments towards the achievement of net zero investment portfolios. In line with current policies, Brunel should be asked to continue their focus on renewable energy within the infrastructure portfolio, along with improved reporting that clearly demonstrates what proportion of the infrastructure portfolio is being invested in renewable energy or climate solutions.
- 5.5 The Fund should also look to review its own climate change policies alongside the Brunel stocktake. Should the Committee agree to the proposed survey of fund members on climate change and other stewardship issues, then the results of that survey can be fed into a review of both Devon Fund policies and the Brunel stocktake.
- 5.6 Further reports will be brought to future meetings of the Committee, but if there are any specific priorities that the Committee wants to raise at this stage then they can be minuted and forwarded onto Brunel for inclusion in their review.

Angie Sinclair  
Director of Finance and Public Value

Electoral Divisions: All

Local Government Act 1972:  
List of Background Papers: Nil  
Contact for Enquiries: **Mark Gayler**  
Tel No: **01392 383621** Room: **196**





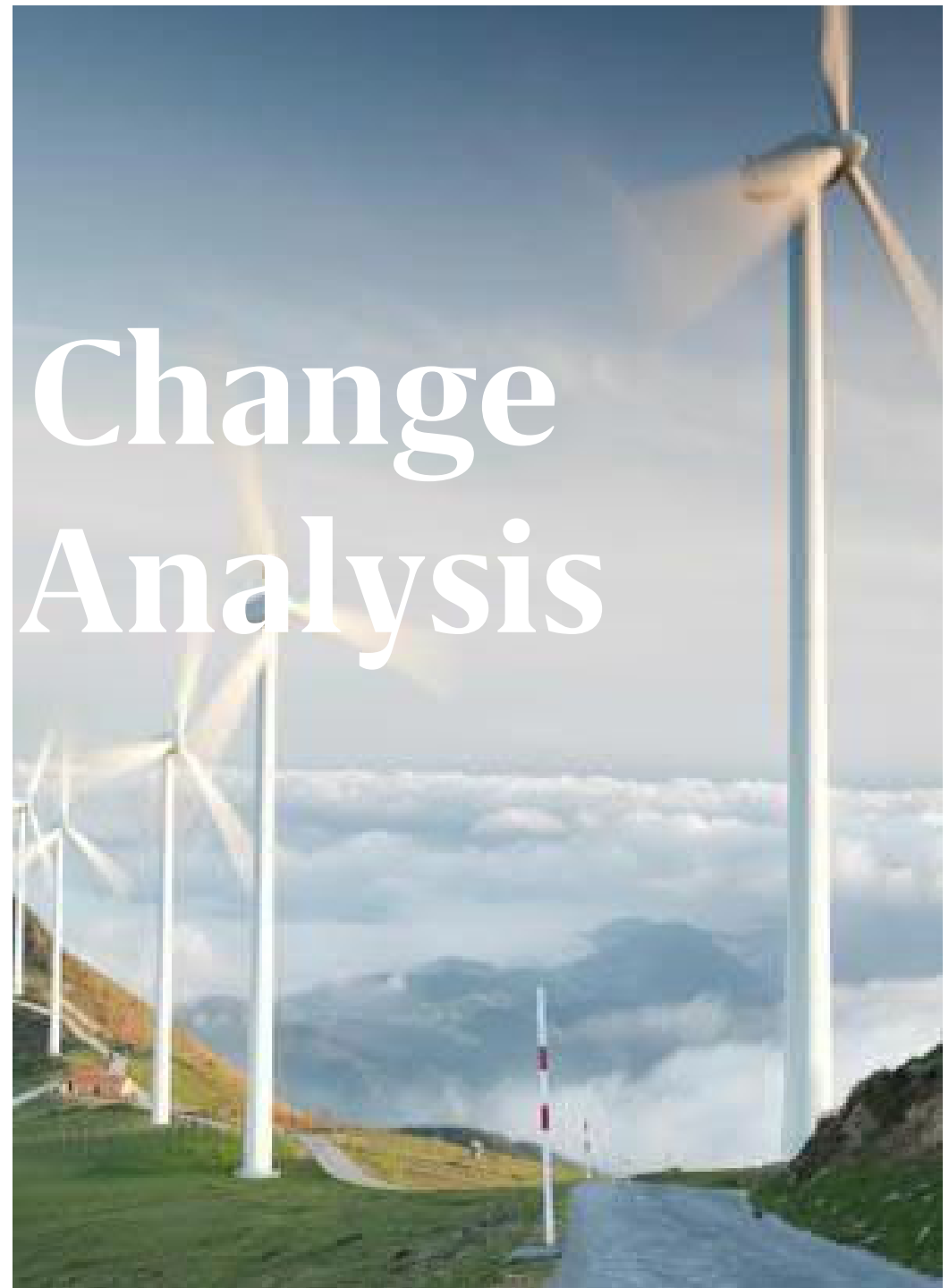
Investing in a Time of Climate Change – The Sequel

# Climate Scenario

**Devon Pension Fund**

**March 2022**

welcome to brighter



# Table of Contents

1. Executive Summary
2. Introduction
3. Mercer Methodology
4. Climate Change Scenario Modelling Results
5. Appendix

# Devon Pension Fund

## Climate Change Beliefs

*The Devon Pension Fund “...believes climate change poses significant risks to global financial stability and could thereby create climate-related financial risks to the Fund’s investments, unless action is taken to mitigate these risks.*

*The Fund is a signatory to the IIGCC’s Commitment to achieve net zero portfolio greenhouse gas emissions by 2050 or sooner.*

*The Fund has set an initial target of a 7% per annum reduction in the Weighted Average Carbon Intensity (WACI) of the Fund’s investments, based on the March 2019 calculation of the WACI, to be reviewed in 2022. This recognises the need for significant progress in the earlier part of the period to 2050, with the intention of achieving a 50-75% reduction by 2030.”*

Source: <https://www.devonpensionfund.org.uk/investments/climate-change/>



# Executive Summary



# Executive summary

## What did we compare?

Our climate scenario analysis compares two portfolios – one based on the Fund’s existing asset allocation and a “sustainable portfolio” which maps this across to sustainable equivalent investments.

This report is addressed to the Investment and Pension Fund Committee (“the Committee”) of the Devon Pension Fund (“the Fund”). It **sets out the results of scenario analysis undertaken for the Fund**, as required by the Taskforce for Climate-Related Financial Disclosures (“TCFD”) reporting framework.

## Key Findings

#1 – Stress Tests Help Prepare for Sudden Change

Sudden changes in return impacts are more likely than neat, annual averages. Stress testing demonstrates that a material one-off impact **under a 2°C scenario is significantly more positive for a sustainable asset portfolio** vs the existing portfolio. The one-off impact of **a 4°C scenario is negative across both portfolios** to a broadly equal extent.

#2 – Investing for a 2°C Scenario is both an Imperative and an Opportunity

There is limited downside risk of 2°C scenario aligned investment, vs 4°C aligned ‘business as usual’ investment. A material **low carbon transition premium** is found over various long-term periods for sustainable assets under a 2°C scenario.

#3 – Prioritise Asset Classes that Capture Low Carbon Transition Opportunities

Under a 2°C scenario, **the Sustainable Portfolio is expected to benefit by up to +0.8% per annum to 2030**. This is primarily due to exposure to sustainable allocations in equity (listed and private) and infrastructure.

#4 – Climate Change Impacts are Most Visible at the Sector Level

Energy and Utilities sectors are most negatively impacted by 2030 by a 2°C scenario, with significant variations by sub-sector (and renewables strongly positively impacted). Telecoms, IT, consumer staples, and materials are positively impacted driven by demand for “green” products and services. Under a **4°C scenario, physical risks act as a negative drag on returns across all sectors** by 2030.

# Executive Summary

The current portfolio is vulnerable to transition and physical climate change risk under the majority of scenarios and timeframes. Increased allocations to sustainable asset classes would improve outcomes for the Fund under all scenarios and timeframes.



The analysis shows the potential opportunities from sustainable allocations under a 2°C scenario. Conversely downside is similar for both portfolios under a 4°C scenario.

Total Portfolio across all Timeframes, Annualised

|                                          |      | CURRENT PORTFOLIO | ALTERNATIVE SUSTAINABLE PORTFOLIO |
|------------------------------------------|------|-------------------|-----------------------------------|
| Climate change impact on return (% p.a.) |      |                   |                                   |
| 2°C                                      | 2030 | 0.06%             | 0.83%                             |
|                                          | 2050 | -0.12%            | 0.34%                             |
|                                          | 2100 | -0.12%            | 0.08%                             |
| 3°C                                      | 2030 | 0.00%             | 0.07%                             |
|                                          | 2050 | -0.09%            | 0.04%                             |
|                                          | 2100 | -0.13%            | -0.06%                            |
| 4°C                                      | 2030 | -0.09%            | -0.08%                            |
|                                          | 2050 | -0.17%            | -0.14%                            |
|                                          | 2100 | -0.22%            | -0.18%                            |

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

The low carbon transition premium is found under the 2°C scenario to 2030, 2050 and 2100 for the Sustainable Portfolio. However, the Current Portfolio only generates marginally positive results under a 2°C scenario to 2030.

The majority of the upside in the Sustainable portfolio is due to a high allocation to Global Sustainable Equities which generates a c. 1.78% p.a. positive return under the 2°C scenario to 2030.

Under a 4°C scenario physical risks dominate, with negative outcomes for both portfolios across all timeframes.

All figures represent % per annum climate impact on return, to 2030, 2050 and 2100, under different climate change scenarios.



# 1. Introduction

# Introduction

Mercer released *Investing in a Time of Climate Change – The Sequel* in 2019, documenting our **climate change scenario analysis** research and modelling results.

Importance of climate action is being reinforced within the UK regulatory environment, for example:

- The UK **Taking Action on Climate Risk** TCFD guidance and regulation sets out how pensions schemes should undertake and update climate change scenario analysis.
  - The UK passed a Law to achieve **net zero emissions by 2050**, and released a **Green Finance Strategy** to support investment in climate mitigation and adaptation.
  - Governments have set out a **green and resilient recovery** plans to address COVID-19 and **sustainable investments have proven** to be resilient in the pandemic.
  - The Shareholder Rights Directive II, adopted by UK, increases **transparency around engagements**, and encourages long-term perspective to consider **social and environmental issues**.
  - The EU has made strides in passing the **Sustainable Finance Disclosure Regulation**, review of the **Non-Financial Reporting Directive**, and **Taxonomy Regulation**.
  - The **Department for Work and Pensions (DWP)** set out how Pension Fund trustees should take account of financially material considerations, **including ESG considerations, and explicitly climate change**.
- This presentation summarises the climate change scenario modelling results for Devon Pension Fund (the “Fund”) based on the existing asset allocation and an Alternative Sustainable Asset Allocation\*.

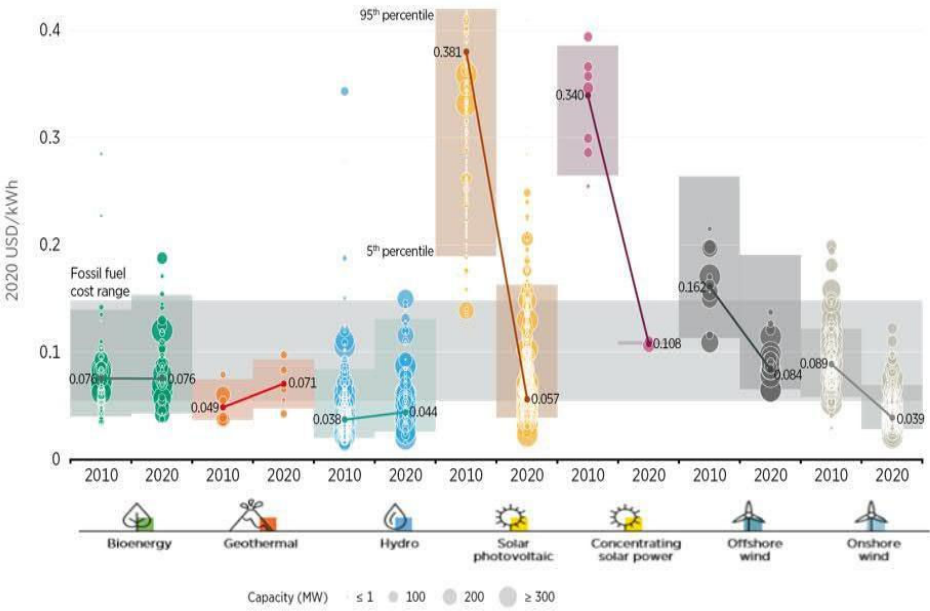




# Ongoing Technological Advancement

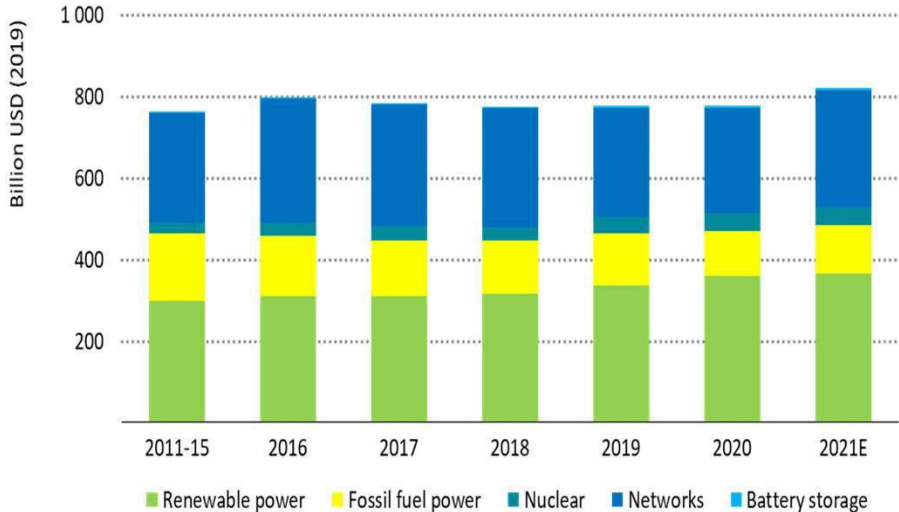
## Renewables are on the Move

### Renewable energy costs



The cost of new renewable energy has reached and passed parity with new fossil fuel generation. It is expected that new renewable capacity will soon become more cost effective than running existing fossil fuel capacity, with renewable electricity costs declining rapidly.

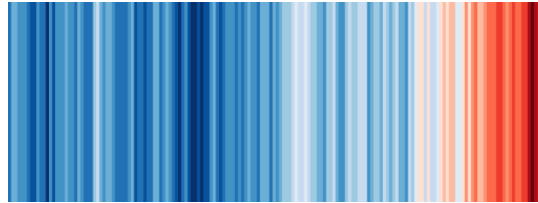
### Renewable energy investment



Electricity investment has already shifted towards renewables, networks, with both being on the rise since 2011. It is estimated that \$110 trillion in investment is required to transform the energy sector towards 2050.

# Summary – Why to Continue to Act on Climate?

Devon Pension Fund will be impacted by climate change, regardless of the scenario that unfolds.



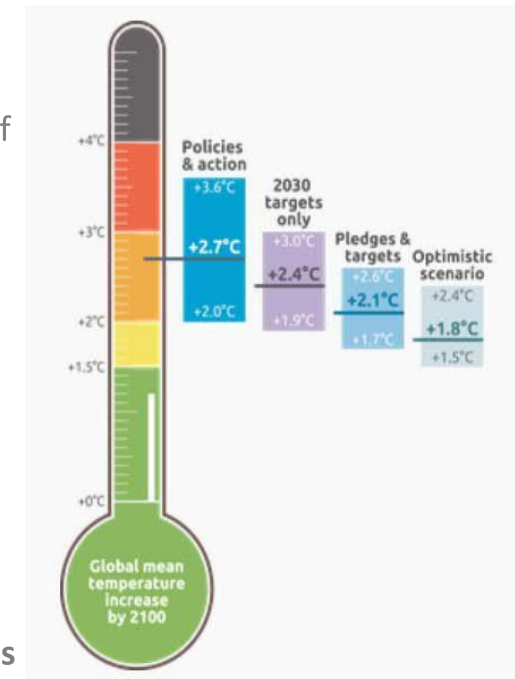
Warming stripes: 1850-2018  
Source: Professor Ed Hawkins

- ← The world is already experiencing **1°C** warming, compared with pre-industrial times.
- ← We are hence already experiencing climate change and its associated physical impacts today.

The global policy environment is currently on track for c. **3°C** of warming to the end of the century. This would result in highly disruptive physical risks.

## Investing for a 2°C scenario is both an imperative and an opportunity the Devon Pension Fund should address.

- An imperative, since, for nearly all asset classes and timeframes, a 2°C scenario leads to enhanced projected returns versus 3°C or 4°C and a better investment outcome.
- An opportunity, since, although incumbents can suffer losses in a 2°C scenario, there are many notable investment opportunities enabled in a low-carbon transition. From sustainability themed investments in listed and private equities to infrastructure and fixed income.



## 2. Mercer Methodology



# Mercer Climate Change Findings

## The Sequel Report: Key Findings



### 1. STRESS TESTING IS AN IMPORTANT TOOL



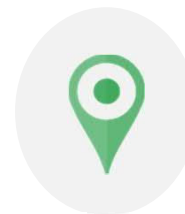
- Sudden climate changes are more likely than annual average impacts
- Asset re-pricing risk

### 2. A 2°C SCENARIO IS MOST BENEFICIAL



- Enhanced projected returns under 2°C
- Lower physical damages costs

### 3. TRANSITION OPPORTUNITIES EXIST



- Opportunities from the low carbon transition
- Potential premium from investing in opportunities

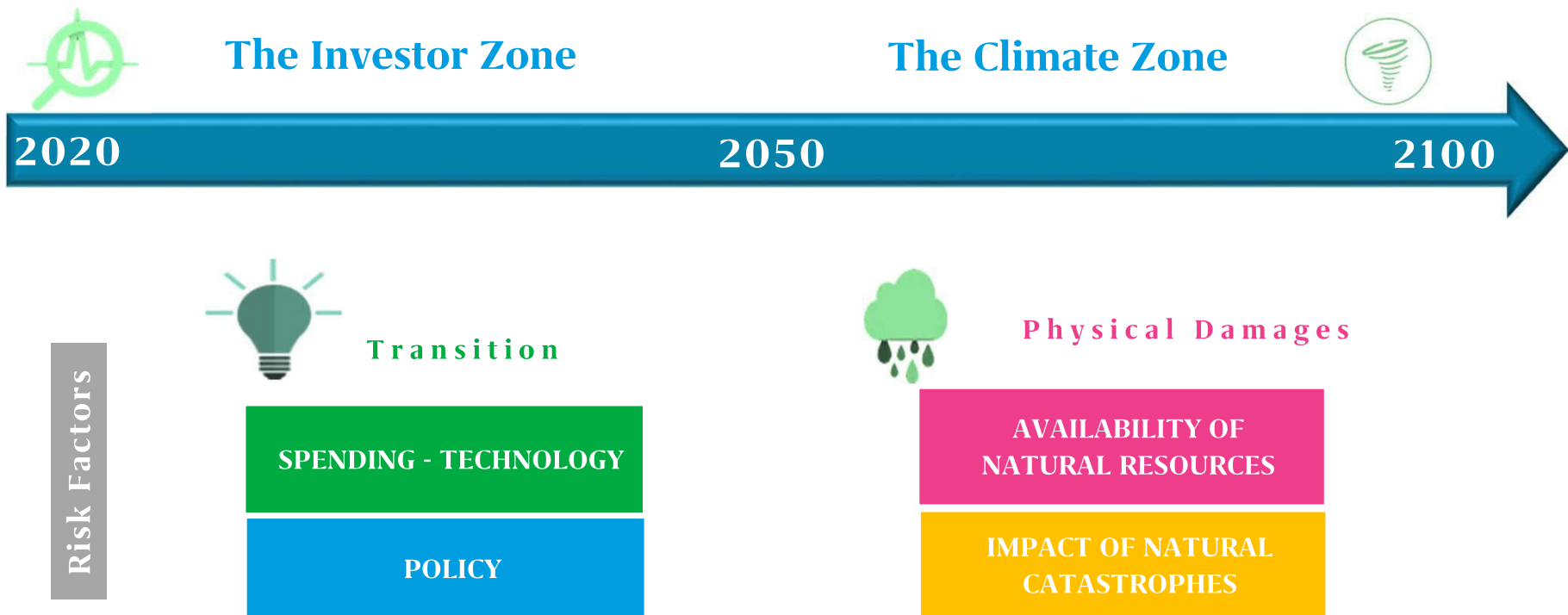
### 4. IMPACTS ARE MOST VISIBLE AT THE SECTOR LEVEL



- Sector performance divergence
- Energy and Utilities most impacted by the transition

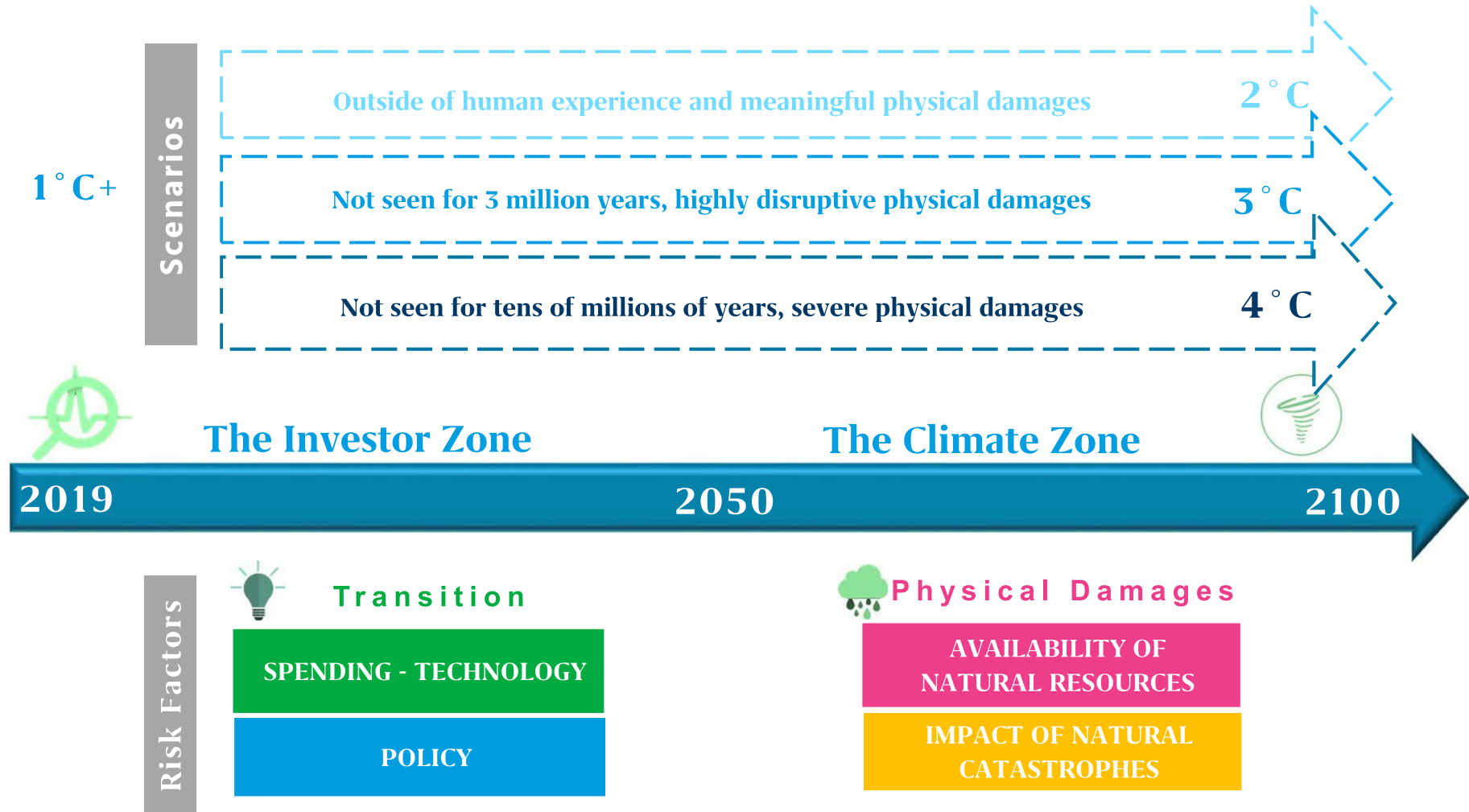
# Mercer Climate Change Approach

## Risk Factors and Timeframes



# Mercer Climate Change Approach

## Scenarios, Risk Factors and Timeframes



# 3. Results



# Investing in a Time of Climate Change

## What we Analysed for the Fund



### Total portfolio:

Compare SAAs by scenario



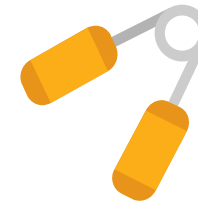
### Asset classes:

Prioritise risks and opportunities



### Sectors:

Evaluate portfolio construction



### Stress testing:

Discuss views on scenarios, market awareness, and physical damages

---

Annual Average Analysis  
(% p.a.)

---

Stress-Testing Analysis  
(% point in time impact)



# Devon Pension Fund

## Portfolios Modelled

| Asset class                    | Current allocation | Alternative sustainable allocation |
|--------------------------------|--------------------|------------------------------------|
| Global Developed Equities      | 32.0               | -                                  |
| Emerging Market Equities       | 5.2                | -                                  |
| Global Small Cap Equities      | 5.9                |                                    |
| Global Low Volatility Equities | 6.9                |                                    |
| UK Equities                    | 8.6                |                                    |
| Sustainable Global Equities    | 5.1                | 33.0                               |
| Global Low Carbon Equities     | -                  | 30.7                               |
| <b>Total Equities</b>          | <b>63.7</b>        | <b>63.7</b>                        |
| Global High Yield Debt         | 6.6                | 6.6                                |
| UK Investment Grade Credit     | 6.6                | 6.6                                |
| Real Estate*                   | 8.5                | 8.5                                |
| Private Debt                   | 2.0                | 2.0                                |
| Infrastructure                 | 4.2                | -                                  |
| Sustainable Infrastructure     | -                  | 4.2                                |
| Diversified Growth Fund**      | 8.4                | 8.4                                |
| <b>Total</b>                   | <b>100.0</b>       | <b>100.0</b>                       |

Figures may not sum due to rounding

Current passive equity mandates have been assumed to transition to Paris Aligned equivalents and have been modelled as 90% low carbon, 10% sustainable equities.

\*Real estate has been modelled as 80% UK Property, 20% Developed Overseas Property.

\*\*The Diversified Growth Fund has been modelled as 50% MSCI ACWI, 25% Global High Yield Debt, 25% Hedge Funds. In the sustainable asset allocation the MSCI ACWI allocation is replaced with 50% Sustainable Equity.

# Key Finding #1 – Stress Tests Help Prepare for Sudden Change

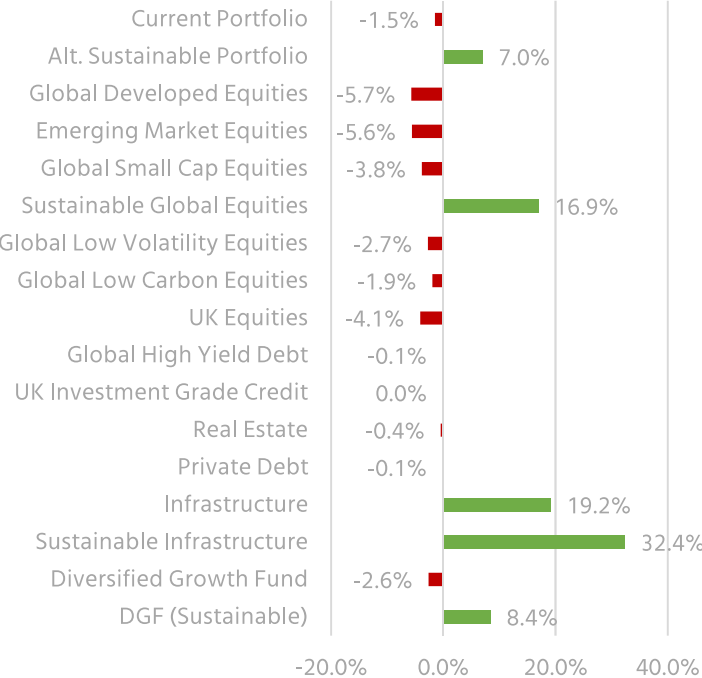
## Low Carbon Transition, Stress Test



In reality, sudden changes in return impacts are more likely than neat, annual averages. Stress testing changes in scenario probability, market awareness, and physical damage impacts help to prepare for this eventuality.

### STRESS TEST TOWARDS 2°C

This situation could arise e.g. should a carbon price be introduced across key markets (to which the portfolio is exposed), at a sufficiently high price to impact on behaviour.



Under this stress test scenario, the expected return impact to the Current portfolio is approximately **-1.5%** and the Alternative Sustainable Portfolio is approximately **+7.0%**.

The Sustainable asset allocation performs considerably better under this stress test owing to the increased allocations to sustainable asset classes which are able to capture and benefit from the low carbon transition premium.

Climate change impact on return (point in time %)

The return figures presented are not annualised, but represent a single point in time impact over less than one year.

# Key Finding #1 – Stress Tests Help Prepare for Sudden Change

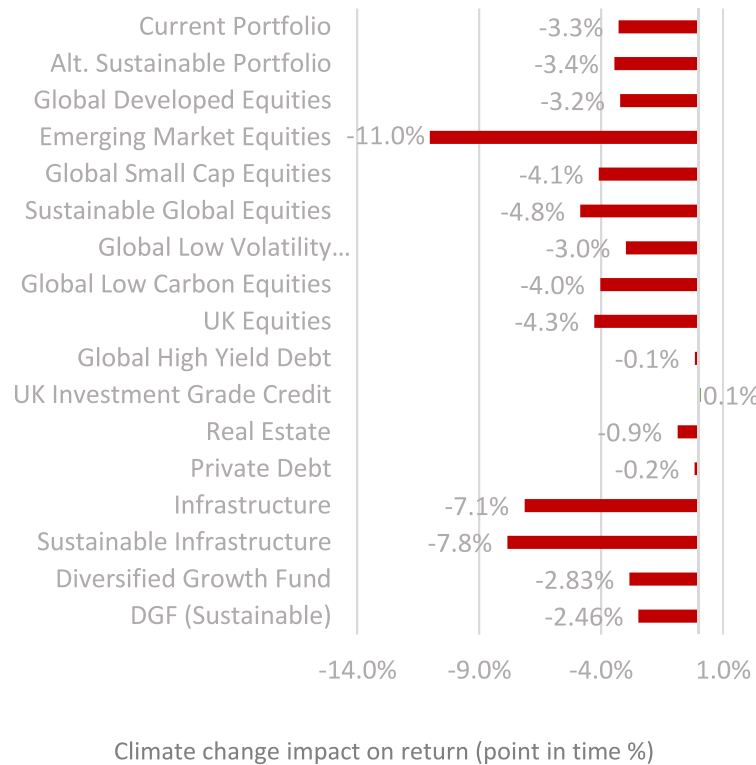
## Physical Risks, Stress Test



In reality, sudden changes in return impacts are more likely than neat, annual averages. Stress testing changes in scenario probability, market awareness, and physical damage impacts help to prepare for this eventuality.

### STRESS TEST TOWARDS 4°C

*This situation could e.g. arise should multiple natural disasters occur across key markets (to which the portfolio is exposed), which act as a return detractor.*



Under this stress test scenario, the expected return impact to the Current portfolio is approximately **-3.3%** and the Alternative Sustainable Portfolio is approximately **-3.4%**.

The largest negative impacts under 4°C are for Emerging Market Equities and infrastructure owing to their exposure to the quadrupling of physical risks under this Scenario, as compared with today. The HY, Global Bonds and Private debt allocations, are less sensitive to modelled climate risks, which is partly due to modelling limitations, but also partly due to the asset class's characteristic as a safe-haven asset.

The return figures presented are not annualised, but represent a single point in time impact over less than one year.

# Key Finding #2 – Investing for a 2°C Scenario is both an Imperative and an Opportunity

## Total Portfolio across all Timeframes, Annualised



The analysis shows the potential opportunities from sustainable allocations under a 2°C scenario. Conversely downside is similar for both portfolios under a 4°C scenario.

|                                          |      | CURRENT PORTFOLIO | ALTERNATIVE SUSTAINABLE PORTFOLIO |
|------------------------------------------|------|-------------------|-----------------------------------|
| Climate change impact on return (% p.a.) |      |                   |                                   |
| 2°C                                      | 2030 | 0.06%             | 0.83%                             |
|                                          | 2050 | -0.12%            | 0.34%                             |
|                                          | 2100 | -0.12%            | 0.08%                             |
| 3°C                                      | 2030 | 0.00%             | 0.07%                             |
|                                          | 2050 | -0.09%            | 0.04%                             |
|                                          | 2100 | -0.13%            | -0.06%                            |
| 4°C                                      | 2030 | -0.09%            | -0.08%                            |
|                                          | 2050 | -0.17%            | -0.14%                            |
|                                          | 2100 | -0.22%            | -0.18%                            |

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

The low carbon transition premium is found under the 2°C scenario to 2030, 2050 and 2100 for the Sustainable Portfolio. However, the Current Portfolio only generates marginally positive results under a 2°C scenario to 2030.

The majority of the upside in the Sustainable portfolio is due to a high allocation to Global Sustainable Equities which generates a c. 1.78% p.a. positive return under the 2°C scenario to 2030.

Under a 4°C scenario physical risks dominate, with negative outcomes for both portfolios across all timeframes.

All figures represent % per annum climate impact on return, to 2030, 2050 and 2100, under different climate change scenarios.

# Key Finding #2 – Investing for a 2°C Scenario is both an Imperative and an Opportunity

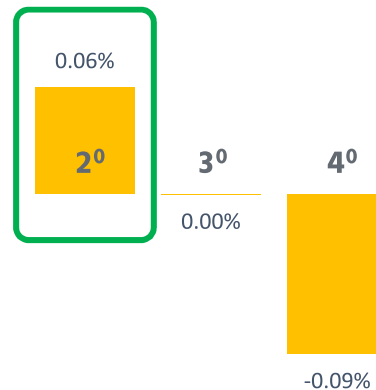
## Current Portfolio to 2030 and 2050, Annualised



The results emphasise the physical damages risks and why a below 2°C scenario is most beneficial, and the 4°C and 3°C scenarios are to be avoided, from a long-term investor perspective.

### CURRENT PORTFOLIO – 2030

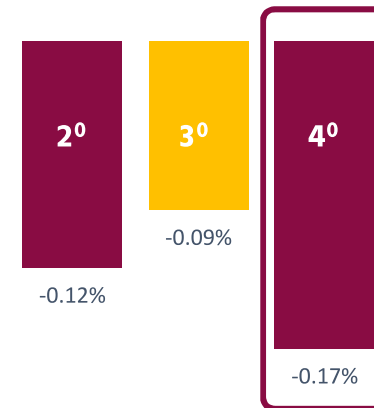
Under 2°C to 2030, the current portfolio is expected to benefit from the low carbon transition. This provides a +0.5% return benefit, on a cumulative basis.



Climate change impact on return (% p.a.)

### CURRENT PORTFOLIO – 2050

Under high carbon scenarios to 2050, particularly 4°C, physical risks act as a negative drag on returns. Fund returns are expected to degrade by -4.6% on a cumulative basis.



Climate change impact on return (% p.a.)

All figures represent % per annum climate impact on return, to 2030 and 2050, under different climate change scenarios

Copyright © 2022 Mercer Limited All rights reserved.

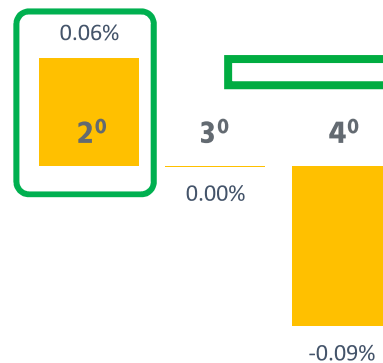
# Key Finding #3 – Prioritise Asset Classes that Capture Low Carbon Transition Opportunities

## Current and Alternative Sustainable Portfolio to 2030, Annualised



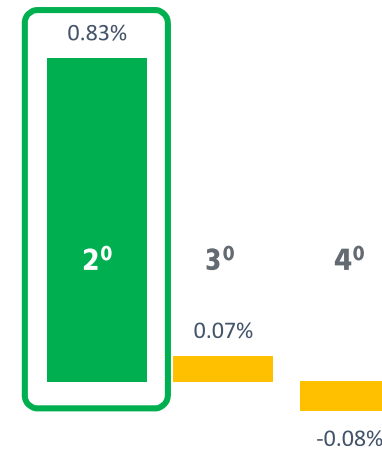
Transition opportunities emerge from a 2°C scenario, with transition now expected to be a benefit from a macroeconomic perspective, including the potential to capture a “low-carbon transition premium”.

CURRENT PORTFOLIO – 2030



Climate change impact on return (% p.a.)

ALTERNATIVE SUSTAINABLE PORTFOLIO – 2030



Climate change impact on return (% p.a.)

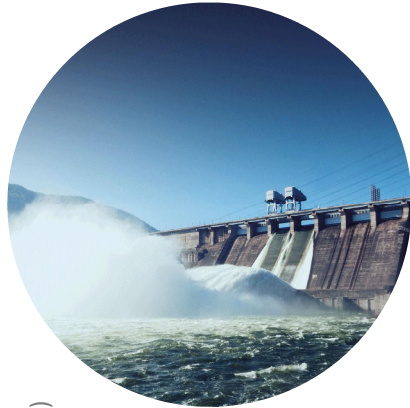
Under 2°C to 2030, the Alternative Sustainable Portfolio is expected to benefit by up to **+6.9%** on a cumulative basis, compared with the current portfolio. This is primarily given the stronger exposure to sustainable allocations in equity (listed and private).

All figures represent % per annum climate impact on return, to 2030, under different climate change scenarios.

Copyright © 2022 Mercer Limited All rights reserved.

# Key Finding #3 – Prioritise Asset Classes that Capture Low Carbon Transition Opportunities

## Equities to 2030, Annualised



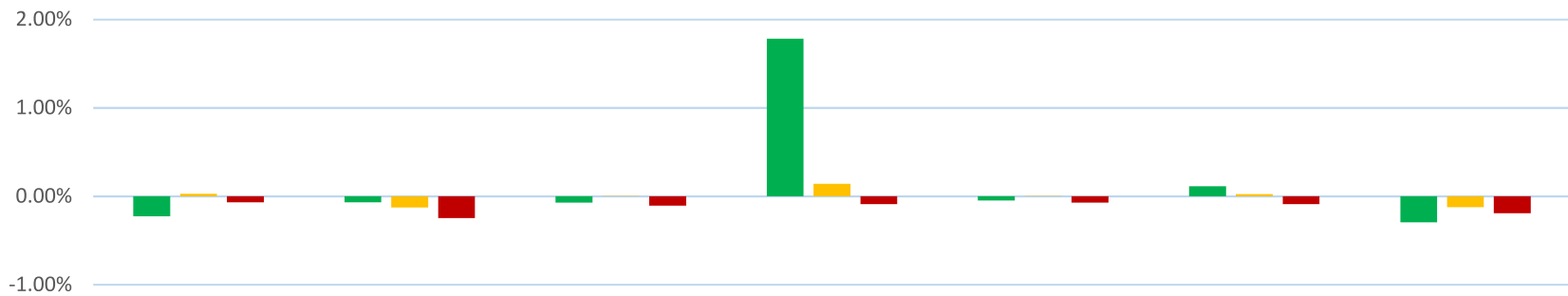
Equity returns can also vary significantly by scenario. We can see a large positive swing in sustainable equity in contrast with negative impact on most equity types.



2030

Sustainable allocation in listed equity capture the greatest “low carbon transition premium” from exposure to companies delivering mitigation and adaptation solutions in response to climate change.

Climate change impact on return (% p.a.)



|     | Global Developed Equities | Emerging Market Equities | Global Small Cap Equity | Sustainable Global Equities | Global Low Volatility Equities | Global Low Carbon Equities | UK Equities |
|-----|---------------------------|--------------------------|-------------------------|-----------------------------|--------------------------------|----------------------------|-------------|
| 2°C | -0.23%                    | -0.07%                   | -0.07%                  | 1.78%                       | -0.05%                         | 0.11%                      | -0.30%      |
| 3°C | 0.03%                     | -0.13%                   | 0.00%                   | 0.14%                       | 0.00%                          | 0.02%                      | -0.12%      |
| 4°C | -0.07%                    | -0.25%                   | -0.11%                  | -0.09%                      | -0.07%                         | -0.09%                     | -0.19%      |

All figures represent % per annum climate impact on return, to 2030, under different climate change scenarios.

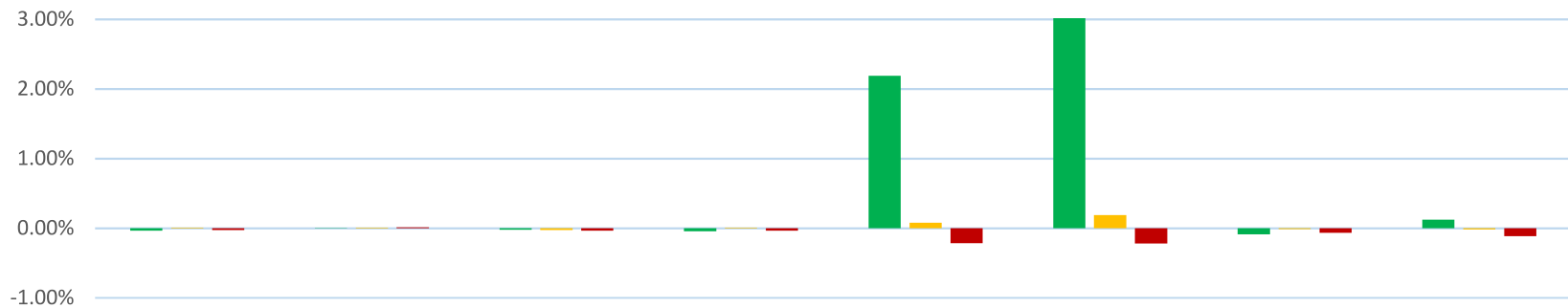
# Key Finding #3 – Prioritise Asset Classes that Capture Low Carbon Transition Opportunities

## Other Asset Classes to 2030, Annualised



Other asset class returns can also vary significantly by scenario, with infrastructure the most notable. Overall credit is not affected by different scenarios, partly given low exposure to physical risks.

Climate change impact on return (% p.a.)



|     | Global High Yield Debt | UK Investment Grade Credit | Real Estate | Private Debt | Infrastructure | Sustainable Infrastructure | Diversified Growth Fund | DGF (Sustainable) |
|-----|------------------------|----------------------------|-------------|--------------|----------------|----------------------------|-------------------------|-------------------|
| 2°C | -0.04%                 | -0.01%                     | -0.03%      | -0.05%       | 2.19%          | 3.37%                      | -0.09%                  | 0.12%             |
| 3°C | 0.01%                  | 0.01%                      | -0.03%      | 0.01%        | 0.08%          | 0.18%                      | -0.01%                  | -0.02%            |
| 4°C | -0.03%                 | 0.01%                      | -0.04%      | -0.04%       | -0.22%         | -0.22%                     | -0.07%                  | -0.11%            |

All figures represent % per annum climate impact on return, to 2030, under different climate change scenarios.