

# Taskforce on Climate-Related Financial Disclosures (TCFD) Statement – Scheme Year Ended 31 March 2023

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## Executive Summary

This report has been prepared by the Trustee of the Smiths Industries Pension Scheme ('the Scheme') with input from its advisors in accordance with the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 ('the Regulations'). This report covers the period from 1 April 2022 to 31 March 2023 ('the Scheme Year').

A short summary of the report is included below to help members to understand the key findings. A more detailed report then follows, split into four sections:

- **Governance:** the governance arrangements in place around climate-related risks and opportunities.
- **Strategy:** the actual and potential impacts of climate-related risks and opportunities on the Scheme's investment and funding strategy.
- **Risk Management:** processes in place for the Scheme to identify, assess, and manage climate-related risks, and how these are integrated into overall risk management.
- **Metrics and Targets:** the metrics and targets used to assess, monitor, and manage climate-related risks and opportunities.

These sections address the specific disclosure requirements in the Regulations and have regard to the Statutory Guidance. This report has also been prepared with regard to the Pensions Regulator's guidance on the governance and reporting of climate-related risks and opportunities.

The Scheme is a hybrid scheme with a Defined Benefit ('DB') Section and Defined Contribution ('DC') Section. In respect of DB assets and liabilities, the requirements relating to strategy and scenario analysis and metrics in the Regulations relate to the DB Section. In respect of the DC assets, the requirements relating to strategy and scenario analysis and metrics relate to each 'popular arrangement'<sup>1</sup> offered by the Scheme. For the Scheme, the only popular arrangement is the Legal & General Cash Lifestyle Profile, the Scheme's default DC strategy. The four sections below therefore include detail on both the DB Section of the Scheme and the popular arrangement of the DC Section of the Scheme.

For brevity where we refer in this report to risks and opportunities relating to climate change, we mean this to cover both the risks arising from changes in the climate itself and the risks and opportunities presented by the anticipated transition of economies and society to a lower carbon future.

### Governance

Whilst the Trustee has overall responsibility for all investment decisions of the Scheme, certain responsibilities regarding climate policy and strategy are delegated to the Investment Committee ('IC') with input from its DB investment advisor, Redington, and its DC investment advisor, Aon. The Trustee expects investment managers to consider financially material environmental (including climate change risks), social, and governance issues in investment decision making. The Trustee also expects investment managers to practise good stewardship which includes engaging with issuers of debt or equity on financially material environmental, social or governance ('ESG') issues. The Trustee has assigned its investment advisors to engage with the managers on its behalf for this purpose and inform the Trustee of any relevant updates.

### Strategy

The Trustee considers climate-related risks and opportunities across short-term, medium-term and long-term time periods relevant to the Scheme's investment and funding strategy. These risks are primarily assessed via climate scenario analysis of the Scheme's DB and DC assets, DB liabilities,

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<sup>1</sup> A popular arrangement is one in which £100 million or more of the Scheme's assets are invested; or one that accounts for 10% or more of the assets used to provide money purchase benefits (excluding assets which are solely attributable to Additional Voluntary Contributions).

and an assessment of the sponsoring company's exposure to climate-related risks and opportunities. The results of this climate analysis are reported during the Scheme Year, as at 31 December 2022.

The Trustee has considered changes to the investment strategy to limit exposure to climate-related risks and take advantage of climate-related opportunities. To do this, the Trustee considered the levers they could pull to manage climate-related risk and implement a net-zero strategy:

- **Strategic asset allocation changes:** the Trustee identified areas for improvement within the strategic asset allocation. In November 2022, the Trustee agreed to transfer the entire holdings within the M&G Alpha Opportunities Fund ('AOF') to a more sustainably oriented credit fund called the M&G Sustainable Total Return Credit Investment fund ('STRCI').
- **Actively engaging with managers:** the Trustee regularly meets with its managers to assess and challenge them on their ESG activities over the previous year and requests specific examples of where each manager has engaged with underlying companies.

## Risk Management

The Trustee acknowledges that the Scheme is susceptible to climate change-related risks. They manage these risks through conducting and reviewing climate change scenario analysis, receiving regular reporting including carbon emissions from their DB investment advisor Redington, and expecting investment managers to integrate climate change risks into their approach. Climate-related risks have been integrated into the Scheme's wider risk management framework, with the Trustee engaging with investment managers regularly to assess their approach to ESG integration and climate-related risk assessment. Redington provides annual climate related reporting on a fund-by-fund basis on the Scheme's portfolio level exposure to climate-related risks. These measures enable informed decision-making and effective management of climate related risks for the Scheme.

## Metrics and Targets

On an annual basis, the Trustee monitors and reports the Scheme's total carbon emissions<sup>2</sup>, carbon footprint<sup>3</sup>, the results of the 'disorderly' Network of Central Banks and Supervisors for Greening the Financial System ('NGFS') scenario<sup>4</sup> and the output of the portfolio alignment Science Based Targets initiative ('SBTi') metric<sup>5</sup>. These metrics will be reported on as at the Scheme's year-end (31 March 2023), within this report. Going forward, the Trustee will use the results to identify the climate-related risks and opportunities which are relevant to the Scheme. Follow-up actions might include, for example, engaging with fund managers who have material emissions intensity levels or with other industry participants, exploring low-carbon alternative investment options, and updating investment guidelines for managers where the Trustee has discretion to make such changes. The Trustee has also set an aspirational net-zero target, with an interim target to decrease the carbon footprint of the segregated Buy & Maintain credit mandate by 50% by 2030 (subject to the Trustee's fiduciary and financial objectives).

The following pages summarise the Trustee's current position compared to the recommendations set out by the TCFD as set out in the Regulations. This is the first climate report published by the Trustee of the Scheme. We hope you find it informative and would welcome any feedback.

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<sup>2</sup> Represents the total share of Scope 1, Scope 2 and Scope 3 carbon emissions a fund is responsible for.

<sup>3</sup> Measurement of the CO<sub>2</sub>e emissions of a fund per million pounds of EVIC using Scope 1, Scope 2 and Scope 3 emissions. Given a company's direct Scope 1 emissions will inevitably be another company's indirect Scope 3 emissions, aggregating the individual Scope emissions results in a higher number of emissions than exists. To mitigate double-counting, we apply a scaling factor in accordance with MSCI's methodology.

<sup>4</sup> A disorderly scenario includes higher transition risk due to policies being delayed or divergent across countries and sectors. For example, carbon prices would have to increase abruptly after a period of delay. The NGFS scenarios help to assess the impact of climate-related risks on the value of the assets held within the Scheme under 'orderly', 'disorderly', and 'hot house world' scenarios. The results of the scenarios provide the Trustee with a clear overview of how resilient the investment strategy is with regards to different climate change outcomes.

<sup>5</sup> SBTi examines whether a voluntarily-disclosed company's decarbonisation target is aligned with a relevant science-based pathway. The scores are binary with a 'yes' or 'no' assessment.

## 1. Governance

The Trustee has overall responsibility for the Scheme's investment decisions, and running the Scheme in its members' best interests, including the management and oversight of responsible investment ('RI') and the opportunities and risks associated with climate change.

The Scheme's Investment Committee ('IC') is a sub-committee of the Trustee Board and has delegated responsibility to assist the Trustee in monitoring and advising on funding, investment, and covenant matters concerning the Scheme. In addition, certain responsibilities regarding climate policy and strategy have been delegated to the IC. This includes overseeing the implementation of the 'RI policy', and the 'Stewardship & Engagement policy' contained within the Statement of Investment Principles ('SIP'), which provides the framework for the incorporation of ESG and stewardship considerations into the investment strategy, objectives, and policies of the Scheme. The SIP was updated over the Scheme Year to include a 'Climate-related Investment Beliefs Statement' which formalises the Trustee's beliefs towards climate-related risks and opportunities as well as how and to what extent they are incorporated into the Scheme's strategy and risk management. There was extensive debate and discussion with the Scheme's DB investment advisor in its drafting.

The Trustee Board determines the composition of the IC. It currently comprises: the Chair of the Trustee Board and four further Trustee Directors. Appointments to the IC are not for fixed terms but membership will be reviewed periodically. The Trustee and IC understand the importance of allocating sufficient time and resources to the governance of climate-related risks and opportunities (given that the Trustee believes that climate change risk is likely to be a financial risk that will affect all of the Scheme's investments to some degree, as well as the Scheme's liabilities and covenant), and therefore regularly discuss these. During the Scheme Year, four regular IC meetings took place, with climate change related items discussed at each meeting, after which the IC reported any meaningful items to the Trustee for consideration or sign-off.

To effectively carry out these responsibilities, the IC (and the Trustee) received training from the relevant advisors on a regular basis in respect of climate-related risks and opportunities, including training on the regulatory requirements of climate change reporting, climate change risk and its impact on the investment process, and the business risks of climate change. The Trustee will continue to assess skills gaps and undertake training accordingly and will continue to review the climate competency of its advisors to ensure adequate processes are in place. Members of the Scheme's in-house pension team also attend each IC meeting, receiving the aforementioned training. The Scheme's investment advisors are reviewed annually against formal objectives, including objectives on the provision of TCFD requirements training and information, ESG advice provision, and climate scenario analysis to demonstrate to the Trustee that adequate steps are taken by their advisors to identify and assess climate-related risks and opportunities. The Scheme's DB advisor was reviewed against these in September 2022 and the IC was satisfied it met these objectives competently.

The Trustee expects the Scheme's investment managers to take a proactive approach to managing climate-related risks and opportunities where this is possible and appropriate. To aid the Trustee's monitoring of managers' approaches, the Trustee met with at least one of its managers quarterly, with ESG analysis, carbon metrics reporting, and engagement examples included as part of each meeting. To aid the Trustee's assessment of the resilience of the Scheme against climate-related risks, climate scenario analysis has been performed in relation to the Scheme's DB and DC assets, DB liabilities, and covenant by the Trustee's advisors. This analysis will be performed triennially; interim updates may be performed, for example if there are material changes to the Scheme's strategy or if there are significant changes to the methodology and industry practice relating to the analysis. The Trustee will consider annually whether a refresh of the analysis is required.

Scheme component	Provider of climate scenario analysis
DB assets	Redington (DB Investment Advisor)
DB liabilities	Aon (Actuary & DC Investment Advisor)
DC assets	Redington and Aon
DB covenant	Penfida (Covenant Advisor)

## 2. Strategy

The Trustee considers climate-related risks and opportunities and their potential implications for the Scheme's investment and funding strategy over the short-term, medium-term, and long-term. To do this, it receives scenario analysis relating to the Scheme's DB and DC assets, DB liabilities, and covenant. This helps to ensure that climate-related factors are incorporated throughout the Trustee's funding and risk management process, from strategic asset allocation to manager selection and portfolio monitoring, as well as considering potential risks to the covenant of the Scheme.

The Trustee is conscious that, given the diversified nature of the Scheme's investment portfolio, the source of climate-related risks is likely to be varied. The main known risks to the Scheme are transition risk and physical risk, which are described below. It is important to note that these are not the only risks that schemes will face and there are many others that are either unknown, or not yet considered in climate analysis due to the difficulty in quantifying the risk.

- **Transition Risk:** refers to the potential price impact on the Scheme's assets as a result of policy actions taken to encourage economies to decarbonise. Policy actions are expected to affect asset values through channels such as carbon prices, and the greater adoption of renewable energy, for example. The transition to a low-carbon economy is also expected to produce opportunities for investing in businesses that are poised to benefit from the transition, such as producers of renewable energy.
- **Physical Risk:** refers to the potential price impact on the Scheme's assets due to changes in weather patterns and extreme weather scenarios, as well as from other physical effects of climate change such as rising sea levels. These risks can affect the value of assets due to direct damage to assets and indirect destabilising impacts from disruptions to supply chains.

During the global transition to a low-carbon economy, climate-related opportunities may also arise over time, for example through improved resource efficiency across production and distribution, adopting low-emission energy uses, supply chain resilience, and the creation of new products or services. These opportunities will likely vary depending on region and industry.

The Regulations require the Trustee to consider climate-related risks and opportunities over different time horizons. Therefore, the Trustee considers the potential impact of these on the Scheme's funding strategy over the short-term, medium-term, and long-term. For example:

- Short-term risks and opportunities may include stock price movements resulting from increased regulation directed at addressing climate change (i.e. mostly transition risk).
- Over the medium-term, it is expected that there will be changes in consumer spending habits following changes in technology, such as the uptake in electric vehicles or a reduction in overseas travel (i.e. a combination of transition and physical risk).
- Longer-term risks may include physical damage to real assets as a result of rising sea levels for coastal property or infrastructure assets; there may be opportunities for outperformance for organisations that put in place strategies to mitigate these potential risks well in advance of them materialising (i.e. higher levels of physical risk than over the medium or short-term).

The table below sets out the time horizons chosen by the Trustee for both the DB and DC Sections of the Scheme.

Time Horizon	Years	Rationale
Short-term	0 – 3 years	For the DB Section, this time horizon aligns with the three-year actuarial valuation cycle. For the DC Section this also captures the more immediate climate risks and opportunities to the DC Section. The Trustee believes this is an appropriate horizon for both sections. Risks/opportunities include: carbon prices, regulation, and changes in consumer behaviour.
Medium-term	5 – 10 years	This time horizon aligns with the DB Section's target full funding date of 2030 (on a solvency basis). This time horizon also demonstrates the importance of significant climate data improvements over the next decade to meet carbon emission reduction targets. Risks/opportunities include: carbon prices, regulation, changes in

		consumer behaviour, extreme weather events, and competitive pressures.
Long-term	15 – 20 years	This time horizon is broadly in line with the DB Section's liability duration and helps the Trustee to better consider the potential impact of physical risks. This time frame is also helpful given the long-term nature of the investments of the DB and DC Sections. Risks/opportunities include: regulation, changes in consumer behaviour, competitive pressures, weather events, food price inflation, and commodity scarcity.

Please note, each item identified above may be a risk or an opportunity depending on how the companies within the Scheme's portfolio respond to climate-change.

## **2.1 Climate scenarios**

The analysis uses the climate scenarios developed by the Network of Central Banks and Supervisors for Greening the Financial System ('NGFS'). The NGFS scenarios were first published in June 2020 as a consistent starting point for the financial sector to analyse climate risks, and are now widely used by investors, banks, and regulators, including the Bank of England. The NGFS has since published its updated scenarios in June 2021.

The analysis draws on three reference scenarios from the NGFS scenario set, which explore a wide range of different emissions and temperature pathways over the period to 2050. These scenarios were chosen to show a range of lower-risk and higher-risk outcomes. These represent the most recent scenarios that the Trustee has analysed, with the analysis taking place as at 31 March 2023:

- **Hot House World:** in this scenario, emissions continue rising until 2080, leading to an average global temperature increase of above 3°C and severe physical risks such as sea level rises. Physical risks are highest in this scenario, which strongly affects countries closer to the equator and developing economies, where agriculture often makes a significant contribution to total economic output.
- **Orderly transition:** this scenario assumes climate policies are introduced early and gradually become more stringent, limiting average temperature increases to well below 2°C. Physical risks are smaller in this scenario than in the 'hot house world' scenario. In contrast, transition risks are more significant: carbon-intensive sectors experience increasing costs due to rising carbon prices and reduced revenue from falling demand. Low-carbon products and services experience increasing demand over time.
- **Disorderly transition:** this scenario assumes transition policies kick in ten years later than under the 'orderly' scenario, but that the average temperature rise is still limited to well below 2°C. This requires carbon prices that increase more rapidly and that reach higher levels than in the 'orderly' scenario. Fossil fuel volumes are reduced more drastically to enable decarbonisation over a shorter period of time, resulting in greater transition risk.

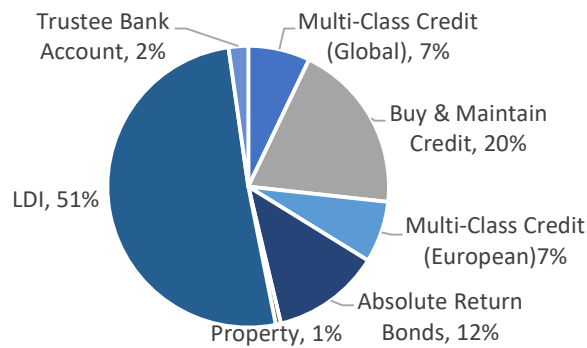
The 'disorderly' and 'orderly' transition scenarios reflect a large decline in emissions in the period to 2050, driven by large changes in the energy and transport sectors. In contrast, emissions continue to grow throughout the period in the 'hot house world' scenario. The Trustee has chosen to focus its attention on the 'disorderly' scenario for its investment decisions, whilst also considering the analysis for the other scenarios. This is in part because the 'disorderly' scenario has the most significant impact on the DB Section's assets and funding level and is currently considered to be the most likely scenario. Further detail on the scenarios may be found in Appendix A.

## **2.2 DB Section asset scenario analysis**

This analysis is considered alongside other factors when the Trustee sets the strategic asset allocation. This helps to determine whether investment strategy changes are likely to have a positive or detrimental impact on the Section's climate risk profiles. The Trustee has considered changes to the investment strategy to limit exposure to climate-related risks and take advantage of climate-related opportunities. To do this, the Trustee considered the levers they could pull in terms of managing climate risks and implement a net-zero strategy, which included the following:

- Strategic asset allocation changes:** the DB Section’s strategic asset allocation invests currently in LDI assets, and liquid credit mandates, with a small property holding currently being sold down. Publicly listed mandates disclose significantly more transparent climate data and typically exhibit lower emissions intensity than private mandates, offering some climate risk mitigation. Additionally, the Trustee considered and identified areas for improvement within this strategic asset allocation. In November 2022, the Trustee agreed to transfer the entire holdings within the M&G Alpha Opportunities Fund (‘AOF’) to a more sustainably oriented credit fund called the M&G Sustainable Total Return Credit Investment fund (‘STRCI’). The main consideration for this change was to increase the liquidity of the overall portfolio; however, the ESG credentials of the fund were an important consideration. Figure 1 below shows a breakdown of the DB Section’s strategic asset allocation (excluding bulk-annuity purchases) as at 31 March 2023.
- Actively engaging with managers:** the Trustee regularly meets with its managers to assess and challenge them on their ESG activities over the previous year and requests specific examples of where each manager has engaged with underlying companies.

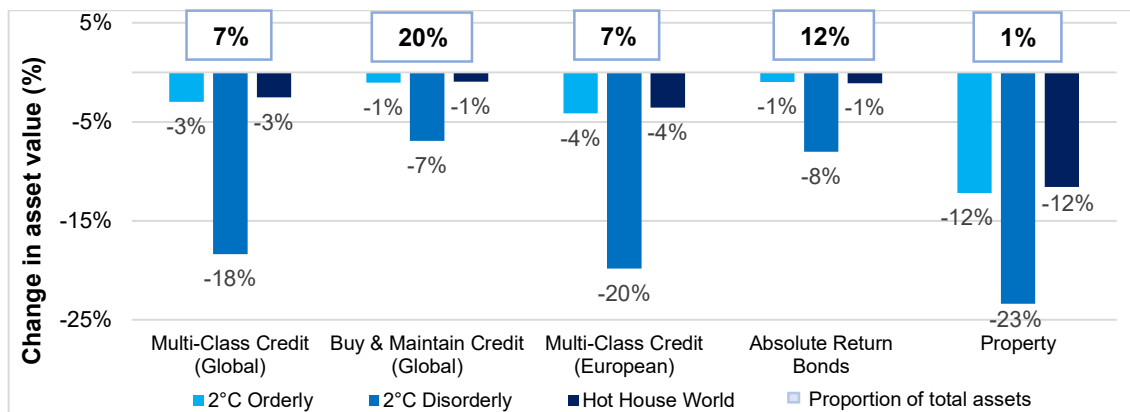
**Figure 1. The DB Section’s strategic asset allocation excluding bulk-annuity purchases as at 31 March 2023**



Source: Redington

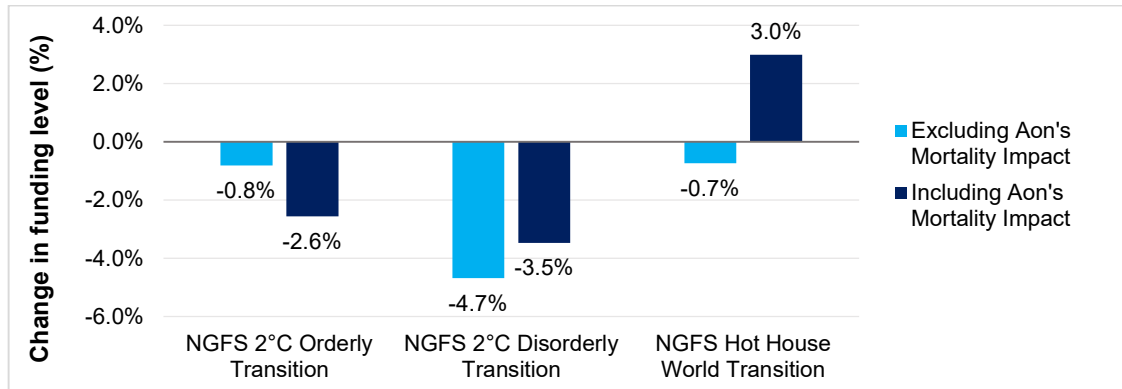
### **2.3 DB Section scenario analysis results and conclusions**

**Figure 2. Change in asset value (%) of the DB Section’s growth assets as at 31 March 2023**



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**Figure 3. Change in funding level (%) on a solvency basis as at 31 March 2023**



The funding level analysis assumes the liability interest rate and inflation impacts are hedged exactly by the LDI assets. Certain information ©2023 MSCI ESG Research LLC. Reproduced by permission.

The scenario that currently poses greater risk to the DB Section is the 2°C disorderly transition scenario, in which climate-related policies are delayed, with the global economy failing to decarbonise in an orderly manner. The predicted impact in this scenario on the Section's funding level is an approximate c.4.7% fall, excluding the impact of member mortality. Three of the DB Section's growth asset mandates are projected to lose 18% of their value or greater.

Including the impact of mortality, the funding level fall is predicted to be c.3.5%, as members' life expectancies are projected to be slightly shorter, leading to a fall in the present value of the liabilities.

The modelled impact in the Hot House World scenario is also relatively small. This is in part because there is no transition risk in this scenario (as further policies to encourage a shift to a low-carbon economy are not introduced). Moreover, physical risk is expected to take some time to materialise, and discounting these risks to the present therefore reduces their impact in today's terms.

The Trustee believes the current level of climate risk is acceptable and the DB Section's funding strategy is sufficiently resilient to the analysed climate risks given the wider risk tolerance as outlined in the Trustee's Pension Risk Management Framework (the funding level fall in a 'disorderly' transition scenario including the impact of mortality represents c.50% of the DB Section's maximum 'budget' for Funding Ratio at Risk).

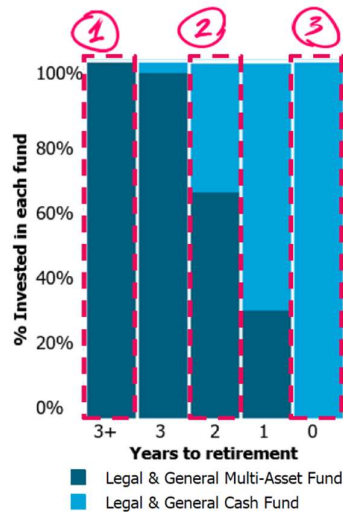
## **2.4 DC Section scenario analysis results and conclusions**

Guidance requires trustees to perform scenario analysis for each 'popular arrangement' (one in which £100 million or more of the Section's assets are invested; or one that accounts for 10% or more of the assets used to provide money purchase benefits) offered by a scheme providing DC benefits. For the DC Section, the Legal & General Cash Lifestyle Profile (the default strategy) is the only arrangement that is categorised as a popular arrangement. The Cash Lifestyle Profile is made up of a Multi-Asset Fund and a Cash Fund. The Multi-Asset Fund and the Cash Fund are valued at £5.1m and £1.3m respectively as at 31 March 2023.

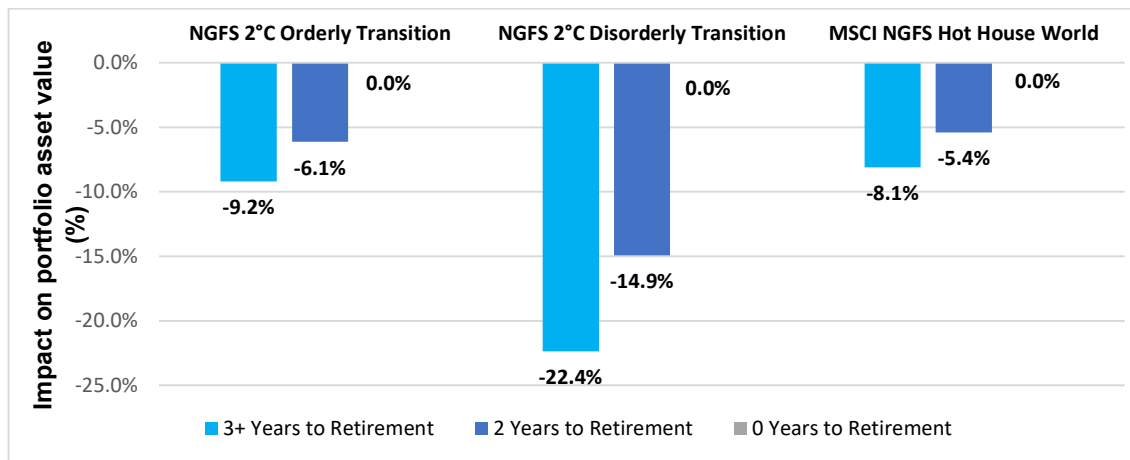
Lifestyle investment profiles are investment options for members where the asset allocation changes over time to de-risk as members approach retirement. This can be seen in 'Figure 4', as member allocations de-risk from the Multi-Asset Fund, which invests in a variety of assets from equities to corporate bonds and property and transition into the Cash Fund, which invests in instruments such as bank deposits and government bonds. The journey shown starts at 3+ years to retirement as prior to this point members are invested fully in the Multi-Asset Fund. To analyse how climate risk might affect members at different points on this journey to retirement, we have performed scenario analysis for three different points: at 3+ years to retirement, 2 years, and 0 years, as shown in the chart.



**Figure 4. The Legal & General ‘Multi-Asset Fund’ and ‘Cash Fund’ lifestyle profile**



**Figure 5. Impact on Lifestyle Investment Portfolio value as at 31 March 2023**



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The Multi-Asset Fund is the driver of the vast majority of the DC Section’s climate risk exposure as it invests in more volatile assets, such as equities – the highest-risk asset class (from a climate perspective) out of all the asset classes in which the DC Section invests. Equities are modelled as having higher climate risk than other asset classes such as debt, as equity investors generally have more direct operational control of a company than other investors.

‘Figure 5’ shows how the asset allocation translates into lower levels of risk in each scenario as members de-risk as they approach retirement. When the members retire, no climate stress is currently applied as the profiles are invested entirely in the Cash Fund. This invests in assets such as government bonds that are not currently modelled as having climate risk due to the complexity involved with calculating the emissions associated with them. It is expected that methodological changes will address this limitation in the future. This decrease in climate risk as members approach retirement aligns with the investment strategy of the default strategy in which investment risk also decreases in a similar fashion as members approach retirement.

## 2.5 **Covenant scenario analysis and conclusions**

Whilst the scenario analysis on both the assets and liabilities uses a matching set of scenarios, the covenant analysis relies on qualitative analysis. The Trustee understands that as the covenant climate reporting evolves, it will seek to use a unified set of scenarios across the assets, liabilities, and covenant.

The Scheme's covenant advisor, Penfida, have performed analysis focussing on Smiths Group Plc's ('Smiths') targets and goals in the context of climate change, key climate scenarios considered by Smiths, how Smiths benchmarks against its peers, and an assessment of the key physical and transition risks faced by Smiths and mitigation actions. At this stage the analysis is focussed on Smiths' publicly disclosed information relating to climate change and focusses on qualitative aspects of the risks and opportunities.

As a large industrial conglomerate, Smiths faces several risks relating to the ongoing climate change crisis and has developed goals and strategies for managing the risks and opportunities borne from climate change as part of its responsible business framework. Smiths is aiming to achieve net-zero emissions by 2040 for scope 1 and 2 emissions and has set intermediate goals for 2024 on its path to carbon neutrality. Penfida noted that Smiths has also achieved or exceeded all of its Financial Year ('FY') 2019 to FY2021 environmental targets.

Smiths is currently rated favourably by several third party ESG rating agencies and in comparison, to its UK industrial peers. Whilst Smiths' risk assessment concluded that climate change was unlikely to have a significant short term negative impact on the company, it is seeking to mitigate potential impacts, and take advantage of potential opportunities, from climate change through adopting globally recognised initiatives and incorporating climate transition risks into planning, strategy, and project evaluation.

In line with the recommendation by the TCFD that the choice of scenarios covers 'a reasonable variety of future outcomes' with 'at least one 2°C scenario or lower', Smiths has considered two climate scenarios for the purpose of its analysis: a higher-emissions scenario and a lower-emissions sustainable development scenario, details of which may be found in Appendix C. Smiths has detailed multiple climate related risks which it believes are the most pertinent to its operations across the value chain.

### **Transition risks and opportunities to Smiths**

<b>Climate risk</b>	<b>Climate opportunity</b>
Regulation and GHG emission pricing – Margin impact from the cost of compliance and reporting to new regulations.	Regulation and GHG emission pricing – Revenue uplift through supporting customers' transitions to greener alternatives and waste reduction.
New competitors – competition in the net-zero/efficiency space resulting in a reduced accessible market.	New low-carbon emission tech – investment in new technologies due to policy incentives, creating cost savings and increased revenues.

### **Physical risks and opportunities to Smiths**

<b>Climate risk</b>	<b>Climate opportunity</b>
Storms and hurricanes – cause damage to key assets and supply chains with loss of revenue from disruption.	Extreme weather events – damage to supply chains/ assets may cause disruption which Smiths could take advantage of.
Heatwaves and droughts – increased investment costs associated with temperature regulation and water scarcity mitigation.	Droughts – Revenue uplift from technology that cleans and monitors water quality (including filtration and transportation).

Whilst Smiths' risk assessment concluded that climate change was unlikely to have a significant negative impact on the company in the short term due to its diversified portfolio, resilient supply chain and geographic spread of assets, Smiths does have and will continue to implement measures to reduce exposure to climate risks.

To mitigate the impact of climate related risks, Smiths' long term strategic direction is in line with the transition to a low carbon economy. Specific control actions in the context of climate risks include:

- A 2040 scope 1 and 2 emissions net-zero road map and further ambition to achieve net-zero scope 1, 2, and 3 emissions by 2050 with action examples including a commitment to pursue science-based targets under the SBT initiative with an intention to have GHG reduction targets approved by the SBTi, zero emissions from all company vehicles, and commitment to the 1.5°C Business Ambition under the UN Race for Zero.
- Smiths has established a Science, Sustainability and Excellence Committee of the Board.
- In 2022 a metric measuring the reduction in GHG emissions was planned to be introduced into incentive plans.

Given the significant headroom in the covenant, the diversified nature of the sponsor and the actions that are currently being undertaken by Smiths to address the potential climate change risks, Penfida believe the Trustee's buyout target date of 2030 is reasonable.

## 3. Risk Management

### **3.1 Climate risk monitoring and management**

Climate-related risks and opportunities are considered in terms of the physical risks to assets that are expected to result from climate change, and in terms of the transition risks associated with the global shift to a low-carbon economy. Over the next few decades transition risk is expected to be of greater impact than physical risk, but as we approach the middle of the century physical risks are likely to become more significant. Based on the scenario analysis that has been performed, the Scheme is marginally more exposed to near-term transition risks than longer-term physical risks. These risks are expected to impact the multi-class credit mandates as demonstrated in Figure 2.

The Trustee has integrated climate change into the Scheme's wider risk management and receives additional climate-related reporting from Redington on an annual basis through detailed fund-by-fund ESG reporting. This reporting contains relevant climate metrics to assist with the identification of climate-related risks as set out under the DWP's adoption of the recommendations of the TCFD. As described in 'Section 1: Governance', the Trustee and the IC have clearly defined climate-related risk responsibilities to ensure it is considered alongside other risk considerations. Climate risks are identified through this reporting and the Scheme's scenario analysis, but will also be identified by the Scheme's advisors should any specific risks emerge, and by the Scheme's investment managers in their updates to the IC and Trustee. Where risks are identified they will be addressed in the first instance by the IC to agree appropriate actions. There is an expectation that the Trustee will use the climate analysis included in this report to monitor investment manager progress towards the climate targets stated in 'Section 4: Metrics & Targets', with any material developments escalated by the IC to the Trustee as appropriate.

The Scheme's investment advisors advise on differing approaches to responsible investment to help the Trustee decide on a responsible investment strategy and adopt appropriate responsible investment objectives for the Scheme, including climate risk mitigating objectives, and opportunities to invest in climate solutions. The responsibilities of the investment advisors were set out in more detail in 'Section 1: Governance'. The Trustee also requires the appointed investment managers to be cognisant of climate-related risks and opportunities within their investment processes as applied to the assets of the Scheme.

As described below, the Trustee has begun to take advantage of climate-related opportunities where this is expected to improve the risk/return profile of the Scheme and aims to continue to do so. The Trustee's investment advisors identify, where appropriate, climate opportunities available to the Scheme, highlighting investment mandates that may perform well in different climate-related scenarios. At the level of individual investments, the Trustee expects the appointed investment managers to consider climate-related opportunities when making investments and engage with portfolio companies to encourage them to take advantage of relevant opportunities.

Examples of climate-risk monitoring and integration by the Scheme over the Scheme Year includes:

- The IC, on behalf of the Trustee, met with at least one of their investment managers at each quarterly meeting. As part of this, the manager's ESG metrics and progress are discussed and questioned, with specific examples of engagement with underlying companies included.
- As mentioned in 'Section 2: Strategy', in November 2022, the Trustee agreed to transfer the entire holdings within the M&G AOF to a more sustainably oriented credit fund called the M&G STRCI fund. This transition completed on 20 March 2023, reducing the climate risk exposure of the Scheme. The Trustee are also reviewing additional similar mandate changes that could be made in the next Scheme Year to further reduce the DB Section's credit mandate climate risk exposure.
- Insight have made progress towards reducing the carbon emissions of the Global Buy & Maintain credit mandate over the previous 24 months.

### **3.2 Engagement and voting**

The Trustee believes that engagement and voting are core components of sound risk management. Engagement is aimed at ensuring companies manage the physical and transitional risks that climate change poses. Direct engagement with underlying companies in which the Trustee owns shares and/or debt is carried out by the Scheme's investment managers. The Trustee's ability to influence investment managers' stewardship activities will depend on the nature of the investments held. Due to the nature of the DB Section assets, the Trustee has limited scope to directly influence managers' stewardship activities; however, in response to rising expectations regarding stewardship activities for the Trustee, further work will be undertaken on this matter in 2023.

Engagement examples by the Scheme's investment managers include:

- Engagement by CQS, one of the Scheme's DB credit managers, identified issues with an airline company held as a debt investment within the 'Credit Multi-Asset' mandate. The issues involved a lack of clarity around what scope of emissions were included in the company's net-zero commitment and decarbonisation target, and also that the decarbonisation targets were unverified. Following engagement, the company clarified their decarbonisation targets and had these targets third-party validated by the SBTi and classed as being 'well-below 2 degrees'.
- CQS engaged with a retail company to seek to improve the company's ESG disclosures and targets. Following engagement, the company produced its first ESG report in October 2022.
- M&G, another of the Scheme's DB credit managers, engaged with a German chemicals company with the objective of encouraging the company to agree a net-zero target by 2050 and an interim emissions reduction by 2030. Following M&G's targeted and collaborative dialogue with the company, they set a target for a 25% absolute carbon reduction goal by 2030 and have now also set a net-zero target by 2050.
- Insight, the Scheme's DB Buy & Maintain credit manager, engaged in Q1 2022 with an oil refinement company as Insight wanted clarity on the company's Arctic oil/ gas extraction. The engagement is an ongoing conversation with the company as the definition of 'Arctic' may be causing data discrepancies.

## 4. Metrics and Targets

### 4.1 Metrics introduction

The DWP's guidance for pension schemes submitting Climate Disclosure reporting suggests that the following metrics are chosen: a Total Greenhouse Gas (GHG) emissions metric (total carbon emissions), an emissions intensity metric (carbon footprint), an additional non-emissions-based metric, and a portfolio alignment metric.

The Trustee has chosen the following metrics:

DWP suggested metric	Metric selected	Applicable Section of the Scheme	Rationale
Total Greenhouse Gas (GHG) emissions	Total carbon emissions	DB and DC	This is the Total Greenhouse Gas (GHG) emissions metric recommended by the DWP.
Emissions intensity	Carbon footprint	DB and DC	This is the emissions intensity metric recommended by the DWP.
Additional - climate change	Impact on the funding level/ asset value under an NGFS stress test, specifically, under the 2°C 'disorderly' scenario	DB – Impact on the Section's funding level  DC – Impact on the Section's assets	This metric is the output of the scenario analysis and is key to assessing the level of downside risk exposure of the Scheme's assets and any hedging provided by assets that may benefit from climate-related opportunities.
Portfolio Alignment	Science-based target initiative (SBTi)	DB only (due to the nature of the data received for the DC Section assets, this metric was unable to be calculated for the DC Section)	This metric examines whether a voluntarily disclosed company decarbonisation target is aligned with a relevant science-based pathway. There is evidence that companies that have set science-based targets are delivering emissions reductions in line with their ambitions, making this a key metric to monitor to drive positive change.

The chosen metrics will be reviewed at least annually to ensure they remain relevant and appropriate for the DB and DC Sections. Recognising the nascency of climate metrics in an investment context, there may be situations in which the Trustee considers updating or replacing the metrics due to changes in data quality and availability, the emergence of new, more robust metrics and methodologies and/or industry improvements.

The Trustee will use the results to identify the climate-related risks and opportunities which are relevant to the DB and DC Sections. These might include, for example, engaging with fund managers who have material emissions intensity levels or with other industry participants, exploring low-carbon alternative investment options, and updating investment guidelines for managers where the Trustee has discretion to make such changes, similar to work already undertaken as mentioned.

For the purpose of this analysis, emissions from gilts and cash are currently excluded due to methodological challenges. However, the Trustee understands that this is a fast-moving area and therefore may revisit this in future as best practice develops. This would in turn change the results of the analysis presented in this report materially.

The emissions-based metrics have been calculated using line-by-line portfolio holding information from the DB and DC Sections' asset managers and climate data from the ESG data provider MSCI. Where it was not possible to reflect a fund using line-by-line emissions data analysis from the MSCI data feed, the metrics have been modelled at an asset class level. This approach was applied wherever line-by-line data coverage for a particular fund was below 50%. Line-by-line data has been used for all but two of the DB Section's non-LDI mandates. Asset class proxying has been used for

the multi-asset global credit fund and the property portfolio due to the unavailability of line-by-line data. More detail on the proportion of the DB Section portfolio represented by each asset class is provided in Figure 1 above. The Trustee expects data availability to improve following wider adoption of climate metrics and greater industry consensus on appropriate methodologies. As this develops, the Trustee will review its approach to calculating climate metrics to ensure that the Scheme is aligned with industry best-practice.

Going forward, the Trustee will use the results to identify the climate-related risks and opportunities that are relevant to the DB and DC Sections. These might include, for example, engaging with fund managers who have material emissions intensity levels or with other industry participants, exploring low-carbon alternative investment options, and updating investment guidelines for managers where the Trustee has discretion to make such changes.

The DB Section has also purchased bulk annuity transfer policies ('buy-ins') issued by Pension Insurance Corporation plc ('PIC') and Canada Life Limited to cover benefits for a subset of core legacy pensioners and dependents. In line with DWP guidance, the Trustee has engaged with these providers to understand the emissions relating to the DB Section's buy-ins. However, the data received could not be appropriately verified and therefore the Trustee was not able to calculate the metrics using the data available; however, they will continue to engage with these providers over the next Scheme Year to improve coverage and to ensure inclusion in the next report.

## **4.2 DB Section metrics results**

### **Metric 1 – Total Greenhouse Gas (GHG) emissions (Scope 1, 2 & 3) – Total carbon emissions (tonnes CO2 equivalent)**

The Trustee has chosen total carbon emissions as the main metric for Total Greenhouse Gas (GHG) emissions – the metric shows the total greenhouse gas emissions that are financed by the DB Section's investments, also known as category 15 (investment emissions) in the Greenhouse Gas ('GHG') Protocol.

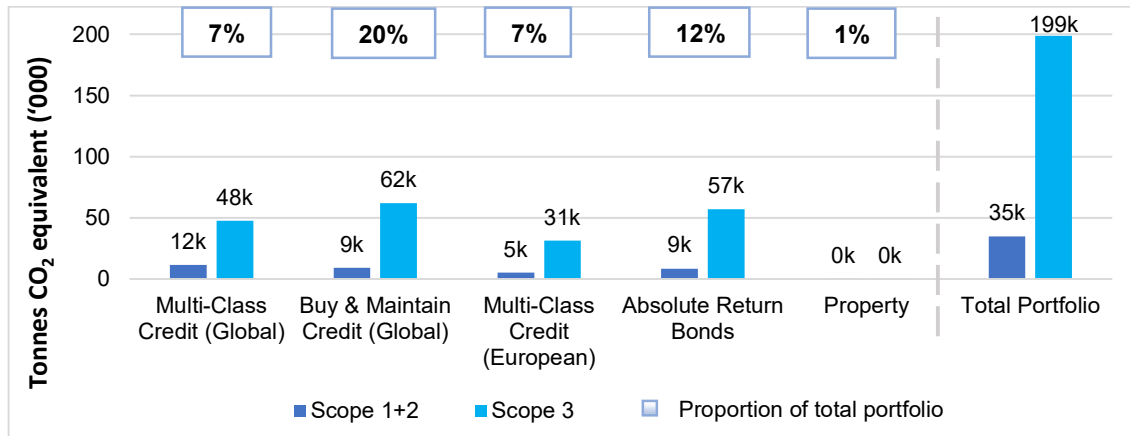
There are three scopes of carbon emissions:

- **Scope 1:** emissions are direct emissions from an entity's owned or operationally controlled sources;
- **Scope 2:** emissions are those from the use of electricity purchased by an entity;
- **Scope 3:** emissions are indirect emissions from the use of company's products, or any other emissions across its supply chain.

This metric shows the share of greenhouse gas emissions stemming from the DB Section's assets. Given the abundance and prominence of carbon dioxide as a greenhouse gas, all the other gases are considered carbon equivalent.

Total emissions are calculated as the proportional share of the Scope 1 and Scope 2 GHG emissions for each relevant investment, based on the size of the investment relative to the EVIC of the respective company – EVIC is a measure of a company's total value. 'Total emissions' is therefore sensitive to the Scheme's investment holding size (£m). Further detail on the metric analysis is included in Appendix B.

**Figure 6. Total carbon emissions for the DB Section as at 31 March 2023**



Carbon metrics are proxied where there is insufficient data for funds. ESG and MSCI Carbon Metrics meet the current minimum UK DWP's TCFD-aligned 'Metrics and Targets' regulations. However, regulations are subject to change. Redington monitors developments closely. Certain information ©2023 MSCI ESG Research LLC. Reproduced by permission.

The Total Greenhouse Gas (GHG) emissions of a mandate is naturally in part a function of its size, with larger mandates in terms of assets invested likely to have larger total emissions. Consistent with this relationship, the analysis showed that the DB Section's Buy & Maintain Global credit mandate had the largest Total Greenhouse Gas (GHG) emissions, followed by the Absolute Return Bond mandate. Whilst this information is a useful starting point to understand the DB Section's total carbon emissions, it is difficult to compare across asset classes and funds of differing size. The methodology for calculating carbon emissions is still evolving; for example, there is not currently an approved methodology to calculate the emissions associated with government bonds – hence LDI has not been included. This is likely to change in the future.

**Key takeaway:** of the DB Section's assets, the Buy & Maintain Global credit mandate is the largest contributor, as expected as this is the largest non-LDI mandate.

**Metric 2 – Emissions intensity (Scope 1, 2 & 3) – Carbon footprint (tonnes CO<sub>2</sub> equivalent per million pounds invested)**

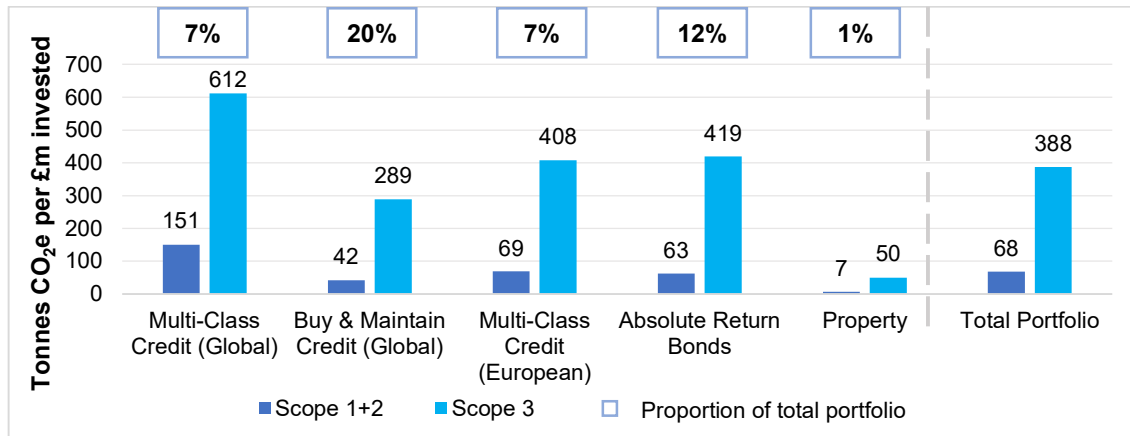
The Trustee monitors carbon footprint as its emissions intensity metric. Carbon footprint measures the carbon efficiency of a portfolio in terms of emissions per million pounds invested. It normalises the total carbon emissions for the value of the portfolio. As it shows the emissions per millions of pounds invested, the metric is comparable between investments of different sizes.

At a portfolio level, the emissions intensity measures are calculated as the average of the emissions intensity of the underlying holdings, weighted by the value of each holding. A portfolio with a high emissions intensity will have a steeper route towards decarbonisation than a less intensive one. Hence, measuring the emissions intensity across the DB Section is useful in order to gauge how difficult (or easy) it will be to progressively decarbonise its portfolio.

Differences in portfolio emissions intensities are driven by differences in sector and company exposure. Portfolios with higher exposures to high-carbon sectors such as utilities, non-energy materials, energy and industrials tend to exhibit higher emissions intensities. The DB Section's Total Greenhouse Gas (GHG) emissions are almost entirely attributable to credit assets, which tend to be more carbon intensive and represent the vast majority of the DB Section's non-LDI investment portfolio. Further detail of the carbon metric analysis is included in Appendix B.



**Figure 7. Carbon footprint for the DB Section as at 31 March 2023**



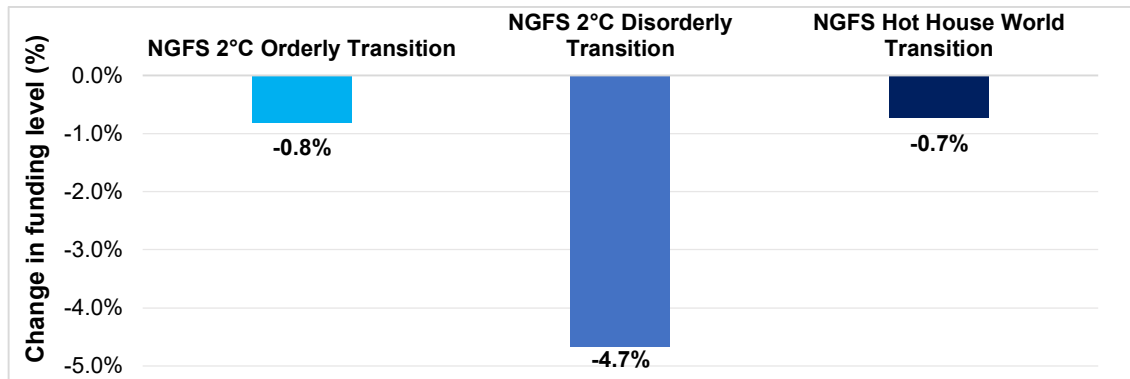
Carbon metrics are proxied where there is insufficient data for funds. ESG and MSCI Carbon Metrics meet the current minimum UK DWP's TCFD-aligned 'Metrics and Targets' regulations. However, regulations are subject to change. Redington monitors developments closely. Certain information ©2023 MSCI ESG Research LLC. Reproduced by permission.

**Key takeaway:** per million pounds invested, the DB Section's Global Multi-Class Credit fund is the most carbon intense mandate.

**Metric 3 – Additional climate change: Impact on DB Section funding level in the 'disorderly' NGFS climate scenario**

For the non-emissions-based metric, the Trustee has opted to utilise the NGFS 'disorderly' scenario. The Trustee selected this metric as it provides a good assessment of climate risk at a strategic level which the Trustee finds helpful to monitor.

**Figure 8. Change in funding level excluding mortality impact (%) on a solvency basis as at 31 March 2023**



Carbon metrics are proxied where there is insufficient data for funds. ESG and MSCI Carbon Metrics meet the current minimum UK DWP's TCFD-aligned 'Metrics and Targets' regulations. However, regulations are subject to change. Redington monitors developments closely. Certain information ©2023 MSCI ESG Research LLC. Reproduced by permission.

**Key takeaway:** The chart above shows the impact of climate risk on the funding level of the DB Section under the different climate scenarios tested. Due to the combination of transition and physical risk, under the '2°C disorderly' NGFS scenario, the DB Section's funding level is projected to fall by c.4.7%.

## Metric 4 – Portfolio alignment: Science Based Target’s initiative

The Trustee has agreed to adopt the SBTi as the DB Section’s portfolio alignment metric, which captures a company or issuer’s progress against a self-developed decarbonisation target using science-based methodology. The target can be aimed at one or all of: the short-term, long-term or Net-Zero, with each company being scored with a binary yes or no assessment on the following target categorisations: ‘SBTi Approved 2°C’, ‘SBTi Approved Well Below 2°C’ or ‘SBTi Approved 1.5°C’. Each of the categorisations denote the implied global temperature increases that coincide with the decarbonisation target. Whilst the Trustee is aware that the ‘SBTi Approved 2°C’ categorisation will be gradually phased out in line with the initiative’s raised ambition to 1.5°C, the Trustee will continue to report under the ‘SBTi Approved 2°C’ categorisation to capture companies currently on a 2°C path.

### The DB Section’s SBTi scores as at 31 March 2023

Fund	Fund Value	SBTi Score
Multi-Class Credit (Global)	£77.8m	4.7%
Buy & Maintain Credit (Global)	£214.7m	27.5%
Multi-Class Credit (European)	£77.1m	5.9%
Absolute Return Bonds	£136.4m	18.0%
Property	£6.6m	N/A
<b>Overall SBTi Score</b>		<b>17.9%</b>

Where presented, ‘Science Based Target initiative’ scores are all based on look-through data where it is available and never proxied. ESG and MSCI Carbon Metrics meet the current minimum UK DWP’s TCFD-aligned ‘Metrics and Targets’ regulations. However, regulations are subject to change. Redington monitors developments closely. Certain information ©2023 MSCI ESG Research LLC. Reproduced by permission.

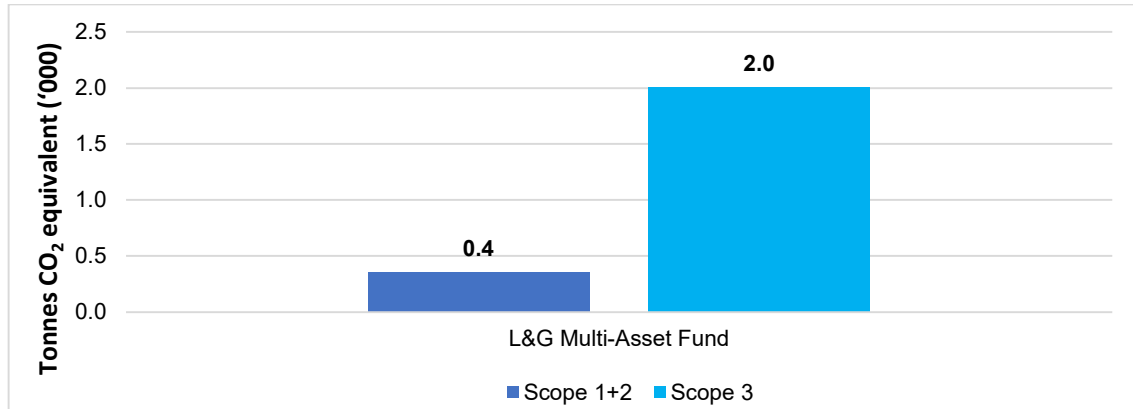
**Key takeaway:** The Scheme’s total SBTi score is 17.9%, meaning that 17.9% of portfolio companies have had their climate targets approved by the SBTi. The Buy and Maintain mandate has the highest score, whilst the Global Multi-Class Credit fund has the lowest scores. This is to be expected, given SBTi submissions are voluntary and are performed only by companies that issue public debt/equity. Managers that invest in non-public securities such as loans (CQS) are therefore expected to have a lower score.

## 4.3 DC Section metrics results

The results of the analysis of the Trustee’s chosen climate metrics as at 31 March 2023 for the funds that make up the DC Section portfolio that classify as a popular arrangement are shown in the following section. The Total Greenhouse Gas (GHG) emissions metric, emissions intensity metric, and ‘Impact on Section assets’ in the ‘disorderly’ NGFS climate scenario metric were calculated by Redington, the Scheme’s DB investment advisor using data provided by Aon, the Scheme’s DC investment advisor. Due to the unavailability of line-by-line data for the Multi-Asset Fund, Redington used generic asset class modelling for these funds. The asset breakdown provided by Aon for the Multi-Asset Fund was used to map each asset back to one of Redington’s generic assets. The carbon metrics for these asset classes are refreshed annually. The Trustee plans to work with Aon, and Redington, to improve the data used for the DC Section’s metrics in the Scheme’s next report. More details are provided in Appendix B.

**Metric 1 – Total Greenhouse Gas (GHG) emissions (Scope 1, 2 & 3) – Total carbon emissions (tonnes CO2 equivalent)**

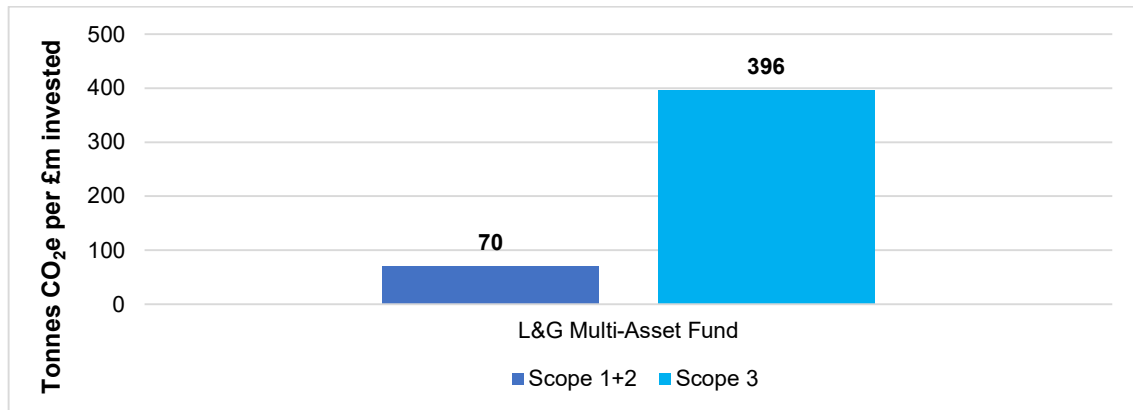
**Figure 11. Total carbon emissions for the popular arrangement of the DC Section as at 31 March 2023**



**Key takeaway:** The total emissions of the popular arrangement of the popular arrangement of the DC Section is around 1% of the total emissions of the DB Section.

**Metric 2 – Emissions intensity (Scope 1, 2 & 3) – Carbon footprint (tonnes CO2 equivalent per million pounds invested)**

**Figure 12. Carbon footprint for the popular arrangement of the DC Section as at 31 March 2023**

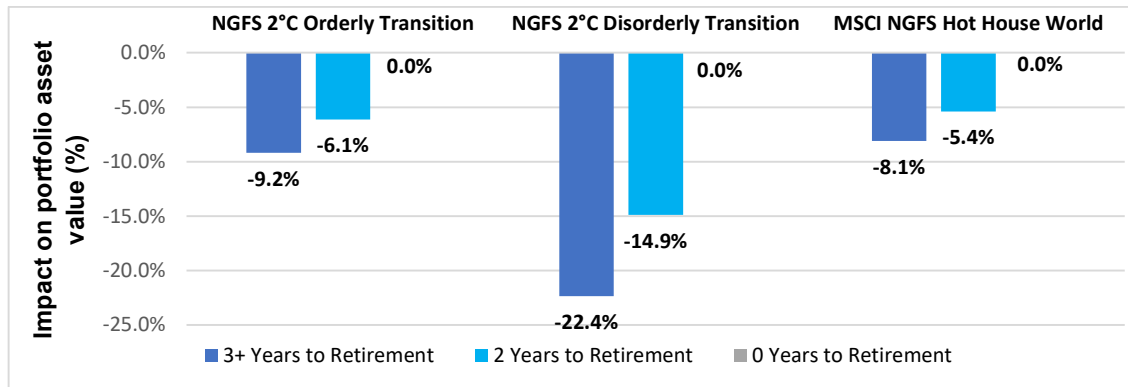


**Key takeaway:** The carbon footprint of the popular arrangement of the DC Section (excluding the cash fund as it has no carbon emissions) is of a similar emissions intensity to the DB Section assets (excluding cash and LDI).

**Metric 3 – Additional climate change: Impact on DC Section asset value in the ‘disorderly’ NGFS climate scenario**

As the funding level is not applicable to the DC Section, the impact on portfolio asset value is shown for this metric.

**Figure 13. Impact on Lifestyle Investment Portfolio value as at 31 March 2023**



**Key takeaway:** The above figure shows how the asset allocation translates into lower levels of risk in each scenario as members de-risk as they approach retirement. When the members retire, no climate stress is currently applied as the profiles are invested entirely in the Cash Fund.

**Metric 4 – Portfolio alignment: Science Based Target’s initiative**

Due to the unavailability of line-by-line data for the Multi-Asset Fund, Redington was unable to calculate SBTi scores for the DC Section. The Trustee aims to include these scores in the Scheme’s next Climate Disclosure Report following improvements in reporting methodologies.

**4.4 DB Section target**

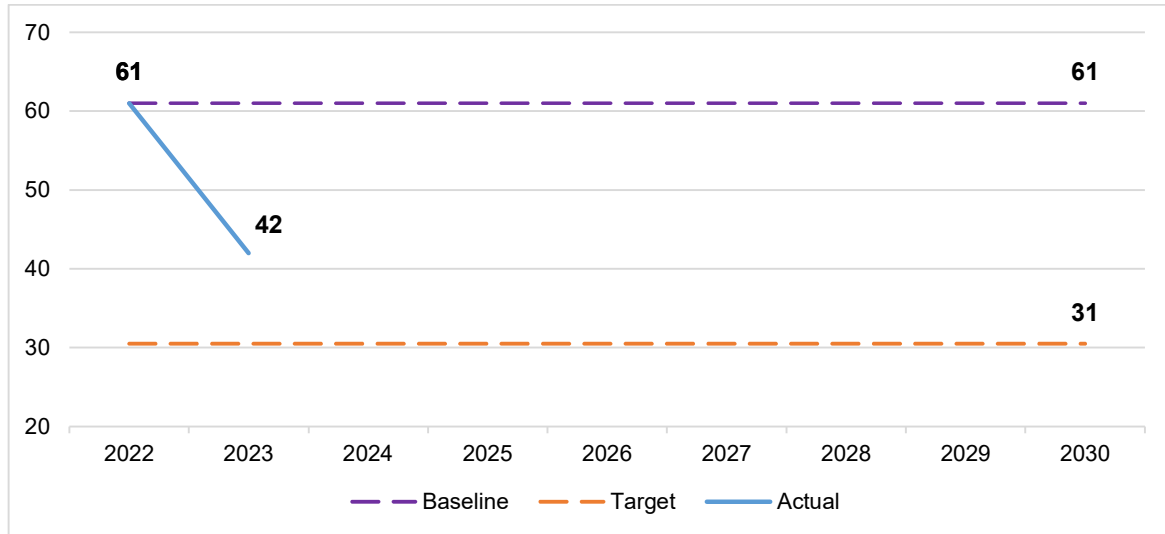
The Trustee believes that it should look to align its investment strategy with achieving the goals of the Paris Agreement. It is generally accepted that to achieve the goals of the Paris Agreement, the world economy needs to reach net-zero by 2050 or sooner.

The Trustee has therefore set an aspirational long-term target of net-zero scope 1, 2 and 3 emissions by 2050, with an interim target of reducing the emissions intensity of the Buy & Maintain credit holdings by 50% by the year 2030, using a base year of 31 March 2022 to monitor progress against this annually. This is measured using the Carbon Footprint metric selected by the Trustee, more details on which are included in Appendix B. The interim target is the target that has been selected in accordance with the DWP’s regulations, and Figure 14 below relates to the progress towards the interim target. The Buy & Maintain holdings were selected as this mandate is the only segregated non-LDI mandate that the DB Section invests in; there is therefore more scope to directly influence the manager’s actions to reduce emissions. The Trustee is aware that progress towards this metric may not occur in a linear fashion and the carbon footprint of the mandate may increase in some years and decrease in others. It is, however, the trend over time that is important and will be the key focus of the Trustee. Due to its relatively small size, the Trustee has not set a target in relation to the DC Section.

The Trustee has, with input from its external advisors, assessed the feasibility of such a target by considering the anticipated changes in the DB Section’s asset allocation over time. The Trustee intends to engage with its Buy & Maintain credit manager to formally apply limits on the emissions intensity of the portfolio where this is consistent with the investment risk and return objectives of the mandate and wider portfolio. Climate credentials will also be strongly considered in any ongoing and future manager appointment exercises. This target is embedded within the governance, strategy, and risk management processes through its inclusion in the ESG reporting that is provided annually to the

Trustee. On an annual basis, the Trustee will measure performance against this target and furthermore determine whether this target remains the most appropriate for managing the DB Section's exposure to climate-related risk. Should the Trustee determine that a more suitable target exists in the future, then this section will be updated accordingly along with the Trustee's reasoning for the change.

**Figure 14. Progress towards the Scope 1 and 2 carbon footprint reduction interim target as at 31 March 2023**



Analysis performed by Redington as at 31 March 2023, using data from MSCI.

Note: All analysis is provided by the Scheme's DB Investment Advisor, Redington Ltd ('Redington'), and the data in the report is sourced from MSCI

**Key takeaway:** The total carbon footprint of the Buy & Maintain mandate has reduced over the Scheme Year from the baseline of 31 March 2022.

## APPENDIX A: Scenario Analysis

The Network of Central Banks and Supervisors for Greening the Financial System ('NGFS') is a group of 91 central banks and supervisors and 14 observers committed to sharing best practices and developing environment-related risk management in the financial sector to support the low-carbon transition. The NGFS scenarios have been developed to provide a common starting point for analysing climate risks to the economy and financial system. They incorporate important themes including increasing electrification and a spectrum of new technologies to tackle remaining hard-to-abate emissions.

NGFS explores scenarios consistent with the framework (see figure to the right) published in the First NGFS Comprehensive Report covering:

- **Orderly (1.5°C or 2°C)** - climate policies are introduced early and become gradually more stringent. Both physical and transition risks are relatively subdued.
- **Disorderly (1.5°C or 2°C)** - higher transition risk due to policies being delayed or divergent across countries and sectors. For example, carbon prices would have to increase abruptly after a period of delay.
- **Hot house world** - some climate policies are implemented in some jurisdictions, but globally efforts are insufficient to halt significant global warming. The scenarios result in severe physical risk including irreversible impacts like sea-level rise.

### Limitations of NGFS scenarios

Stress tests are based on scenarios constructed by the NGFS in June 2021 and therefore present a world view as at that date and have not been updated since.

Stress tests are based on a strategic mapping of the Scheme's assets to Redington's generic asset class universe and do not consider the individual composition of the Scheme's funds.

Redington proxies are based on index composition as at December 2022 and do not allow for changes since. Redington asks users of these stresses to bear this in mind when reviewing stresses of assets with more volatile sector compositions such as those with significant Momentum-style tilts.

## APPENDIX B: Carbon Emissions Analysis for the DB and DC Sections

Where possible and where there is reasonable data coverage, the Trustee monitors 'line-by-line' emissions reporting for funds. These tend to be more generic, long-only asset classes such as corporate credit. However, for funds with less than 50% coverage, funds with more than 2% in short positions, and illiquid assets, the Trustee monitors 'asset class level' carbon estimates in the absence of reliable, reported line-by-line emissions data from MSCI. The Trustee notes using asset class modelling of emissions for assets where this data is not available enables a more holistic view of the Scheme's total portfolio emissions, albeit recognising that the modelled data is not perfect.

Redington, on behalf of the Trustee calculates the carbon emissions for a series of building blocks, proxied using equity and credit indices that are mapped to the rest of the asset class universe, mapped in line with Redington's risk and return modelling assumptions. The modelling of this generic universe is reviewed on an annual basis and centrally approved by Redington's Investment Strategy Committee. Where the asset class proxy is unavailable, a judgement has been made based on the nature of the fund on a best endeavours basis. This is done for:

- **Total Greenhouse Gas (GHG) Emissions (tCO<sub>2</sub>e):** Total carbon emissions associated with the underlying investments of a portfolio. On a portfolio level, issuer's emissions are scaled by ownership – the total portfolio metric is a sum of the proportionate carbon emissions of portfolio companies based on the investor's ownership share.

- **Carbon Footprint (tCO<sub>2</sub>e / EVIC £m invested):** Measurement of the estimated CO<sub>2</sub>e emissions of a fund per million pounds of EVIC. It is calculated as the Absolute Carbon Emissions normalised by the invested £m.

Redington's data processing systems are reviewed centrally on a quarterly basis by in-house developers and their ESG analytics team. Automated and manual checks on the calculation and aggregation of the ESG metrics are also completed.

Emissions metrics will be calculated in line with the GHG Protocol Methodology, the global standard for companies and organisations to measure and manage their GHG emissions. The GHG Protocol provides accounting and reporting standards, sector guidance and calculation tools. It has created a comprehensive, global, standardised framework for measuring and managing emissions from private and public sector operations, value chains, products, cities, and policies to enable greenhouse gas reductions across the board.

For calculation of the progress towards the Scheme's interim target, the DB Section's Buy & Maintain Credit fund carbon footprint has been calculated using line-by-line asset data both as at 31 March 2023, and 31 March 2022. This is to use as a baseline with which to not only measure progress against, but also to calculate the target carbon footprint.

The table below outlines the proportion of DB Section holdings for which MSCI verified issuer reported emissions data was available for each mandate and a Scheme-level total.

DB Section Fund	MSCI Climate Metrics Coverage
Multi-class Credit (Global)	0.0%
Buy & Maintain Credit (Global)	88.3%
Multi-class Credit (European)	74.2%
Absolute Return Bonds	76.1%
Property	0.0%
LDI	0.0%

### Limitations of Carbon Metrics

TCFD based regulations require portfolios to report on their climate metrics without asset class adjustments. Therefore, metrics in funds with a lower coverage (below 80%), or in multi-asset funds and liquid / semi-liquid credit need to be evaluated with more context. This is because a low coverage means a larger part of emissions are unknown, and because the carbon risk of equity holdings will tend to be higher than that of credit holdings.

Specific line-by-line modelling of emissions is currently available only for publicly listed equity and credit assets. For unlisted asset classes, we currently carry asset class-level estimations of carbon emissions. This gives you a broad and longer-term understanding of what the portfolio's emissions are and where the biggest amount of emissions come from. This is enough from a strategic asset allocation perspective but will not capture specific actions managers are taking to reduce their CO<sub>2</sub>e footprint.

Due to lags in company carbon reporting and database updates, carbon footprint numbers have a one-to-two-year lag. Redington's carbon numbers are updated at the start of every year.

## APPENDIX C: An output of impact of climate change on mortality

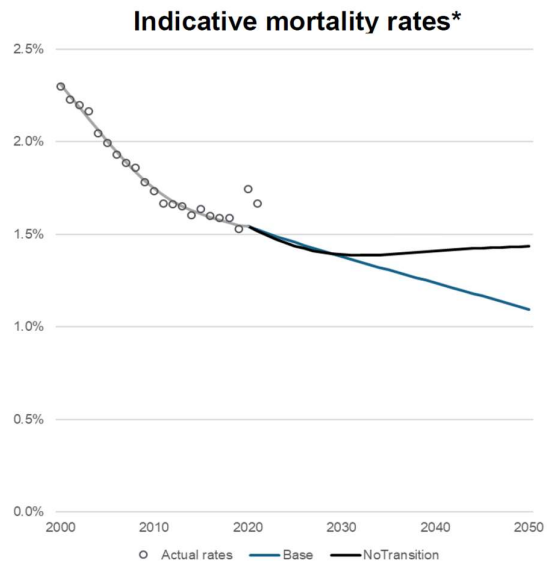
### No transition (Hot House World)

#### S01. No Transition

Limited consideration is given to environmental challenges. Governments and businesses rely on the (false) hope that market forces will provide engineering solutions to mitigate and adapt to climate change naturally, without worldwide government intervention. In the short-term more money may be spent on health services, perhaps reducing mortality slightly.

There is growing awareness of a changing environment and the damaging effects a lack of action is having, over the intermediate term. There is a higher incidence of damaging storms, water shortages, higher pollution levels and reduced agricultural yields (leading to higher food prices). Markets become more volatile and climate change begins to have a growing drag on economic growth and asset returns. In such an environment, there may be no long-term future improvements in mortality (consistent with what we saw between 2014 and 2018).

In terms of the direct climate impacts, fewer deaths from warmer winters may more than offset any impact of heatwaves but the impact is likely to be marginal.



\*Pension scheme (SAPS S3PMA) mortality  
Standardised using European Standard Population 2013  
Males aged 50-90

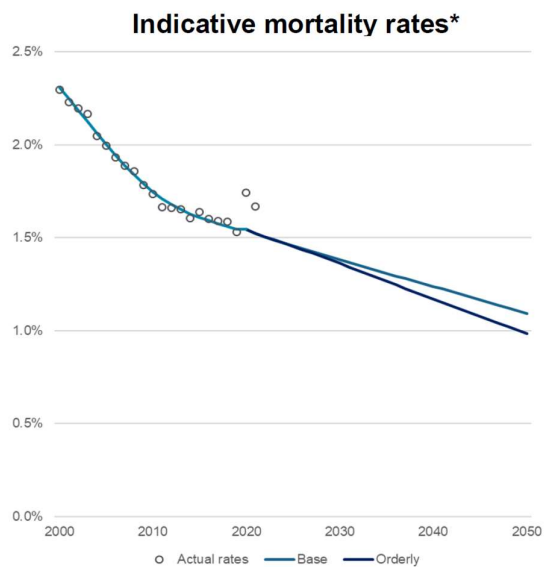
### Disorderly transition

#### S04. Orderly Transition

Over the first three years, the global economy experiences a period of turmoil and lower growth as the economy arduously divests away from fossil fuels. Global growth and market returns remain strong relative to the base case in the long-term, supported by a brighter sustainable outlook and the positive spill-over effects from green policy adoption.

Disruption to health and social care services, and damage to related infrastructure, due to extreme weather (potentially coinciding with increased demand) may increase mortality. However, the disruption is likely to be short-lived.

In longer-term, better air quality and improved health conditions may lead to higher longevity: overall around a 0.5 year improvement in life expectancy for the average 60-year-old.



\*Pension scheme (SAPS S3PMA) mortality  
Standardised using European Standard Population 2013  
Males aged 50-90



## Orderly transition

### Liability impact of each scenario

Redington scenario	Aon Scenario	Aon assumed Long-term improvement in mortality	Ultimate liability impact (age 60) from mortality
N/A	Base case	1.5% p.a.	-
No Transition	No Transition	0.0% p.a.	-4%
Fast Transition	Disorderly	1.0% p.a.	-1.5%
Slow Transition	Orderly	2.0% p.a.	+2%

### Modelling Assumptions:

- Data used: deaths and populations for years 1960-2020 as published by the Office for National Statistics ('ONS') and used by the Continuous Mortality Investigation ('CMI') in the industry standard CMI mortality projections model CMI\_2020. 2021 data added to historic data points (but CMI model not updated to CMI\_2021 at this stage).
- For charts, mortality standardised using the European Standard Population 2013 for ages 50-90 as set out in this paper: Revision of the European Standard Population -Report of Eurostat's task force -2013 edition -Products Manuals and Guidelines -Eurostat (europa.eu).
- Model: industry-standard mortality projections model CMI\_2020 with varying parameters to reflect short-and long-term impacts of different scenarios on mortality. The key parameters used were the Initial Addition (A) parameter which increases or decreases improvements in the near-term, and the long-term rate parameter (LTR) which increases or decreases improvements in the long term. Adjustments were applied to assumed base mortality to ensure that the rate used in 2020 was the same across all scenarios.
- In the charts in the presentation, male mortality rates are used, assuming standard (SAPS S3PMA) mortality rates. Circles for "actual rates" are based on a run of the CMI model without using the standard smoothing parameters.
- Charts illustrate mortality rates up to 2050, but rates were provided up to 2150 to enable liabilities to be calculated. Descriptions of each scenario and its possible impact on future mortality (short-term and long-term) are provided in the scenario slides.
- Liability impacts of each scenario were calculated based on the ratio of male life expectancy at age 60 and rounded to the nearest 0.5%. It is noted that the impact could be different depending on discount rate. A difference might also be expected for joint life annuities although it's not likely that they will be significantly different given that figures are rounded to 0.5%.

**Limitations:**

These scenarios provide an indication as to what might be expected in particular scenarios, to provide an impact of mortality on liabilities to place alongside the impact from financial variables on the liabilities and the impact on assets from investment returns of the given scenario. The scenarios are not intended to provide the highest or lowest possible outcomes, and are not intended to show what will happen, rather they give a reasonable range of impacts against which to consider the possible impact of climate change on a particular pension scheme. The scenarios are deliberately not given likelihoods, we have not sought in any way to estimate how likely each scenario is.

Scenarios are essentially expressed relative to a pension scheme’s current position (i.e. the central scenario). If a pension scheme is already specifically reflecting a particular belief on the current path (for example, if it is believed that we are heading to a “No transition” scenario) then variations should be expressed relative to that scenario rather than the central one, otherwise the liability impact of that scenario would be incorrect for that scheme. At this stage we don’t believe pension schemes are reflecting views on climate change in this way, but this may be (explicitly or implicitly) the case in future.

## APPENDIX D: Details of Penfida’s Covenant Climate Scenarios

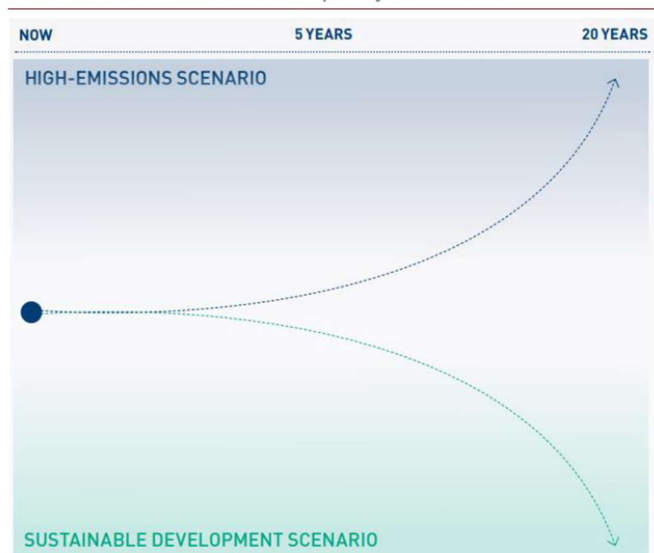
**High-emissions scenario:**

Intergovernmental Panel on Climate Change (“IPCC”) representative concentration pathway (“RCP”) 8.5 high emissions scenario which represents a future where levels of GHG emissions continue to rise throughout the 21<sup>st</sup> century resulting in warming of c.4.3°C by 2100, relative to pre-industrial temperatures.

**Sustainable development scenario:**

The World Energy Outlook 2020 Sustainable Development Scenario (“SDS”) which models a significant reallocation of investment away from fossil fuels towards a low carbon economy/renewable energy and GHG reductions in line with achieving the Paris Agreement of limiting global warming to 2.0°C, with anticipated warming of c.1.6°C by 2100, relative to pre-industrial temperatures.

Climate and environmental policy scenarios



## APPENDIX E: Glossary of Terms (ESG and Carbon Metrics)

**Enterprise Value Including Cash (EVIC):** Defined as the sum of market capitalisation of shares and book values of total debts and minority interests at fiscal year end. No deductions of cash or cash equivalents are made to avoid potential negative enterprise values. This is the recommended denominator metric for carbon attribution according to the GHG Protocol, the global standard for carbon accounting endorsed by the European Union and the DWP.

**Estimated Total Carbon Emissions (tonnes):** Represents the total share of Scope 1, Scope 2 and Scope 3 carbon emissions a fund is responsible for. Please note the metric is sensitive to the investment holding size in the fund.

**MSCI Climate Metrics Coverage:** The proportion by value of a fund for which carbon metrics are available from MSCI. Climate metrics are proxied where coverage is low and in this case, the MSCI Climate Metrics Coverage will be assumed to be.

**Tonnes of Carbon Dioxide Equivalents (tCO<sub>2</sub>e):** Tonnes of greenhouse gases including methane, nitrous oxide, carbon dioxide, and fluorinated gases. Given the abundance and prominence of carbon as a greenhouse gas, all the other gasses are considered carbon equivalents.

**Scope 1 & 2 Carbon Footprint (tCO<sub>2</sub>e/£m invested):** Measurement of the Scope 1 & 2 CO<sub>2</sub>e emissions of a fund per million pounds of EVIC. Scope 1 emissions refer to those which are directly connected to the production of a company's product or service. For example, the burning of fossil fuels to power the electricity grid. Scope 2 emissions refer to those from the electricity used to power the facilities and machinery of a company.

**Total Carbon Footprint (tCO<sub>2</sub>e/£m invested):** Measurement of the CO<sub>2</sub>e emissions of a fund per million pounds of EVIC using Scope 1, Scope 2 and Scope 3 emissions. Given a company's direct Scope 1 emissions will inevitably be another company's indirect Scope 3 emissions, aggregating the individual Scope emissions results in a higher number of emissions than exists. To mitigate double-counting, we apply a scaling factor in accordance with MSCI's methodology. This metric may be used to assess a fund's contribution to global warming versus other funds. Previous Total Carbon Emissions (tCO<sub>2</sub>e/£m invested) are estimated by looking at the funds' respective holdings and emissions 12 months ago.

**Weighted Average Emissions Intensity (tCO<sub>2</sub>e/sales £):** A weighted average of the scope 1 & 2 emissions intensity of companies, defined as a company's total emissions divided by its total sales. This metric can be interpreted as a measure of the relative carbon efficiency of a fund, can be used for sovereign assets, and is not affected by movements in companies' valuations. However, it is sensitive to movements in price.

**SBTi Score:** The Science-Based Targets initiative ('SBTi') sets out a framework through which companies can set out their decarbonisation pathway and have them assessed against the goals set out in the Paris Agreement – limiting global warming to 1.5°C above pre-industrial levels or well-below 2°C. The SBTi Score is the proportion of assets invested that are classified as being Paris-aligned.

For SBTi scores, Redington use line-by-line data to calculate the proportion of assets invested that correspond to each SBTi target category in a fund/portfolio. A scheme-level score is then calculated as the value weighted average of the fund level scores.