

Syngenta UK Pension Fund

Climate change report 2023

For the scheme year ending 31 March 2023

<https://www.syngenta.co.uk/uk-pension-trustee>

Table of Contents

Introduction..... 4

Section 1: Governance..... 5

Section 2: Strategy 7

Section 3: Risk Management..... 16

Section 4: Metrics and Targets 19

Appendix – IA scenario analysis..... 26

This page is intentionally blank

Introduction

The Trustee of the Syngenta UK Pension Fund (hereinafter referred to as the “Trustee” and the “Fund”, respectively) presents its annual report under the Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 (the “Regulations”) for the year ended 31 March 2023. The principal employer of the Fund is Syngenta UK Limited.

The Fund is now subject to the requirement to produce disclosures in line with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), as transposed into UK law in 2021. The aim is to improve and increase reporting of climate-related financial risks and opportunities.

The TCFD framework requires disclosures in four broad categories:

- **Governance:** around climate-related risks and opportunities
- **Strategy:** the actual and potential impact of climate-related risks and opportunities on the strategy and financial plans of the scheme
- **Risk management:** how the scheme identifies, assesses, and manages climate-related risks
- **Metrics and targets:** the metrics and targets used to assess and manage climate-related risks and opportunities

This report sets out the Fund’s approach to compliance in each of these four areas



Section 1: Governance

The Trustee Board has identified climate change, alongside other Environmental, Social and Governance (ESG) factors, as an important risk and opportunity which requires sustained, long-term oversight and management. The Trustee Board has ultimate responsibility for setting the Fund's strategy, policies, and actions in this area.

The Trustee has delegated the day-to-day management for ensuring that the established policy for monitoring climate-related risk and opportunities is integrated in the Trustee's investment strategy, risk management and decision making to the Investment Committee (IC). The IC is a sub-committee who handle the majority of investment matters and makes recommendations to the Trustee, where decisions are required to be taken by the Trustee. In 2023 they met 7 times. The Audit Committee also supervises the Fund's risk management framework including the risk register and typically meets 5 times a year. The Fund has a dedicated Investment Account (IA) Committee that focuses on matters arising for the IA strategy including risk management. This committee meets 3 times year. The Fund also has a Valuation & Covenant Committee which considers matters that may impact the covenant, including climate risks, as well leading on actuarial valuations.

The main parties that support the Trustee in implementing its policies in relation to climate change and Sustainable Investment and risk management more widely are:

- **Investment consultant (WTW)** – Helps the Trustee to formulate investment beliefs and to reflect these in the Fund's investment policies and strategy. The investment consultant also helps the Trustee with conducting scenario analysis, advises on how climate-related risks and opportunities might affect the Fund over the short, medium, and long term and provides ad hoc specialist advice on a variety of pension matters, including risk management.
- **Investment Managers** – Responsible for managing climate change risks and opportunities within their mandates as per their guidelines. This includes the selection of assets as well as stewardship activities. The Trustee receives reporting on an annual basis to assess the underlying managers' competencies. This provides an assessment of the managers' approach to ESG integration and stewardship activities as well as consideration of a balanced scorecard of climate metrics which provide insight into the managers' underlying exposures to climate change risks and opportunities.
- **The Fund Actuary (WTW)** - The Trustee also takes advice from the Fund's Actuary WTW, who performs valuations of the Fund and who advises on how climate-related risks and opportunities might affect the Fund's funding position over the short, medium, and long-term and the implications for the Fund's funding strategy.
- **The Covenant adviser (Penfida Limited London)** - The Covenant Adviser, Penfida Limited London, who provides advice to the Trustee on the ability of the Sponsor to support the Fund, assessing the financials of the business as part of each formal valuation and ad hoc covenant advice between actuarial valuations as and when either Penfida Limited London or the Valuation & Covenant Committee feel it would be useful.
- **Dedicated pensions team** – The Trustees are supported by a dedicated pensions team within the sponsoring employer who, whilst not having any decision-making powers, assist the Trustees when it comes to organising Trustee meetings, day to day governance requirements and implementing strategy decisions.

The key overarching investment policies are detailed in our Statement of Investment Principles (SIP) which can be found online at the following links:

[Investment Account \(IA\) Section](#)

[Retirement Account \(RA\) Section](#)

The Trustee has considered how sustainability and ESG factors should be taken into account in the selection, retention and realisation of long-term investments. This includes climate change which the

Trustee recognises can present potentially material risks to the portfolio but could also potentially present new investment opportunities. The SIP also sets out the Trustee's views with regards to Sustainable Investments. The Trustee reviews the SIP at least annually and without delay after any significant change in investment policy.

As part of the day-to-day management of the assets, the Trustee has largely delegated to the Investment Managers consideration of climate risk as part of their overall management process. As a result, the Trustee expects the Fund's Investment Managers, where appropriate, to have integrated ESG factors as part of their investment analysis and decision-making process. The Trustee reviews managers with respect to relevant matters including performance and risk as well as ESG factors. The IC meet with each manager on an annual basis and ask them to present on the managers' policies on ESG, stewardship, and engagement. In 2023, the IC updated the policies in the SIP (approved by The Board) and the IC have also shared a copy of the latest SIP with the Investment Managers to inform them of the Fund's Stewardship policy and priorities (including climate change) and asked them to provide detail on how they have performed in light of the policy. The IC keep records of manager presentations and meeting minutes. The IC and Trustee receive performance monitoring updates on a semi-annual basis from WTW with performance updates provided monthly.

The Trustee received ESG focused training in 2021 and 2022 which covered climate risks and TCFD requirements and training on climate scenario analysis. The training sessions and the regular IC and Trustee Board meetings provide an opportunity for the Trustee to assess the competency of themselves and their advisers, and receive updates on climate-related risks and opportunities and discuss output from the processes with relevant advisers. The sessions also provide a forum for open dialogue between the Trustee and its advisers and provide the opportunity to question or challenge information provided to the Trustee. The Trustee seeks to ensure an appropriate amount of time and resource is allocated to overseeing all risks and opportunities relevant to the Fund, including climate-related risk and opportunities.

The Trustee has also reviewed the competency of their investment advisers, WTW, to determine that they can appropriately advise the Trustee in matters on climate change. The review was conducted as part of the June 2022 strategy day. The IC have also set a specific objective for WTW as Investment Consultant relating to supporting the Fund when it comes to climate risk.

The Trustee also recognises the importance of its covenant adviser being able to identify and quantify climate related risks in relation to the Sponsor. After the acquisition of Penfida by XPS during the year, the Trustee met with Penfida to assess their ongoing suitability as covenant adviser. They satisfied the Trustee that they have appropriate competencies and were retained.

Section 2: Strategy

The Trustee believes that part of its fiduciary duty is to manage the impact of climate change and associated risks and opportunities on the Fund's investment portfolio. Climate change is a financially material consideration, and the Trustee has determined that climate change could have a negative or a positive impact on the Fund from the point of view of the returns available on its investments, its funding position, the potential impact on IA members' retirement outcomes, and the support made available by the Sponsor.

The Trustee has looked at the potential effects of climate change over a range of identified time horizons for the Fund using 31 March 2023 as the baseline, the first Fund year during which the TCFD requirements came into effect for the Fund.

Short Term

RA Section - The period to 2025 broadly aligns with the triennial valuation period, when any sudden shock to the portfolio would be crystallise: this is when investment strategy will be reviewed.

IA Section - The period to 2026 is considered to be the short-term to allow for the evolution in regulations and allow for data availability to improve.

Medium Term

The period to 2030 was selected as a medium-term timeframe for the RA and IA Section: the mid-point between the short and long-term time horizons that is also aligned with the year of an Actuarial Valuation for the RA account.

The Trustee has set a target for both Sections with the medium-term date in mind and believe this is an appropriate timeframe given how risks and opportunities are expected to materialise. The targets can be found in Section 4 Metrics & Targets.

Long Term

RA Section – The period to 2035: this is consistent with the likely time to winding up the Fund having fully bought in all liabilities. The Trustee recognises that the member timeframe is much longer and when considering appropriate insurers for any future buy-ins will consider their approach to climate risk.

IA Section – The period to 2050 is consistent with the Paris agreement timeframe and more aligned to the benefits timeline.

As part of its analysis around the climate risk faced by the Fund, the Trustee has split out the following elements of this risk:

- **Physical risks:** Physical risks relate to the direct effects of climate change on the Fund and its members. These risks are expected to primarily impact the Fund in the long term (12 years or more). They are expected to be limited in scope to the effects of climate change-related weather (impacting the liability side) and other natural events on the businesses of invested companies (affecting the asset side), and the effect of changing temperatures on the mortality of Fund members. These could have varying effects on the funding and investment strategy of the Fund, but the direction and size of the effects is unlikely to be clear for a considerable period of time. Physical risks will create drags on the Fund's asset return and liability streams, having a more significant impact in the longer term.
- **Transition risks:** Transition risks are an indirect impact of climate change, relating to the risks and opportunities arising from efforts made to transition towards a net-zero economy (both

domestically and globally) in order to limit climate change. For example, this may be a relatively short-term cost for a business to meet new climate regulations. These risks and opportunities are generally expected to occur in the medium term, with some occurring in the short term.

Since the Trustee considers the short term to relate to the next 2 years, up to the next investment strategy review, for the RA Section (2025), and the next 3 years for the IA Section (2026) this period is likely to be defined primarily by transition risk. In the short term market risk will predominantly be the risk of a sudden repricing of assets in response to changing views on climate transition, although there is some exposure to physical risk. The impact of climate change on the Fund in this time will depend heavily on regulation changes and the improvement in understanding emissions data. Over this period the risk management tool for the Trustee will be the ability of the Fund's Investment Managers to identify those companies which are likely to be most affected by climate transition, both positively and negatively, and to position the Fund's investments accordingly. For the IA Section, where the majority of assets are managed passively the Trustee is seeking improvements in the coverage and quality of the emissions data, in order to consider whether strategic changes to the investment strategy are appropriate. To further manage transition (and physical risk) the equity fund in the IA Section default does explicitly consider the carbon, water, energy, waste and ESG scores of companies as part of its stock ranking process.

Medium-term risks are those that will be present in the next 2 (or 3 for the IA) to 7 years. These risks will be a combination of transition risks, the costs of which might strain business profitability and increasing physical risks. This is expected to be the most important period where action taken will have a definitive impact on the ability of the global economy, and the Fund, to reach the desired net zero targets. To manage these risks, the Trustee expects its Investment Managers and advisors to help identifying those companies likely to be most affected negatively by climate transition risk, those which might offer investment opportunities as they adapt to the transition and companies subject to future potential physical risks. The Trustee expects its Investment Managers and advisors' ability to engage with underlying companies, regulators and other investors over this period will be key to managing the risks relating to climate change.

In the long-term (12+ years) the physical risks resulting from climate change will become material. The precise impact of these is very difficult to ascertain at this point, limiting the ability of the Trustee to manage these risks. The Trustee expects the Fund's Investment Managers to work over the coming years to improve the quality of data and the resources available to better understand the risks and opportunities and to position the Fund's investments accordingly. The Trustee will also continue to explore the Fund's exposure and to consider what further changes might be made to ensure the security of members' benefits within both the RA and IA Sections. The Fund has a reasonable allocation to longer-dated assets and so the Trustee understands the impact the longer-term risk can have on the investment strategy.

Climate Scenario Analysis

The Trustee has carried out climate change scenario analysis in partnership with its investment and actuarial advisers across the RA and IA Section. The aim of this analysis was to help the Trustee to quantify the potential effects of climate change on the Fund's assets, liabilities, and covenant. The Trustee considered four separate scenarios which are in part defined through their success, or otherwise, in meeting the Paris Agreement target of a sub-2.0°C temperature rise.

Whilst there were no issues with the data or its analysis which have limited the comprehensiveness of the assessment of the scenarios, the Trustee recognises that there is a great deal of uncertainty around the assumptions used, and the expected outcome, under each of the scenarios. The scenarios chosen do not necessarily reflect the most severe outcomes possible from climate change.

These scenarios have been considered as the Trustee believes that they cover a plausible and comprehensive range of climate outcomes over the long-term:

1. A clear transition narrative that describes the socioeconomic pathway, both globally and regionally, from climate policies implemented and resulting in technological and societal shifts that occur.
2. Modelled emissions pathways, (typically communicated using the Representative Concentration Pathways developed by the IPCC) resulting from the implementation of public policies and technologies resulting in the level of temperature rise.
3. A set of economic costs and benefits resulting from physical and transition risks and opportunities.
4. The impact on financial returns at the asset class level.

The Trustee understands that WTW made a series of simplifying assumptions to shield the analysis from being obscured by other factors. All the analysis was conducted as at 31 March 2022.

The key assumptions were as follows:

- No change to the level of prudence in the discount rate relative to the yield on government bonds
- The impact of the climate scenarios is experienced in a linear way over the projection period
- The impact of climate change is time dependant, with transition risk being front-loaded over the first 10 years, and physical risk following over the remainder of the projection period (up to 20 years)
- Investment return assumptions are calibrated from the long-term historical experience across a wide range of countries, but then further calibrated to reflect future returns being lower than suggested by the historical track record reflecting WTW's belief that markets are more expensively priced than they have been and a number of the historic tailwinds for markets (debt, demographics, globalisation) are likely to turn into headwinds in the immediate future and new headwinds such as climate change will emerge
- Gilts will not be materially impacted by climate risk over the short term

While each of the scenarios selected reflect pathways, it is broadly acknowledged that there is material uncertainty in all aspects of climate scenario modelling. It is not yet known which energy transition pathway will transpire and each could look quite different to how it is modelled. The projections served to illustrate the possible future range of long-term returns from different asset classes and their inter-relationship, but it is recognised that no economic model can be expected to capture perfectly future uncertainty, particularly the risk of extreme events. The projections also serve to illustrate the potential variability, but it is recognised that these are subjective, and arguments could be made for different outcomes. The scenario analysis takes no account of developments after the date of its presentation to the Trustee.

The following scenarios were used in the analysis:

	Lowest Common Denominator	Inevitable Policy Response	Global Coordinated Action	Climate Emergency
Description	A “business as usual” outcome where current policies continue with no further attempt to incentivise further emissions reductions. Socioeconomic and technological trends do not shift markedly from historical patterns.	Delays in taking meaningful policy action result in a rapid policy shift in the mid/late 2020s. Policies are implemented in a somewhat but not completely co-ordinated manner resulting in a more disorderly transition to a low carbon economy.	Policy makers agree on and immediately implement policies to reduce emissions in a globally co-ordinated manner. Companies and consumers take the majority of actions available to capture opportunities to reduce emissions.	A more ambitious version of the Global Coordinated Action scenario where more aggressive policy is pursued and more extensive technology shifts are achieved, in particular the deployment of Negative Emissions Technologies at scale.
Temperate rise	~3.5°C	~2.0°C	~2.0°C	~1.5°C
Renewable energy by 2050	30-40%	80-85%	65-70%	80-85%
Physical risk level (longer term)	High	Low – Medium	Low	Low
Transition risk level (shorter term)	Low	High	Low – Medium	Medium – High

RA Section - Impact of Climate of the Fund’s Funding Level

The analysis examined the effect the climate scenarios had on both assets and liabilities over the next 20 years and how that impacts overall funding. The results are outlined below. The numbers illustrate

that transition costs (which are assumed to occur in the first 10 years of the modelling) are likely to be larger than physical costs due to the relatively short time horizon of the Section. There are potentially sizeable drags on returns from transition in both the Climate Emergency scenario and the Inevitable Policy Response scenario, with the physical costs from 10 years onwards less significant as they have yet to fully materialised (and have a discounted present value). From a financial perspective, the most harmful scenario to assets is the Inevitable Policy Response scenario. The impact on the Fund's liabilities has been calculated by modelling four different mortality outcomes, a large and moderate increase and decrease in life-expectancy before assigning a probability of each outcome in the scenarios above. The impacts on the Fund's liabilities are net of the pensioner buy-in policy.

The results below are not forecasts of the Fund's funding position but are instead used to quantify potential outcomes under the specific illustrative scenarios.

The Least Common Denominator scenario actually results in a better evolution of funding versus the base case over the period considered, as some of the worst physical effects on asset prices tend to be in the 2040s, whilst mortality effects (an undesirable worsening of longevity, which is however advantageous to funding) impact more quickly.

Table 1: Impact of climate drags on Funding Level

	Asset Return Impact pa.	Liability Return Impact pa.	Projected Funding Level in 2030	Expected year of funding target (103%)
Base case	0	0	103.0%	2030
Least Common Denominator	-0.08%	-0.30%	106.3%	2028
Inevitable Policy Response	-0.14%	-0.12%	103.0%	2030
Global Coordinated Action	0.02%	0.20%	101.9%	2051
Climate Emergency	-0.06%	-0.03%	102.9%	2031

The timing of the impact from climate change is uncertain. Therefore, as part of the analysis the Trustee has assessed the impact by looking at different time horizons. The below table shows the asset and liability impacts by assuming they occur as an instantaneous shock (allowing for the entire climate change impact to be capitalized instantaneously).

Table 2: Impact of instantaneous climate change shock on Funding Level

Scenario	Asset Shock (£m)	Liability Shock (£m)	Changes in deficit (£m)	Change in funding level	Expected year of full funding	Projected Funding level in 2030
Least Common Denominator	-142.4	-107.4	35.0	-2.2%	n/a	99.5%
Inevitable Policy Response	-116.4	-43.0	73.5	-3.3%	n/a	97.9%
Global Coordinated Action	-45.7	75.2	120.9	-4.2%	n/a	96.4%
Climate Emergency	-75.1	-10.7	64.4	-2.7%	n/a	98.8%

As part of the long-term investment strategy the Trustee has set a number of de-risking triggers which the above analysis does not take into account. Therefore, as the funding improves the overall risk in the strategy is reduced. The Trustee anticipates that this will reduce exposure to climate risk.

Conclusion on resilience of RA Section to climate change

The analysis completed shows that climate change is a material but manageable risk and is not outsized relative to the other risks that the Fund faces.

- Climate change is a material risk to the Fund but the buffer within the strong funding level and low risk strategy would be able to absorb this in most scenarios (absent any other downside events).

The scenario analysis suggests that members' life expectancies might increase more slowly (relative to the base case) under some of the scenarios considered. Whilst this would be beneficial to the Fund's funding level, there remains considerable uncertainty relating to the potential impact. Therefore, hedging these liabilities remains an important part of the Fund's risk management. The Fund has implemented two Buy-in's, which cover a portion of the current pensioners to help manage these risks.

IA Section – Impact of climate change on a member's final pot value

The Trustee acknowledges that there are differences between the RA and IA Section when it comes to considering climate risk. As individual members in the IA Section bear their own investment and longevity risks, unlike in the RA Section, climate change is likely to impact members differently. For example, younger members are likely to be more exposed to the long-run physical risks due to their long investment time horizon whilst members close to retirement are more likely to be exposed predominantly to transition risks. Therefore, the modelling focused on 5 different illustrative members, details of which can be found in the Appendix.

The below IA analysis focuses on the potential reduction in final pot value for an early career IA member, compared to a base case, if the impact of climate change materialises as a drag on returns over time. The below table shows this for both the default Drawdown strategy and the previous (pre-2021) default Annuity strategy. Both of these strategies are classified as “popular” arrangements as they hold at least 10% of the total IA assets.

Table 3: Reduction in final pot value of early career IA member

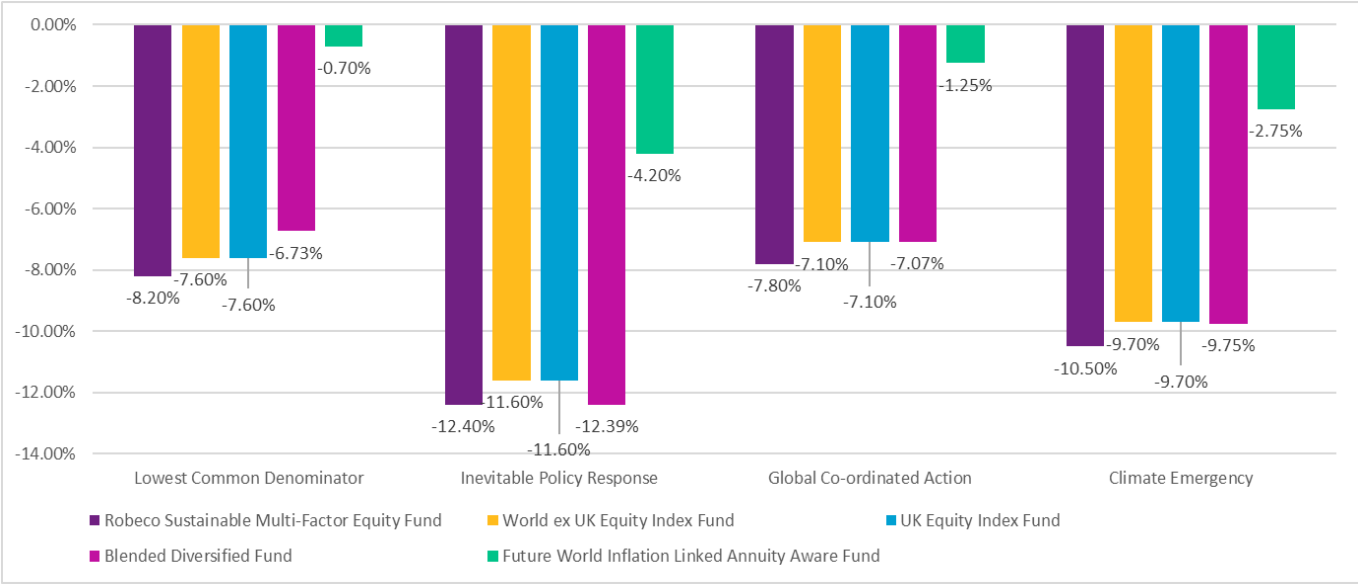
Reduction in final pot value: Early career IA member	Drawdown Lifestyle	Pre-2021 Annuity Lifestyle
Base case	0%	0%
Least Common Denominator	-7%	-6%
Inevitable Policy Response	-8%	-7%
Global Coordinated Action	-5%	-4%
Climate emergency	-5%	-4%

For this illustrative member the most significant scenarios are the Inevitable Policy Response and Least Common Denominator, where later stage transition risks and longer-term physical risks impact more severely than under the other scenarios. The Drawdown lifestyle is more impacted than the Annuity lifestyle as it has a higher weighing to equities, where the returns are expected to be more impacted by climate change than bond investments.

The Appendix shows results from the IA Section scenario analysis for other illustrativemembers.

The Trustee has also assessed the more popular self-select funds as part of the scenario analysis (those which held at least 10% of the total IA assets at the date of the analysis, 31 March 2022). The below graph shows the potential impact to these funds if the impact of climate change materialised as a 1-in-20 “shock” within one year. The biggest impact is under the Inevitable Policy Response where the transitions risk poses the biggest threat. The Robeco Sustainable Multi-Factor Equity Fund is the most susceptible to the climate risk, due to its exposure to emerging markets.

Chart 1: Impact of 1-in-20-year climate change shock on popular self-select funds



Conclusion on resilience of IA Section to climate change

The analysis shows that for members of the IA section climate change is a material risk, particularly for early career members whose longer investment horizon means they could be more severely affected by potential transition and physical risks when compared to members who are close to retirement.

The impact is most severe under scenarios where members have greater exposure to equities. Recognising this the Trustee has managed these risks by:

- Providing a suitable range of self-select funds for members to choose.
- Diversification within default lifestyle strategies to reduce the risk for members closer to retirement who are more vulnerable to adverse market movements.

Impact of climate change on the Sponsor

In order to inform the analysis above, the Trustee has held discussions with representatives from Syngenta AG, the global owner of Syngenta’s Crop Protection and Seeds businesses and the funds guarantor, to provide further detail on how it is working to appropriately manage and monitor climate risks and opportunities.

Syngenta AG, produces an annual ESG report which has been reviewed by the Trustee and their investment advisers. In the 2020 ESG report, Syngenta AG conducted deep dive scenario analysis on five climate-related risks and opportunities to understand their potential financial impact on Syngenta’s Crop Protection and Seeds business by 2030. Two contrary climate-related scenarios were analysed for their impact:

- A low-carbon transition scenario representing a successful transformation of the economies to curb greenhouse gas emissions and limit global warming well below 2°C (i.e., <2°C scenario)
- A physical climate impact scenario in which greenhouse gas emissions are not reduced rapidly enough and physical climate change impacts materialise (i.e., 4°C scenario)

The full results of the scenario analysis can be found in the following report:
<https://www.syngenta.com/sites/syngenta/files/sustainability/reporting-sustainability/Syngenta-ESG-Report-2020.pdf#page=73>

The climate scenario analysis conducted by Syngenta AG in 2020 showed that by the year 2030, growers would be facing increased risks from droughts and floods. Among other insights, the analysis showed that by offering farmers products that can help them adapt to climate change, Syngenta can tap into new market opportunities related to the transition to a low-carbon economy. The Trustee has been reassured by the publicly available information on climate change, and the discussions held with the representative of Syngenta AG to discuss their approach, that it is managing its risks, will benefit from opportunities and overall will be resilient under the scenarios that the Trustee is considering. Specifically, the Trustee has noted that since the first Syngenta AG climate report, strategic changes have been made to improve climate risk management which can be demonstrated as the Syngenta AG CDP Climate Change score improved to A-, from C back in 2020.

The Trustee has also engaged with the Sponsor, Syngenta Limited, to understand how the Syngenta AG analysis can be viewed in the context of Syngenta Limited. Given the strong funding position of the Fund, the Trustee also has a relatively low likelihood of reliance on the Sponsor in the long term horizon.

Syngenta AG's ESG Report 2022 is available on:
www.syngenta.com/sites/syngenta/files/sustainability/reporting-sustainability/Syngenta-AG-ESG-Report-2022.pdf

Section 3: Risk Management

Risk management is of fundamental importance to pension scheme management as all pension funds are exposed to multiple risks. Climate change is a key risk and opportunity and therefore receives particular attention from the Trustee as part of the ongoing risk management processes.

The Trustee seeks to identify, assess, and mitigate relevant risks, including those related to climate change, through its established governance structure detailed in Section 1. The risk register, maintained by the Audit Committee on a quarterly basis, includes climate change as a specific risk. This clearly details the size and likelihood of the risk, the controls in place and the actions the Trustee takes to manage, mitigate, and exploit both this risk and opportunity. Although the Trustee retains ultimate ownership, the risk register clearly sets out the parties that assist the Trustee and Trustee responsibilities. The risk register is monitored on an ongoing basis and reviewed by the Trustee Board on a quarterly basis.

The climate change scenario analysis presented to the Trustee, mentioned in Section 2, provides a holistic overview of the potential impacts of climate change and how they may affect the Fund's funding and investment positions (across assets, liabilities, and covenant). This is an important risk management tool for a top-down risk and opportunity assessment. The scenario analysis was presented in the June 2022 Strategy Investment Committee Day. The analysis highlighted that the Fund is expected to be resilient to the potential impacts of both transition and physical risks, which were considered at an overall Fund level for the RA and IA sections.

The Trustee conducts an annual review of the Investment Managers and underlying Investment Manager policies, processes, and actions in the area of Sustainable Investment, which includes a focus on climate change. The Trustee's policy is to delegate to the Investment Managers stewardship activities such as the exercise of rights attaching to investments, including voting rights, and engagement with relevant persons about matters including ESG considerations. When appointing new Investment Managers and choosing insurers, the Trustee relies upon WTW's Manager Research capabilities, in order to effectively assess the climate related risks and opportunities posed.

Whilst the Trustee's policy is to delegate stewardship activities to the Investment Managers, the Trustee recognises that the responsibility for these activities remains with the Trustee. The Trustee has identified the following stewardship priorities; climate change, biodiversity and corporate governance and communicates these priorities to Investment Managers. The Trustee encourages the Fund's Investment Managers to adopt the voluntary code, the UK Stewardship Code, published by the Financial Reporting Council in July 2010 (and updated in September 2012 and January 2020) intended to promote shareholder activism. The Trustee expects the Investment Managers to cast votes on its behalf in a manner that is consistent with the agreements of the relationship and the Fund's SIP. These votes and engagement are documented on an annual basis as part of the Fund's Implementation Statement.

The Trustee also receives updates from its covenant advisers as a part of each formal valuation, and ad hoc advice between each actuarial valuation as to the ability of the Sponsor to meet its obligations to the Fund. The Valuation and Covenant Committee receive periodic updates from the Sponsor based on publicly available information. Between meetings if there are material changes relating to the Sponsor, the Trustee will seek further information from the Sponsor and utilise the Trustee covenant adviser, Penfida Limited London when necessary.

The Fund Actuary, WTW, who performs actuarial valuations of the Fund and who advises on how variations in experience compare with the assumptions adopted, will support the Trustee in factoring in climate risk as part of the 2023 valuation of the Fund liabilities.

Managing climate risks

In order to manage the Fund's climate risks, the Trustee has developed a structure for a 'Carbon Journey Plan', which the Trustee believes will act as a tool in helping the Fund meet its carbon target

and lead to effective decision-making along the way. The Trustee has set a target for the RA Section of 50% reduction in carbon footprint by 2030, starting with a baseline of 31 March 2022. The investment consultant has estimated that this is equivalent to a 40% reduction versus the end March 2023 (due to a c10% reduction during the year to March 2022 – see 'De-risking below) and the Fund will measure against this target when it produces next year's version of this report.

The Trustees acknowledges that there are a number of ways it will be able to achieve the target:

- **Free Rider** - Recognising common goals across the finance industry, the Fund will expect to benefit from a reduction in emissions due to the actions taken by other market participants, such as the UK Government, and notes that financial markets may move more quickly as companies look to meet their own targets and high carbon industries fall in value or are taken private. However, this effect alone will be insufficient to meet the Trustee's ambitions and goals.
- **Mandate Changes** - The Trustee is reviewing, and will continue to review, mandate guidelines, restrictions and benchmarks. This includes implementing policies to reduce emissions, reviewing investment strategies to understand any disproportionately emitting strategies, and ultimately selling assets that are most exposed to climate risk if deemed necessary to do so.
- **Engagement** - The Trustee will aim to reduce emissions through changing the behaviour of existing companies. This will involve engaging with managers of key mandates and the Fund's buy-in providers and expecting them to do the same with their underlying holdings.
- **Impact Investing** - The Fund already has allocations to sustainable assets through its investments in Greencoat and Robeco (see case studies) and the RA Section investment strategy is mature, therefore the Trustee will continue to review the investments it already have in place.
- **De-risking of the RA Section** – The Fund's Journey Plan envisages a significant amount of de-risking over the next 5 years, which is expected to reduce portfolio emissions due to a higher weighting of UK government bonds and lower weighting of equities, particularly in emerging markets. Given the improved funding status the Fund has been ahead of journey plan and a large proportion of this de-risking has occurred prior to the publication of the Fund's first climate report.

The Trustee actively seeks climate related opportunities. The below case studies provide examples of such investments that are currently in the Fund's portfolio.

Case Studies

GREENCOAT SOLAR II LP

Greencoat's solar business acquires and manages ground mount solar assets in the UK. Each solar farm has a life span of over 25 years and preserves natural habitats as far as possible through hedgerow and tree planting, placement of bat and bird boxes, and animal grazing from neighbours.

- In 2020, Greencoat acquired 28 operating solar PV assets adding 224MW to its renewable power generation capacity.
- As at 31 December 2021, Greencoat owned 123 solar farms, managing 912GWh of net generation capacity.
- In 2021 alone, Greencoat's solar farms saved 365,000 tonnes of CO2 from entering the atmosphere, and generated energy equivalent to powering 315,000 homes.

LEGAL & GENERAL ROBECO SUSTAINABLE MULTI-FACTOR EQUITY FUND

The Robeco Global Sustainable Multi-Factor index is the equity fund used as part of the IA default strategy and is the largest equity mandate in the RA investment strategy. The fund explicitly looks at

the carbon, water, energy, waste and ESG scores as part of its stock ranking process, giving hergher weightings to sustainable companies.

Section 4: Metrics and Targets

Introduction and overview

A key facet of our ongoing monitoring and management of climate change is having good data on the Fund's carbon exposures. Although there are limitations with some of the metrics presented and the completeness of data, the Trustee believes that the data can helpfully inform the Trustee in its ongoing monitoring and management of the Fund. The Trustee considers metrics across the Sustainable Investment spectrum, but the focus within this statement are carbon metrics, which are likely to drive climate change. The metrics disclosed have been selected from the following required categories:

- An absolute emissions metric
- An emissions intensity metric
- An alignment metric
- One additional climate change metric

It is important to be clear which emissions are captured within the above metrics and therefore the Trustee has referred to the categories of emissions identified within the Kyoto Protocol. These are as follows:

- Scope 1 emissions: all direct emissions from the activities of an entity or the activities under its control
- Scope 2 emissions: indirect emissions created during the production of energy which an entity uses
- Scope 3 emissions: all other indirect emissions from the activities of the entity, which occur from sources that the entity does not directly control. These include emissions from products and services purchased (upstream) and products and services sold (downstream).

Due to the nature of scope 3 emissions, they are significantly more difficult to calculate than scope 1 or scope 2 emissions for any given entity. It is also the case that, for some assets, even scope 1 and scope 2 emissions are difficult to calculate. Scope 1 and 2 emissions are included within the metrics displayed below. The Trustee will include Scope 3 emissions as part of next year's report.

Overview of analysis

The table details the statistics for the 4 metrics the Trustee has selected, which are:

1. **Total Carbon Emissions** – This is an 'absolute emissions' metric which gives the total greenhouse gas emissions attributable to the Fund's assets. This is calculated in line with the GHG protocol methodology and currently includes only Scope 1 and 2 Emissions. A denominator of Enterprise Value Including Cash (EVIC) is used to attribute emissions for corporates. For sovereign bonds the issuer does not have a readily available EVIC measure therefore in calculating the production-based emissions of the jurisdiction, a denominator of GDP is used to attribute emissions.
2. **Carbon Footprint** – This is an 'emissions intensity' metric which gives the total greenhouse gas emissions attributable to the Fund's assets per pound invested. For sovereign bonds emissions intensity is normalised by GDP.
3. **Percentage of assets with approved Science based targets (SBTi)** – This is an 'alignment' metric used to measure the number of companies in a portfolio with their own carbon reduction targets that are aligned to the Paris Agreement and are validated by the Science-Based Targets Initiative – a partnership between CDP, the United Nations Global Compact,

World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). SBTi defines and promotes best practice in emissions reductions and net-zero targets in line with climate science for companies and financial institutions to follow. Greenhouse gas (GHG) emissions reduction targets are considered “science-based” if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement - to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C.

4. **Exposure to climate related opportunities** – This metric aims to assess the balance of the risks and opportunities presented by the transition to a low carbon global economy with the potential to enhance investment returns through investment in such assets. It is calculated as the percentage of the portfolio that may be considered EU Taxonomy eligible based on the criteria set out in the taxonomy. This metric has been selected as it reflects the Trustee’s beliefs that the global response to climate change can reward those who respond and adapt quickly as well as punishing the laggards.

Targets

As referenced, the Trustee has identified carbon footprint as the metric on which to set a target for the RA Section. The target is to reduce the Fund’s Carbon footprint (scope 1 and 2 emissions) by 40% by 2030. For the IA Section, the Trustee has set a target of increasing the percentage of the portfolio with a science-based target by 30% by 2030 across all IA funds.

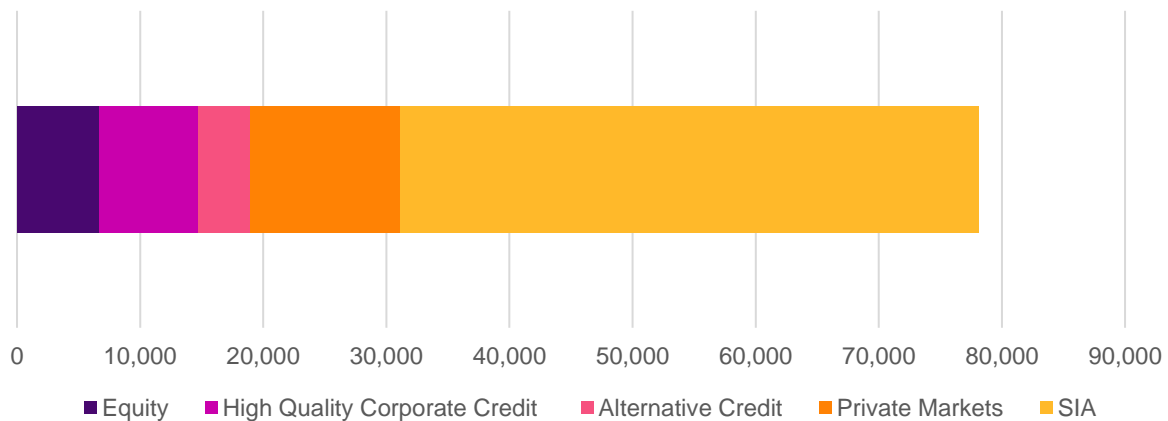
Progress against these targets will be measured from a baseline of 2023, and the Trustee intends to report progress against this objective in next year’s report. The Trustee expects this goal will be achieved through engagement (with our underlying managers and the companies the Fund invests), investing in climate opportunities (in assets such as green energy), strategic changes (investing in assets with lower climate risk) and also as a result of the ‘free-rider’ effect. This recognises that although the Trustee will take positive actions, as outlined in section 3 of this report, the Trustee will not be able to achieve its goal alone and will require the continued collaboration of the global community to combat climate change.

RA Section

Metric 1 - Total Carbon Emissions (“tCO2e”)

The total carbon emissions for the portfolio (ex-sovereign bond allocations) as at 31 December 2022 was 78,131 tonnes of carbon dioxide (CO2) equivalent (tCO2e). The chart below shows this broken down by asset class:

Chart 2: Breakdown of Absolute Carbon Emissions (tCO2e) by asset class



The emissions from the Funds sovereign bond allocations can be found in the table below:

	Absolute Carbon Emissions (tCO ₂ e)
Emerging market debt	38,652 tonnes
LDI (Funded Emissions)	44,218 tonnes
LDI (Additional emissions exposure - derivatives)	34,333 tonnes

Metric 2 – Carbon Footprint (“tCO₂e/£m invested”)

The table below shows a breakdown of carbon footprint by asset class excluding sovereign bond allocations:

Table 4: Breakdown of Carbon Footprint by asset class

	Carbon footprint (tCO ₂ e/£m invested)	Portfolio weight	Weighted carbon footprint (tCO ₂ e/£m invested)
Equity	56	9.7%	5
High Quality Corporate Credit	37	17.7%	7
Alternative Credit	36	9.6%	3
Private Markets	54	18.2%	10
Secure Income Assets	85	44.7%	38
Total			64

*Portfolio weights and carbon footprint figures exclude exposures to Varde where no data has been provided

The absolute emissions intensity for LDI is 134 tCO₂e/£m while the absolute emissions intensity for the sovereign bond portion of the portfolios' emerging market debt allocation is 29 tCO₂e/£m.

Data quality

In calculating absolute emissions and carbon footprint, the Trustee has been able to disclose data on c92% of the portfolio. For the private assets the Trustee has proxied the exposure based on appropriate geographic and sector weights for the underlying holdings. This represents c46% of the total portfolio. As disclosure of carbon emissions data improves, the expectation is that the data quality of the Fund's assets will improve over time – data coverage is expected to be increased with less needing to be proxied.

Metric 3 - Percentage of assets with approved Science based targets (SBTi)

As at 31 December 2022, 7% of the applicable underlying investments held in the portfolio had approved SBTi targets.

Table 5: Breakdown of percentage of assets with approved Science based targets (SBTi) by asset class

	% SBTi targets	Portfolio weight	Weighted % SBTi targets
Equity	20%	9.7%	2%
High Quality Corporate Credit	29%	17.7%	5%
Alternative Credit	0%	9.6%	0%
Private Markets	0%	18.2%	0%
SIA	0%	44.7%	0%
Total			7%

Note that this measure excludes sovereign debt

Metric 4 - Exposure to climate related opportunities (%)

As at 31 December 2022, 16.8% of the portfolio was invested in climate related opportunities.

Table 6: Breakdown of exposure to climate related opportunities (%) by asset class

	Climate Solutions	Portfolio weight	Weighted % Climate Solutions
Equity	4.3%	9.7%	0.4%
High Quality Corporate Credit	4.7%	17.7%	0.8%
Alternative Credit	3.2%	9.6%	0.3%
Private Markets	7.3%	18.2%	1.3%
SIA	31.1%	44.7%	13.9%
Total			16.8%

IA Section

The tables below show the selected metrics for the funds within the default Drawdown strategy and the previous (pre-2021) default Annuity strategy. Additionally, the Trustee has assessed the most popular self-select funds (those which hold at least 10% of the total IA assets as at 31 December 2022) as part of the analysis.

Metric 1 - Total Carbon Emissions (“tCO₂e”)

Table 7: Absolute Carbon Emissions of popular self-select funds

Fund	Absolute Carbon Emissions (tCO ₂ e)
Robeco Sustainable Multi-Factor Equity Fund	1,523 tonnes
Blended Diversified Fund	1,482 tonnes
Inflation Linked Fund (Annuity Aware)	252 tonnes
World ex UK Equity Index Fund	646 tonnes
World Equity Hedged Index Fund	1,423 tonnes
UK Equity Index Fund	1,076 tonnes

Both the Blended Diversified Fund and the Future World Inflation Linked Annuity Aware Fund include allocations to sovereign bonds which are not included in the absolute carbon emissions shown in the table above. The emissions from the sovereign bond allocations of these funds can be found in the table below:

	Absolute Carbon Emissions (tCO ₂ e)
Blended Diversified Fund	3,211 tonnes
Future World Inflation Linked Annuity Aware Fund	715 tonnes

Metric 2 – Carbon Footprint (“tCO₂e/£m invested”)

Table 8: Carbon Footprint of popular self-select funds

	Carbon footprint (tCO ₂ e/£m invested)
Robeco Sustainable Multi-Factor Equity Fund	43
Blended Diversified Fund	47
Inflation Linked Fund (Annuity Aware)	19
World ex UK Equity Index Fund	50
World Equity Hedged Index Fund	58
UK Equity Index Fund	50

Both the Blended Diversified Fund and the Future World Inflation Linked Annuity Aware Fund include allocations to sovereign bonds which are not included in the carbon footprint metrics shown in the table above. The emission intensity from the sovereign bond allocations of these funds can be found in the table below:

	Carbon footprint (tCO ₂ e/£m invested)
Blended Diversified Fund	102
Future World Inflation Linked Annuity Aware Fund	55

Metric 3 - Percentage of assets with approved Science based targets (SBTi)

Table 9: Percentage of assets with approved Science based targets (SBTi) of popular self-select funds

	% SBTi targets
Robeco Sustainable Multi-Factor Equity Fund	39%
Blended Diversified Fund	31%
Inflation Linked Fund (Annuity Aware)	42%
World ex UK Equity Index Fund	38%
World Equity Hedged Index Fund	48%
UK Equity Index Fund	39%

Metric 4 - Exposure to climate related opportunities (%)

Table 10: Percentage exposure to climate solutions of popular self-select funds

	Climate Solutions
Robeco Sustainable Multi-Factor Equity Fund	5%
Blended Diversified Fund	7%
Inflation Linked Fund (Annuity Aware)	6%
World ex UK Equity Index Fund	9%
World Equity Hedged Index Fund	2%
UK Equity Index Fund	9%

The below table illustrates the selected metrics based on the funds that members for both the default Drawdown strategy and the previous (pre-2021) default Annuity strategy would be invested in early in their career and three years prior to retirement.

Table 11: Climate metrics for early career IA members

Early career IA member	Drawdown	Annuity
Absolute Carbon Emissions (tCO ₂ e)	1	1
Carbon footprint (tCO ₂ e/£m invested)	43	43
% SBTi targets	39%	39%
% Climate Solutions	5%	5%

Table 12: Climate metrics for pre-retirement IA members

Pre-retirement IA member	Drawdown	Annuity
Absolute Carbon Emissions (tCO2e)	13	10
Carbon footprint (tCO2e/£m invested)	37	28
% SBTi targets	25%	39%
% Climate Solutions	6%	6%

Members pre-retirement invest in a more diversified pool of assets, including sovereign bonds which are not included in the carbon footprint metrics shown above. The carbon footprint from the sovereign bond allocations for these members can be found in the table below:

Pre-retirement IA member	Drawdown	Annuity
Carbon footprint (tCO2e/£m invested)	80	69

As can be seen from the results above, members in the earlier stages of the lifestyle strategy have a higher carbon footprint (ex-sovereigns) due to the higher equity exposure compared to members pre-retirement but lower absolute carbon emissions given the smaller pension pot sizes of these members.

Data quality

The table below provides a breakdown of the percentage of each fund where the Trustee was able to obtain data to calculate the metrics disclosed in this report:

Fund	Coverage
Robeco Sustainable Multi-Factor Equity Fund (hedged)	95.5%
Blended Diversified Fund	32.6%
Future World Inflation Linked Annuity Aware Fund	83.5%
World ex UK Equity Index Fund	92.4%
World Equity Hedged Index Fund	87.1%
UK Equity Index Fund	80.6%

Going forward

The Trustee is continuing to monitor the evolving climate measurement landscape with the expectation that the robustness of the metrics will improve over time. The Trustee looks forward to sharing updates on its progress in monitoring and managing climate risks and opportunities over time.

Appendix – IA scenario analysis

The below table outlines the 5 illustrative members that have been used for the IA Section scenario analysis. These have been chosen as representative of the DC membership, from both the Investment Account (IA) and Retirement Account (RA) populations.

Table 13:

Member Status	Age	Retirement Age	Initial /existing pot size (£)	Initial salary (£)	Contribution rate	Salary increases
Early career IA member	32	62	20,000	40,000	Up to 45: 12% Age 45-62: 16%	Up to 45: CPI+1.5% Age 45-62: CPI
Mid-career IA member	42	62	150,000	50,000		
Pre-retirement IA member	59	62	300,000	60,000		
Mid-career RA member	42	62	75,000	60,000	5% employer 3% employee	
Pre-retirement RA member	59	62	90,000	70,000		

Table 14:

Reduction in final pot value: Mid-career IA member	Drawdown Lifestyle	Pre-2021 Annuity Lifestyle
Base case	0%	0%
Least Common Denominator	-5%	-6%
Inevitable Policy Response	-10%	-3%
Global Coordinated Action	-5%	-3%
Climate emergency	-7%	-2%

Table 15:

Reduction in final pot value: Pre-retirement IA member	Drawdown Lifestyle	Pre-2021 Annuity Lifestyle
Base case	0%	0%
Least Common Denominator	0%	0%
Inevitable Policy Response	0%	0%
Global Coordinated Action	-1%	0%
Climate emergency	-1%	-1%

Table 16:

Reduction in final pot value: Mid-career RA member	Drawdown Lifestyle	Pre-2021 Annuity Lifestyle
Base case	0%	0%
Least Common Denominator	-4%	-3%
Inevitable Policy Response	-10%	-9%
Global Coordinated Action	-4%	-4%
Climate emergency	-6%	-5%

Table 17:

Reduction in final pot value: Pre-retirement RA member	Drawdown Lifestyle	Pre-2021 Annuity Lifestyle
Base case	0%	0%
Least Common Denominator	0%	0%
Inevitable Policy Response	0%	0%
Global Coordinated Action	-1%	-1%
Climate emergency	-2%	-1%

For the mid-career members, the Inevitable Policy response is the worst result, as the more severe impact on returns is felt at a time when the member has built up a reasonable pot value. For the pre-retirement member the impact on return over the time to retirement is small.