

BTPS

Task Force on Climate-Related Financial Disclosure Report 2023

www.btps.co.uk



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About BTPS

The BT Pension Scheme (BTPS or the Scheme) is one of the largest company pension schemes in the UK. A defined benefit pension scheme for former employees and dependents of British Telecommunications Plc (BT) and some of its associated companies, the Scheme closed to new members in 2001 and to future accrual for most members in June 2018.

The Scheme's Trustee is BT Pension Scheme Trustees Limited, a corporate Trustee with ultimate fiduciary responsibility for the Scheme and its members.

The Trustee's key responsibility is to ensure that BTPS pays benefits as they fall due.

The Trustee Board has delegated responsibility for day-to-day management of the Scheme to **Brightwell** (a trading name of BT Pension Scheme Management Limited; a wholly owned subsidiary of the Scheme). Brightwell is the primary service provider to BTPS, subject to ongoing Trustee Board oversight. Brightwell provides a full services offering to BTPS, including executive support, advice, member services administration and investment management.

To fulfil its key responsibility, the Trustee must ensure that the Scheme is (i) **adequately funded**; (ii) has an **appropriate investment strategy**, having regard to the Scheme's liabilities, support available from BT, the sponsoring employer, and the profile of its members; and (iii) is **administered** and run in a way which demonstrates an appropriate level of care, skill and value for money for members.

At a glance



The Scheme's funding position improved to 91% at 30 June 2023, compared to 88% at 30 June 2020.



As at 30 June 2023, there were 263,447 members.



Total benefits paid were £2.6bn in the year to 30 June 2023.



The Scheme's assets were valued at £37.3bn as at 30 June 2023.



The Scheme's net assets were invested 29% in equity and equity-like¹ assets and 71% in cashflow-aware² assets, as at 30 June 2023.

¹Equity and equity-like includes equities, property, absolute return and infrastructure assets.

²Cashflow-aware includes investment grade credit, sub-investment grade credit, and government bonds and cash.

Foreword

July 2023 was the hottest month in human history and the effects of the continued increase in temperature around the world are far reaching, for global populations and for the investments held within the BT Pension Scheme.

“The era of global warming has ended; the era of global boiling has arrived.”

– Antonio Guterres, UN Secretary-General.

Over the past year we’ve experienced significant physical weather events. These have had devastating impacts on local populations with increasingly adverse economic consequences.

However, with concerted and coordinated efforts, it is still possible to limit global temperature rises to 1.5 degrees Celsius and avoid the very worst effects of climate change.

Climate change is a clear and present risk to the Scheme meeting its long-term financial commitments. For the Scheme to achieve its Net Zero 2035 goal, we are working on both reducing emissions from the Scheme’s portfolio and investing in assets that will support the transition towards a lower carbon economy.

However, achieving the reduction in emissions required to meet our 2035 goal is far from easy. We are reliant on significant decarbonisation of the global economy which involves decisive action from governments, companies and consumers.

We are also conscious of the challenges associated with having a fair transition. There is a need to balance progress on decarbonisation with social challenges such as the current cost-of-living crisis as well as issues such as greater energy security.

2035 is still some time away so, to help keep us on track, in 2022, we announced 5-year targets to reduce the scope 1 and 2 carbon intensity of the Scheme’s equity and credit portfolio by at least 25%, and real estate by at least 33% by 2025, relative to our 2020 baseline. The interim focus on scope 1 and 2 emissions is driven by data challenges with scope 3, which remain largely estimated.

Currently, we are on track with our 5-year reduction targets having reduced carbon intensity by 16% and absolute emissions by 51%.

We continue to seek to influence the businesses in which we invest, and encourage governments and regulators around the world to drive this transition through collaboration with other asset owners, for example co-chairing the Assessing Sovereign Climate-Related Opportunities and Risks (ASCOR) project which will enable investors to assess governments’ climate-related commitments, their policy frameworks and corresponding actions, as well as participating in working groups of the Net Zero Asset Owner Alliance (NZAOA) for greater collective influence.

We firmly believe investing sustainably and ensuring the scheme is resilient to climate risk, supports long term value and contributes towards better outcomes.

Otto Thoresen
Chair, BTPS



Morten Nilsson
CEO, Brightwell



¹Data from the World Meteorological Organization and the European Commission’s Copernicus Climate Change Service

Introduction

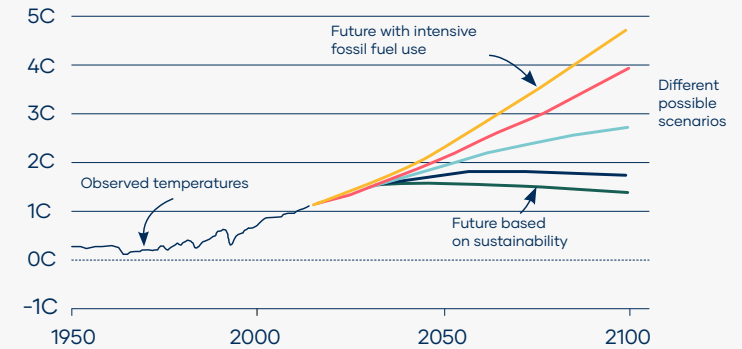
BT Pension Scheme & climate change

There continues to be overwhelming scientific evidence that climate change is accelerating. The world has already experienced around 1.0°C of average warming above pre-industrial levels, and continued increases will have an irreversible and catastrophic impact on the environment and our way of life. The implications of climate change are systemic and apparent, with extraordinary weather events including flooding, drought, storms and wildfires increasing in frequency, with significant financial and human consequences. In the UK, we have seen numerous implications of climate change this year with record breaking summer temperatures, lack of rainfall and wildfires.

Climate change also has other potential negative implications for people and the planet, for example, reduced availability of water for human consumption in some parts of the world, agriculture, and hydro-electric power production. Moreover, severe heat can have detrimental health implications, resulting in strain on health services as well as the direct human impacts.

How much hotter could it get?

Change in average global temperature relative to 1850-1900, showing observed temperatures and future simulations.



Note: Each line shows the average temperature rise for a scenario. Source: IPCC, 2021: Summary for policymakers

Climate change could financially impact the Scheme in three different ways:

BTPS

BTPS' investment returns (assets)

Climate change has the potential to have a negative impact on the value of the Scheme's investments, for example through the impact of stranded assets or higher costs due to carbon pricing.

Whilst a range of outcomes are possible depending on the extent of actual temperature increases, without policy action and/or technology advances, the outcome could materially impair the economies and markets we rely on to generate investment returns.

BTPS' liabilities (liabilities)

Liabilities are the amount of funding a scheme needs to pay peoples' pensions over time. If climate change impacts life expectancies, this will make budgeting for future pensions payments more difficult. Moreover, the liabilities may also be impacted by higher inflation which could result from climate change.

BT Plc (covenant)

BT Pension Scheme depends on ongoing pension contributions from BT Group. However, if BT Group is negatively exposed to or impacted by climate change, this could threaten its ability to contribute to the Scheme's funding. This places more pressure on funding activities.

Introduction continued

In more detail, climate change can negatively or positively impact pensions through costs from disasters such as drought, wildfires and flooding, as well as providing opportunities through shifting from fossil fuels to renewable energy, increasing resource efficiency, and opening new markets through product and services innovations. It is therefore important that these risks and opportunities are identified and mitigated.

How can climate change impact pension scheme investments?

Climate-related risk, opportunities and financial impact



Introduction continued

What are we doing about it?

In 2020, BTPS committed to an ambitious goal to achieve net zero greenhouse gas emissions (absolute scope 1-3) by 2035, across its investment portfolio. In setting this goal, the Scheme will reduce the risks posed by climate change to meeting its funding obligations. Getting to net zero will involve both reducing emissions from the Scheme's portfolio and investing in assets that will support the transition towards a low carbon economy.

BTPS believes that reducing exposure to carbon emissions over time will improve investment outcomes for the Scheme and help reduce the impact of future climate risks.

Investments are potentially exposed to the physical risks of climate change and to the risk that the transition to a low carbon economy will make certain businesses, such as fossil fuel companies, unviable if they fail to change. Additionally, making investments that will aid the low carbon transition will deliver more sustainable returns to enable the Scheme to meet its financial obligations.



NET ZERO 2035

BTPS has set a goal to be net zero greenhouse gas emissions (absolute scope 1-3) by 2035 and, in doing so, to be aligned with the Paris Agreement's goal of net zero by 2050.

We will seek, over time, to decarbonise the portfolio and investment value chain, and make investments that will reduce or remove carbon emissions from the atmosphere.

Our goal is supported by four pillars:

1. Portfolio construction
2. Mandates and managers
3. Stewardship
4. Advocacy

Beneath these pillars are 20 climate actions that we are committing to.

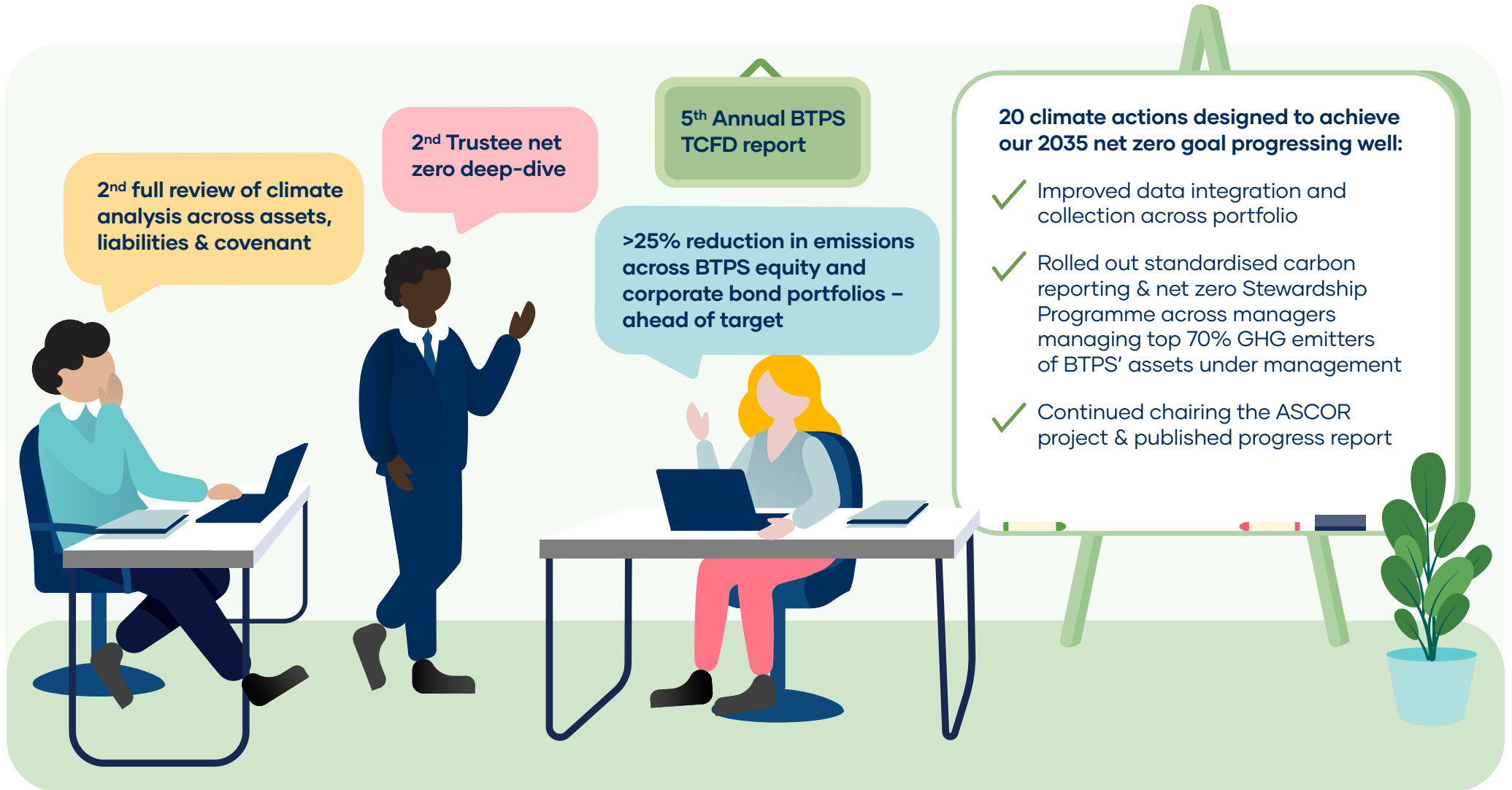
The 15-year goal will be overseen by the Trustee Board and will be made up of 5-year targets, fully reassessed every 3 years, and tracked and publicly reported annually through our TCFD reporting.

What does net zero mean?

Net zero emissions means achieving a balance between greenhouse gas (GHG) emissions produced and the amount removed from the atmosphere, consistent with limiting global warming to 1.5°C and neutralising the impact of any residual emissions by permanently removing an equivalent amount of carbon dioxide (CO₂). For BTPS, this will mean reducing the portfolio's emissions through changing investments and investing in technologies which reduce or remove emissions.



Key Net Zero 2035 & Task Force on Climate-Related Financial Disclosures highlights



Climate change & TCFD disclosure

The BT Pension Scheme has been voluntarily publishing a TCFD report since 2018, and this report aims to fulfil the the Department of Work and Pensions (DWP) TCFD Regulations. As the regulator has identified, carbon accounting and measurement methodologies are still evolving. As a result, many of the numbers used in the climate scenario analysis and carbon footprinting in this report are estimates and may be subject to change as more information becomes available, or approaches become more sophisticated.

What is TCFD?

Climate change is a complex issue with challenges around data and reporting. As such, the Scheme supports the recommendations made by the TCFD, which aim to promote better disclosure of climate-related financial risks in order to improve understanding of the risks and opportunities of climate change.

The TCFD recommendations outline 4 sections for which stakeholders can report their climate-related financial risks and opportunities:

- 1. Governance:** How is the organisation's board and management assessing, managing and providing oversight of climate-related risks and opportunities
- 2. Strategy:** How these risks impact the organisation's business model
- 3. Risk:** What and how have risks been identified and managed
- 4. Metrics & Targets:** How are the risks being monitored, and have the appropriate metrics and targets been selected.



Governance

This section describes how the Trustee assesses, manages, and monitors climate-related risks and opportunities.

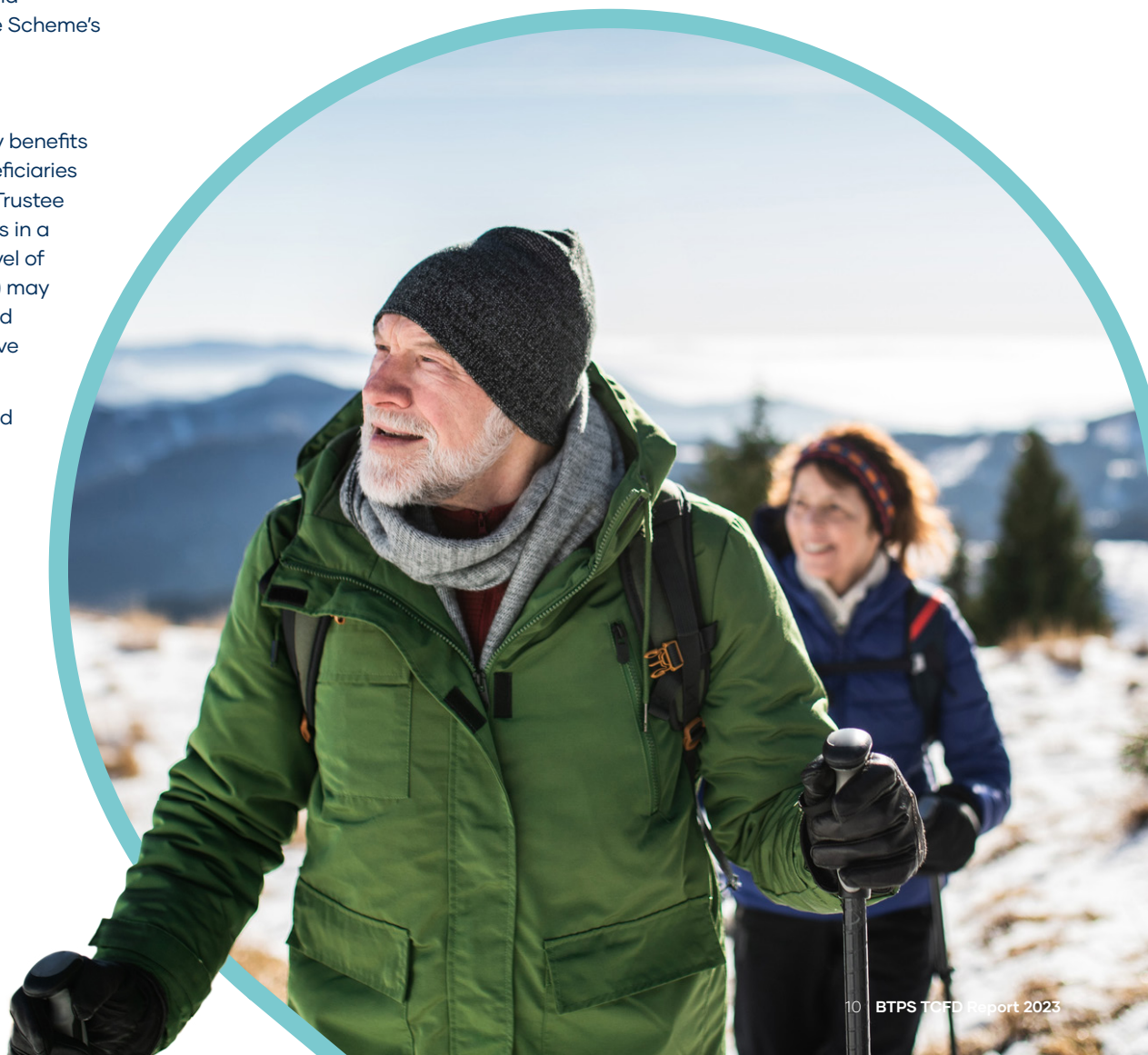
Trustee Board

The Trustee Board has the ultimate authority for all aspects of the management and investment strategy of the Scheme. The Trustee Board is responsible for setting the Scheme's net zero goal and reviewing the goal every 3 years.

Climate change in BTPS' Investment Principles

The main objective of the Trustee is to ensure that there are sufficient assets to pay benefits to members and their beneficiaries as they fall due, and that all members and beneficiaries receive the benefits to which they are entitled under the Rules of the Scheme. The Trustee takes an integrated approach to the management of risk in the Scheme and invests in a manner consistent with funding a defined level of benefits, within an acceptable level of risk, and the funding obligations which BT Group (and other entities where relevant) may have, from time-to-time, to the Scheme. To support this, the Trustee has established a core set of investment beliefs that provide a framework for consistent and effective investment decision-making.

The investment beliefs recognise the importance of being a responsible investor and includes market-related beliefs, such as those concerning the relationship between risk and return, the importance of diversification, and the belief that markets can be inefficient. Further to this, as part of the Scheme's **Statement of Investment Principles**, climate change is specifically highlighted as it is viewed as a key, long-term risk which may have material, adverse impacts on the Scheme. The Trustee believes that reducing exposure to carbon emissions over time will improve investment outcomes and reduce the impact of potential adverse outcomes associated with future climate risk.



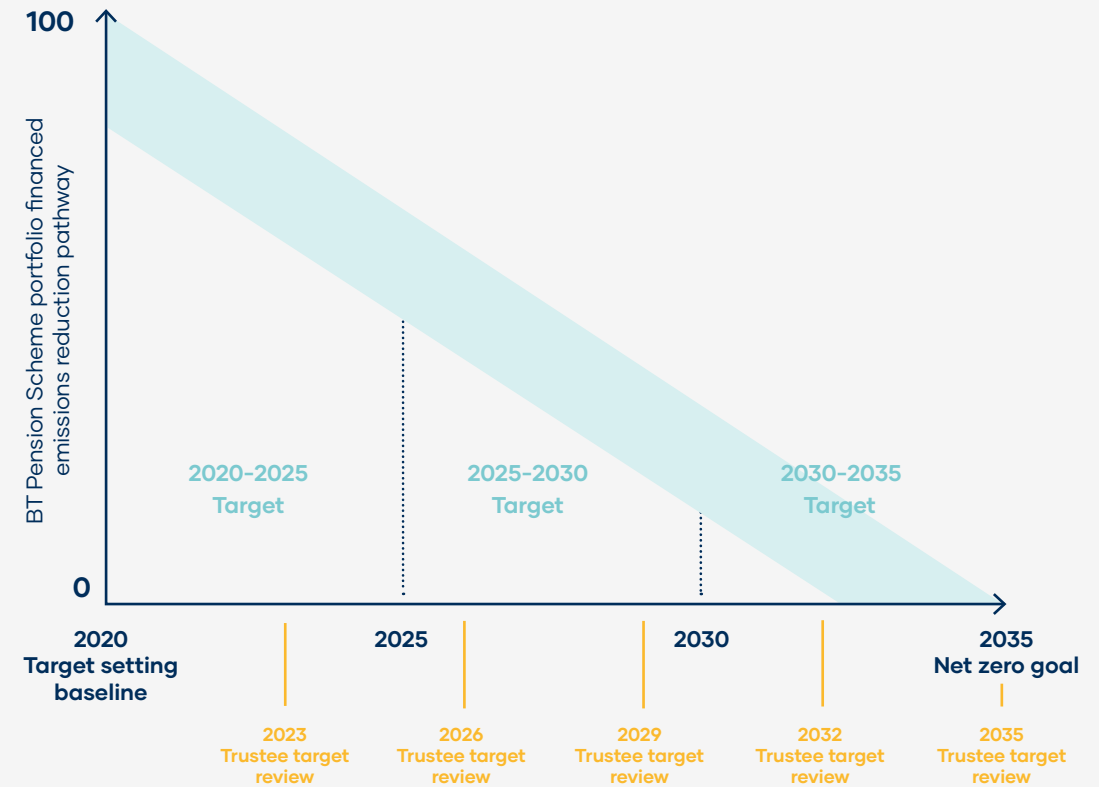
Governance continued

Roles & responsibilities

BTPS Investment Committee

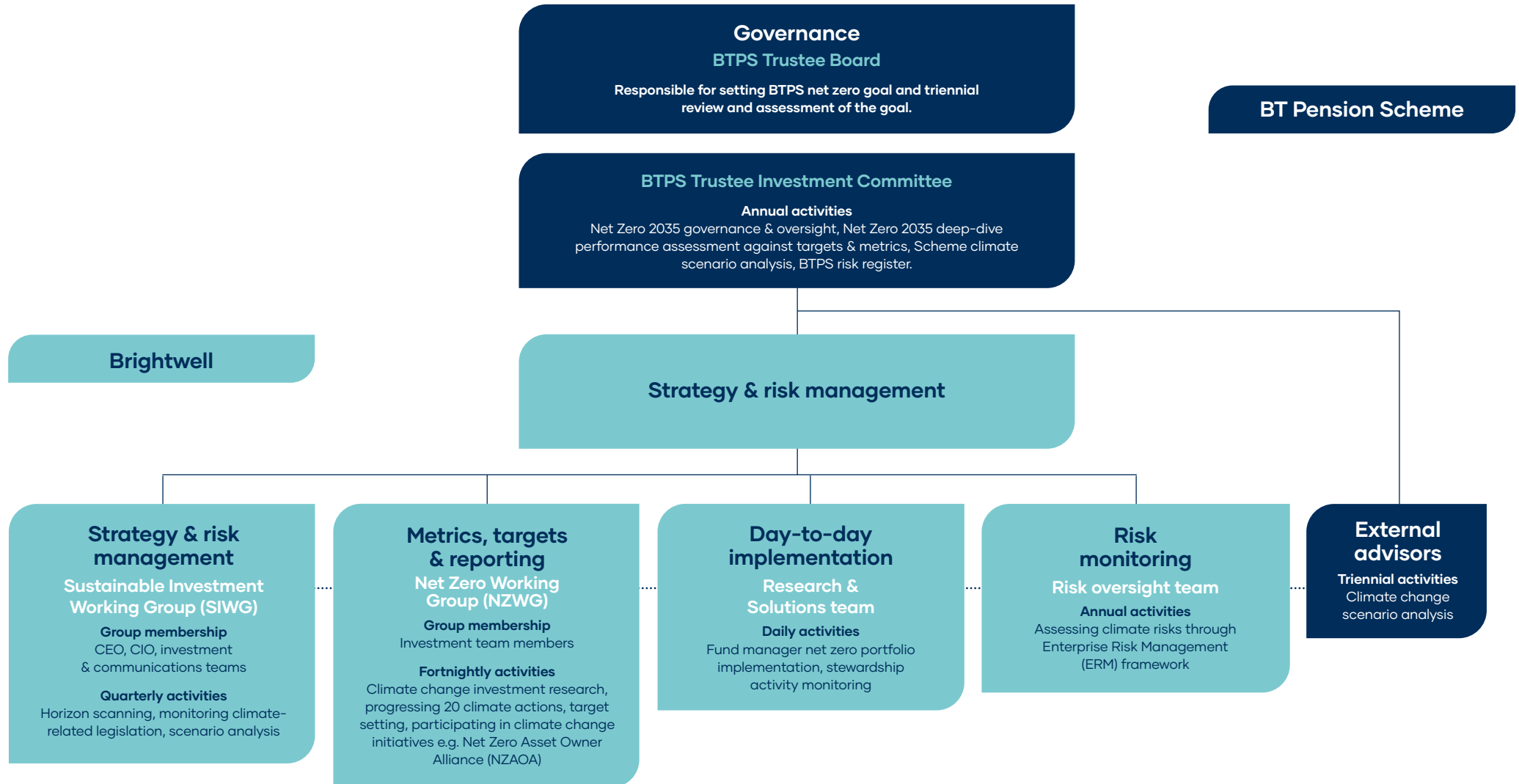
The implementation of the Net Zero 2035 goal is managed by Brightwell on behalf of the BT Pension Scheme however, the BTPS Investment Committee (IC) has ultimate responsibility for the oversight and monitoring of the goal and legislative compliance. The NZ 2035 goal is made up of 5-year targets, which the IC fully reassesses triennially, and the IC ensures net zero and TCFD-related activities are publicly reported annually through TCFD reporting. The BTPS IC reviews and assesses Brightwell's implementation of the goal via annual 'net zero deep-dives' and performance against the Scheme's net zero metrics. When appropriate, the IC will review the most recent climate scenario analysis, integrate the findings into investment strategy discussions and determine whether it is appropriate to undertake new analysis. The IC identifies and assesses the main climate-related risks and opportunities, and considers climate in the Scheme's investment beliefs, investment policies, risk register, contingency planning and monitoring framework. The entire board, including the IC, receives regular training to ensure that it is appropriately informed on key climate change topics and can challenge Brightwell on its activities.

Net Zero 2035 target setting and review schedule



Governance continued

BTPS Net Zero Governance Model



Governance continued

Sustainable Investment Working Group (SIWG)

The SIWG meets quarterly to discuss key sustainability topics impacting BTPS. Climate change is a standing agenda item and the group undertakes horizon scanning of industry themes, climate related legislation, discusses covenant materiality and digests scenario analysis information to report to the IC. The group is comprised of the CEO, CIO and members from the NZWG, which ensures alignment between the detail of internal net zero implementation and external investment market analysis.

Net Zero Working Group (NZWG)

The NZWG coordinates BTPS' efforts to address climate change. It focuses on the day-to-day net zero goal implementation. Members are operational leads within the investment team and meet fortnightly to discuss investment research, continue progress against BTPS' 20 climate actions, and represent BTPS at the initiatives it is a member of such as the Net Zero Asset Owner Alliance (NZAOA) and the Paris Aligned Investment Initiative (PAII). The group is also key in establishing the Scheme's short, medium and long- term climate targets.

Investment Research & Solutions Team

The team drives the day-to-day implementation of the NZ strategy.

The team ensures that the external fund managers, appointed to manage the Scheme's assets, integrate climate change and other environmental, social and governance (ESG) risks into their investment decision-making. The dedicated sustainable investment professionals within the team lead fund manager engagement on stewardship, and coordinate the annual net zero and stewardship survey. We require Scheme fund managers to fill in this survey which gathers a range of ESG information, both qualitative and quantitative. Those are being scored with feedback provided to the managers.

Finally, the team also coordinates regular training for the wider team and the Trustee on climate change matters, from internal and external experts, to ensure diversity of thought.

Risk Oversight Team

The Risk Oversight Team acts as an independent second line of defence with the aim of providing assurances that investment activities are performed in a robust risk-controlled environment. They oversee the application of the Enterprise Risk Management framework and its related policies and procedures, report and escalate risk events, and provide an independent assurance of investment decisions and models. In relation to climate risk, this includes maintaining the Scheme's risk register which assesses climate change risks and their mitigants, as well as developing their use of climate data to monitor key climate metrics.

External advisors

The Trustee IC takes advice from external advisors, where appropriate. In the context of climate change, it uses BTPS' actuarial and covenant advisers to undertake triennial climate scenario analysis on its asset, liabilities and covenant. In line with the requirements of the regulations, this work is included in the advisors' investment advice to the Scheme, and all findings are presented to the SIWG and Trustee IC.

Governance continued

Trustee climate training

To ensure the entire Trustee Board is up-to-date with relevant climate knowledge, and is sufficiently informed to identify, assess, manage and challenge climate risks, virtual and in-person training is organised by Brightwell. Recordings of training are available on the Trustee resources portal and are made available to all Brightwell employees.

Brightwell climate training

To ensure that Brightwell's investment team and executives are also up-to-date with relevant information, long-term asset manager partners and other external experts are invited to present their latest climate-related thinking and activities.



Governance continued

Key 2023 governance progress

- In December 2022, the Trustee IC undertook its second net zero deep-dive which involved a comprehensive update on the net zero strategy and the Scheme's carbon footprint. Discussions also focused on the challenges and limitations of data availability.
- BTPS includes relevant client climate metrics within the suite of KPIs regularly monitored on a quarterly basis.
- Over the past year, BTPS has had extensive discussions, with a particular focus on credit managers, with credit forming the core of the Scheme's long term portfolio, around the optimal way of integrating net zero objectives and guidelines into mandates. The feedback and actions from this activity will be included in our 2023 deep-dive.
- Additionally during the year, the Trustees invite external speakers to their investment committees to discuss certain risk themes. This year, a prominent geopolitical expert discussed the risks and increasing instability due to climate and water scarcity. This was then discussed in relation to the potential impacts on the Scheme's portfolio.
- BTPS also asked key fund managers to present their views on the macro-economic, investment return and portfolio construction implications arising from the transition to net zero.
- BTPS consider significant global thematic risks and their potential impact on the portfolio from a bottom-up asset and sector perspective. This is presented annually to the Trustee and for the past 2 years climate change has been one of the key themes considered. The example to the right shows a summary of this.

Global thematic risks

Three key long-term themes identified; climate change is one of them.



Climate change & national security

Under-appreciated by markets, critical to geopolitical stability, already an issue for many countries

- US Pentagon see climate as impactful to global security
- Impacts the Middle East, India & China most
- Results in more humanitarian crisis & migration
- More resource-related conflicts (food / energy)
- Monitor & manage exposure to climate exposed regions (high overlap with 'hot-spots') – reducing exposure at Scheme level
- Monitor & manage risk to key resource sectors – currently low direct risk, indirect & systemic impacts (e.g. impact on inflation) dominate



US – China competition

World order fractured – less cooperation, heightened conflict risk and deglobalisation

- Promotes fiscal spending, tailwind to higher rates & inflation
- Supportive of 'national champions'
- Increased dispersion
- Higher credit / loss risk from 'losers'
- Ensure direct & indirect China exposure effectively monitored & managed – currently well contained
- Improve country level risk look-through from CF-aware assets



AI, automation & the coming discord

Growing inequality – societal & economic disruption

- More polarisation and questions around established institutions
- Policy responses chaotic & different by region
- Redistribution, changes in safety nets, tax & universal basic income debates
- Improve systematic monitoring and management of regulatory & political risk concentrations
- Regional diversification critical – particularly at company revenue level

Key 2024 focus

We will undertake follow-up work from the triennial review of the net zero goal in Q4 2023 as we continue to undertake annual deep-dives on the Scheme's net zero activities.

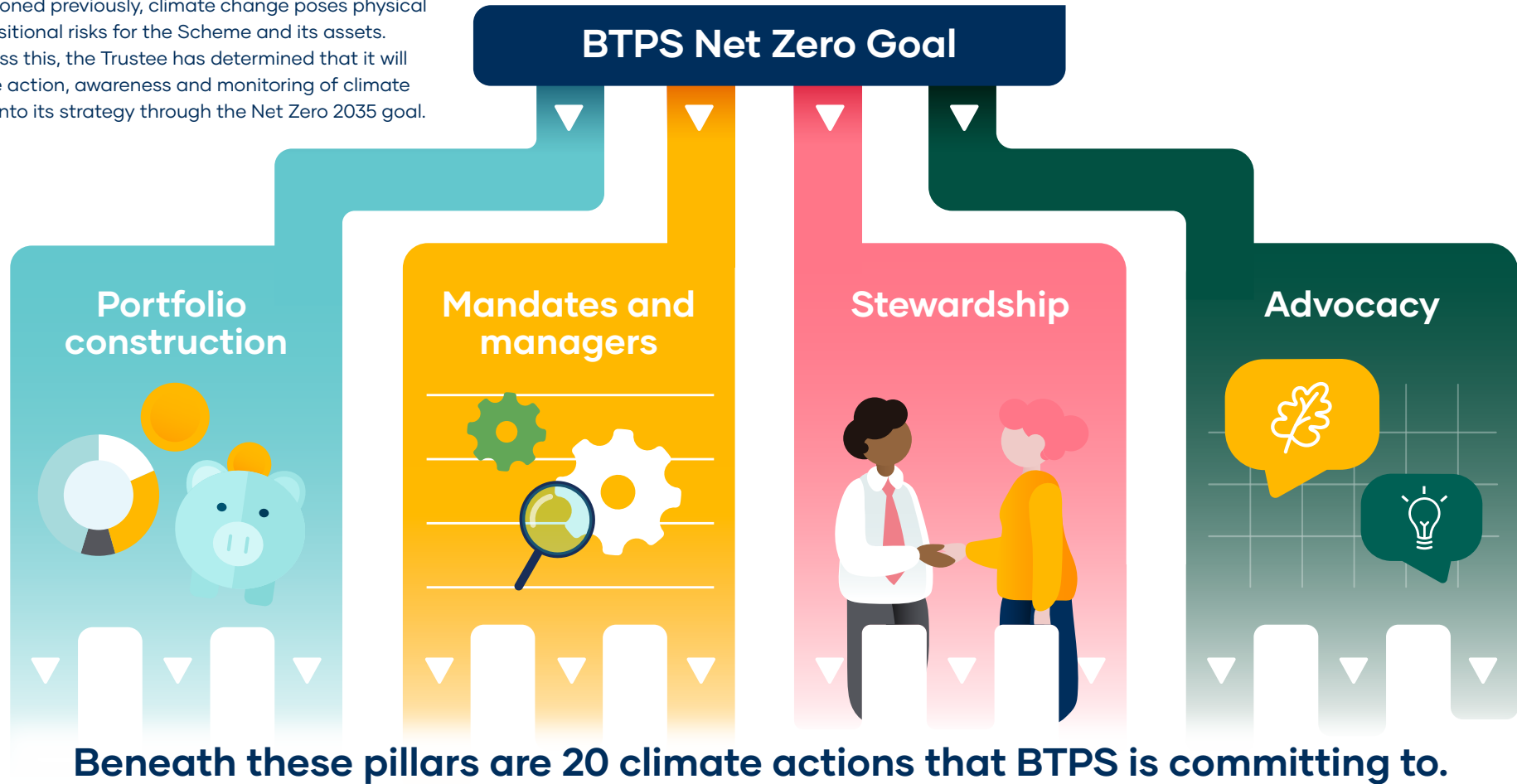
We will continue climate change education to ensure that we remain up-to-speed with technical and regulatory changes.


We will seek to understand the views from our managers on the macro-economic outlook and potential investment implications arising from climate change.

Strategy

This section explains BTPS' Net Zero 2035 goal, our plan to address climate change risks and opportunities, climate change scenario analysis and associated implications for our investment strategy.

As mentioned previously, climate change poses physical and transitional risks for the Scheme and its assets. To address this, the Trustee has determined that it will integrate action, awareness and monitoring of climate change into its strategy through the Net Zero 2035 goal.



 To hear more about the work Brightwell have been doing on integrating the Scheme's net zero goal, watch this **video**.

Strategy continued

Key 2023 strategy progress

Portfolio construction

Integrating climate risk and opportunities into BTPS' investment strategy and capital allocation will be an important activity. This is where Pillar 1, portfolio construction, plays a key role.

Medium and longer-term considerations

Over the next 11 years, there will be a major change in the investments held by BTPS as by 2035, almost all the Scheme's members will be retired. As a result, the Scheme's investment strategy will need more investments that are focused on safe, predictable income such as bonds and secure income assets, to meet members' monthly pension payments. This creates a unique opportunity to make investments in companies that have lower emissions and increase investment in climate change transition solutions. This review and analysis falls within the portfolio construction pillar which has four climate actions to ensure delivery.

Transition risk and opportunities will dominate over the coming decade as the Scheme builds its credit-focused cashflow-generating portfolio. There will be opportunities to invest in decarbonisation strategies that help abate emissions, complementing general emissions reduction.

Over the longer term, sovereign bonds, or government debt, will remain a significant allocation in order to hedge against inflation and match liabilities. However, there is currently a lack of emissions accounting agreement for sovereign bonds and most governments, the UK included, have net zero targets stretching beyond the Scheme's 2035 goal.

1 Portfolio construction		
Climate action	2023 progress	2024 focus
1 Invest to reduce emissions and finance the transition to low carbon economy, whilst ensuring we meet our fiduciary responsibilities	<ul style="list-style-type: none"> Researched new transition investment themes aligned with Scheme risk parameters. Carried out project on biodiversity, with help from MBA student group, which highlighted interdependence with climate topic. Climate solutions universe mapping. 	<ul style="list-style-type: none"> First triennial review of net zero target with Trustee to reflect on progress made, lessons learned and future plans.
2 Climate change scenario analysis and stress testing	<ul style="list-style-type: none"> Revised climate scenario analysis of assets, liabilities & covenant. Greater use of forward-looking carbon metrics. 	<ul style="list-style-type: none"> Develop climate scenario analysis to better address potential limitations, such as tipping points and the non-linear path of climate change.
3 Assess how climate change will impact future investment returns	<ul style="list-style-type: none"> Engaged our credit managers in a series of meetings to understand the practical challenges and opportunities they have faced to date regarding portfolio decarbonisation. 	<ul style="list-style-type: none"> Monitor pricing of carbon risk (at both market and security level). Continue dialogue with external managers on the potential future impacts of climate change to incorporate into our thematic risk analysis.
4 Actively manage the portfolio to achieve net zero	<ul style="list-style-type: none"> Monitoring & managing key net zero metrics. See 'metrics & targets' section for more information. Automated feed of BTPS portfolios to climate data provider. 	<ul style="list-style-type: none"> Create internal climate dashboards based on live holdings.

● Progressing well ● Progressing but behind target ● Weak progress

Beyond 10 years, the Scheme will have a much lower risk portfolio, less impacted by climate change. Moreover, delivering on the Net Zero 2035 goal will give greater portfolio resilience as the Scheme matures.



Strategy continued

Mandates & managers

One of the key strategies to mitigate the impact of significant long-term risks on Scheme assets is via its investment managers. As part of Pillar 2 of the net zero goal, 'mandates and managers', the Scheme will align mandate objectives given to new and existing investment managers with its decarbonisation goal. Mandate objectives will vary by asset class and the strategy of the manager. For example, the objectives set for property investment managers will be different from investment managers investing in the shares of companies.

Medium and longer-term considerations

BTPS will select and retain managers that it believes can help achieve its net zero goal. Managers are required to report annually against a net zero & stewardship questionnaire which will be a continuing expectation. The questionnaire will be reviewed to assess managers' progress in helping the Scheme achieve its goal and, if necessary, manager changes will be made. How managers and mandates are evaluated and monitored also forms part of our risk management process, which is described in more detail later in this report.

Over the next 10 years, the focus will be on (a) ensuring all fund manager mandates have net zero goals fully integrated, and (b) our managers demonstrate progress in evolving their portfolios that aligns with the Scheme's goal. Beyond 10 years, all managers should have mandates that align with net zero.

2 Mandates & managers			
	Climate action	2023 progress	2024 focus
5	Evolve the objectives and guidelines of new and existing manager mandates to align with our net zero goal	<ul style="list-style-type: none"> Integration of net zero language in all cashflow-aware credit mandates is expected to be completed before the end of 2023 (calendar year). 	<ul style="list-style-type: none"> Continuing net zero goal integration into all strategic mandates including private markets which will be key focus for the year ahead.
6	Select and retain manager mandates that we believe can support our net zero goal; phase out those that cannot	<ul style="list-style-type: none"> All strategic manager mandates currently supporting net zero goal. 	<ul style="list-style-type: none"> Monitoring manager net zero progress helped by improved reporting. Assess manager progress on feedback provided from this year's questionnaire.
7	Require managers to report on their progress	<ul style="list-style-type: none"> Managers sent net zero & stewardship questionnaire requesting carbon footprinting, forward-looking climate metrics, stewardship, advocacy activities, internal climate change knowledge & transition investments. 	<ul style="list-style-type: none"> Evaluate year-on-year progress including consistency and effectiveness of stewardship activity.
8	Annually evaluate and challenge our fund managers on their progress towards our goal	<ul style="list-style-type: none"> All strategic managers reviewed against scorecard & given tailored feedback on areas to improve. 	<ul style="list-style-type: none"> Evolve annual feedback to include over-time progression and manager status compared to peer group.
9	Encourage fund managers and counterparties to align their businesses with net zero	<ul style="list-style-type: none"> Managers encouraged to promote net zero in financial system. 	<ul style="list-style-type: none"> Assess managers' progress and future plans to influence positive industry change.

● Progressing well ● Progressing but behind target ● Weak progress



Strategy continued

Investments in climate solutions



[Watch the video](#)

Viridor

Viridor's purpose is "Building a world where nothing goes to waste". It is a leading resource recovery and recycling business focused on energy recovery, and plastics recycling and reprocessing. Annually, its Avonmouth site diverts 320,000 tonnes of non-recyclable household waste from landfill and uses it to generate over 300 GWh of electricity. That's enough electricity to power 84,000 homes. The plastics reprocessing facility is powered by the electricity created from the waste-to-energy process, to repurpose 80,000 tonnes – more than 1.6 billion bottles, tubs and trays a year – creating recycled raw material to return to the economy.

Viridor's ESG strategy is focused on both carbon and circularity. It has a Net Zero 2040 target and aims to be a negative carbon emitter by 2045.

BTPS indirectly owns an £85m stake through the Federated Hermes Infrastructure Fund.

In June 2023, we invited nine BTPS members to visit the Viridor site in Avonmouth, Bristol. They had a tour of the site and a presentation from the Viridor ESG team to fully understand its environmental impact.

Strategy continued

Stewardship

Stewardship plays an important role in how the Scheme pushes its investments to act on climate change. As such, it is the third pillar of the net zero goal.

Medium and longer-term considerations

BTPS will require managers to vote and engage on climate change with companies and other stakeholders in the financial system. Over time, the Scheme expects the companies it invests in to make appropriate emissions disclosures and have clear plans for reducing their emissions to net zero. Failure to engage or make sufficient efforts to curb emissions after a period of engagement is likely to result in divestment by the manager.

Over the next 3 to 5 years, a key priority is engaging with companies to set realistic but challenging climate goals with science-based targets, in particular within hard to abate sectors, such as transportation, steel and utilities.

Longer-term stewardship and engagement will evolve depending on the needs and priorities at the time, with the key focus being optimally pushing companies to decarbonise their businesses.



3 Stewardship			
	Climate action	2023 progress	2024 focus
10	Require our equity managers to follow a set climate voting policy	<ul style="list-style-type: none"> Focused on supporting managers to establish and develop their net zero stewardship practices and alignment to Net Zero through increased engagement, including prior to voting. Helped coordinate IIGCC's Investor Position Statement on Net Zero Transition Plans, to call companies to disclose net zero transition plan, identify & establish director responsibility and provide annual voting on plans. 	<ul style="list-style-type: none"> Assess fund managers' actions, progress and impact from stewardship activity. Additionally, improve relative assessment of stewardship impact across managers.
11	Require fund managers to engage with companies to set net zero targets	<ul style="list-style-type: none"> Managers engaged with, and monitored against, net zero goal expectations, including BTPS' Net Zero Stewardship Programme. Managers expected to report against the IIGCC's Net Zero Stewardship Toolkit annually. 	<ul style="list-style-type: none"> Increase targeted engagement on hard to abate sectors and assets Scheme holding for the long term, beyond 2035.
12	Expect our fund managers to ultimately divest after a period of unsuccessful engagement	<ul style="list-style-type: none"> Monitoring of managers' engagements with heavy emitters in the portfolios, which are yet to set credible decarbonisation plans. Divestment is expected in instances of continued unsuccessful engagement. 	<ul style="list-style-type: none"> Collaborating with managers to promote sustainable net zero targets with investments, consistent with sector decarbonisation pathways.
13	Encourage our managers to actively participate with industry groups on climate change	<ul style="list-style-type: none"> Continue to encourage managers to join industry groups on climate change. 	<ul style="list-style-type: none"> Engage with managers to create a framework to assess the effectiveness of different industry groups.
14	Encourage managers to influence other stakeholders in the financial system	<ul style="list-style-type: none"> Managers strongly encouraged to influence financial system. 	<ul style="list-style-type: none"> Working with managers to influence financial systems with increased prioritisation of activity based on materiality.

● Progressing well ● Progressing but behind target ● Weak progress

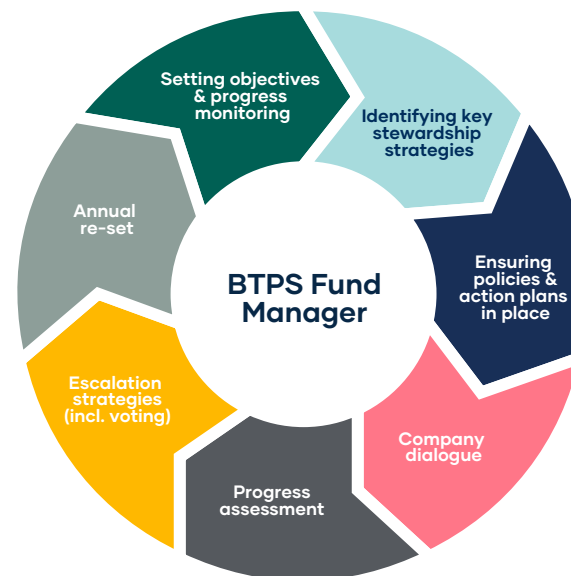
Strategy continued

Programme

Every year we discuss with the Scheme's key, long term asset managers how they could better use stewardship to deliver on the Scheme's Net Zero 2035 goal. Creating a Net Zero Stewardship Programme, based on the Paris Aligned Investment Initiative (PAII) **Net Zero Stewardship Toolkit**, managers were provided with a framework to achieve three goals: drive emission reductions over 15 years; establish materiality-based and goal-orientated engagement plans which would be trackable and refreshed regularly; and to support industry collaborative engagements where appropriate. To achieve this, managers have four objectives:

1. **5-year portfolio coverage target** - Implement a 5-year engagement plan with stewardship strategies, policies and action plans in place to align investments with net zero
2. **Focus on the top 70% biggest emitters** - Managers must focus on the top 70% of the heaviest carbon emitters in the Scheme's portfolio, pushing them to align with a net zero pathway, either through direct or collective engagement and stewardship actions
3. **Escalation strategy** - Managers must establish an escalation strategy for non-improvers over time and if after 5 years no progress is made, divestment of that investment is expected
4. **Reporting** - Managers are expected to report progress against milestones to BTPS quarterly.

Annual net zero stewardship process expectations



As companies do not change overnight, we cannot expect progress to be linear, therefore measuring milestones will be key to monitoring progress. In line with the Net Zero Stewardship Toolkit, we have asked managers to monitor the progress of their investments against five milestones:

- i. **Not aligned**
- ii. **Committed to aligning**
- iii. **Aligning towards a net zero pathway**
- iv. **Aligned to a net zero pathway**
- v. **Net zero**

With changes to data, investment strategy, corporate actions and stewardship advancing, we expect this programme to evolve over time. Progress can be different across asset classes. For instance, the guidance for private equity investors was released in May 2023 and BTPS subsequently discussed it with our private equity managers. Education on alignment to a net zero pathway is only just starting in this asset class, whilst progress in other asset classes is more advanced. We are mindful of where the market is at but continue to push for alignment across all asset classes in which we invest.

⁴ This target may be revised over time.

Strategy continued

Net zero stewardship in practice

Encouraging better ESG reporting with a Turkish renewable energy producer

Corporate credit engagement via Wellington Management

Issue: Wellington engaged with a Turkish renewable energy producer on its carbon reduction plans given limited proactive reporting by the company on the topic.

Action: Through the engagement, Wellington learned that the company is involved in multiple environmental research and development projects, some in partnership with the EU, aimed at making geothermal energy more carbon neutral. The result of the research being done by the company has the potential to result in not only a carbon emissions reduction to its own power plants, but also at other geothermal power plants, through technology licensing.

Outcome: Wellington views this development as a material ESG positive for the company and has recommended that management improve its ESG reporting, specifically around research and development projects, as the investor community is currently underinformed about the company's ESG strengths and progress on key milestones. Wellington will continue to engage with the company around its environmental research projects and develop ESG reporting to drive improvements.

Monitoring progress against an African country's climate policy

Sovereign debt engagement via Wellington Management

Issue: Over Q4 2022, Wellington conducted a follow-up engagement with an African government official regarding progress on climate policy following on from discussions around water scarcity and coal power dependence during early 2022.

Action: Wellington learned about several developments made since the last discussion, specifically faster decarbonisation progress given increased international funding, the implementation of a Green Finance Taxonomy, and the use of a climate budget tagging system. Wellington raised its desire to see net zero targets established and the importance of doing so, as well as concerns around recent flooding seen in the country and adaptation measures taken in response.

Outcome: Wellington continues to monitor developments in the country and are specifically watching for progress towards decarbonisation and implementation of a climate change adaptation strategy.

Environmental risk factors in the insurance sector

Equity engagement via GQG

Issue: GQG engaged with a global insurance company to understand its portfolio exposure to weather-related natural catastrophes, how it integrates environmental risk factors into its underwriting process and its expectations for reinsurance costs' trends in the short to medium term.

Action: They discussed the impact of climate change on reinsurance and the subsequent effect in markets of Florida and California. The insurer explained that there is too much concentration of insured value in these markets which, coupled with increasing frequency and intensity of storms and wildfires, along with a State reluctance to pass the costs onto policy holders, has resulted in under-priced risk.

Outcome: In response, over the past 4 years, the insurer has taken \$1 trillion of underwriting risk off its books, 75% of which was property lines of business. GQG sought and received insight on the firm's underwriting approach and potential opportunities created by climate change, such as climate risk insurance products. Overall, the engagement improved GQG's risk assessment for the holding and informed their investment view for the insurance sector more broadly. GQG will continue to engage with the company and monitor relevant environmental risk factors to the business.

Strategy continued

Net zero stewardship in practice continued

Real estate engagement via Federated Hermes



Business park reducing energy consumption and carbon emissions

Issue: A business park located in Poole is one of the most significant assets of its type in Southern England and is home to many recognised retail names alongside local businesses. It is managed by Federated Hermes in accordance with the Responsible Property Investment programme, which seeks to deliver holistic outcomes by generating positive societal and environmental impacts in addition to meeting financial return targets. Federated Hermes is engaging with the property manager to deliver on this.

Action: Working collaboratively with CBRE, its property management partner, Federated Hermes has sought to reduce the energy consumption and carbon emissions, and promote a more sustainable basis to service provision on site.

Outcome: The business park has had the following success in its sustainability outcomes: the landlord's electricity is 100% renewable; BREEAM In-Use excellent rating for existing office accommodation (BREEAM is the world's leading science-based validation and certification systems for real estate and infrastructure); no communal waste is sent to landfill; LED estate lighting resulting in an energy consumption reduction of 90%; passive infrared (PIR) sensor lighting in building communal places; external biodiversity and tree-planting programmes; green travel plan for occupiers; access to bike share scheme and more.

Ensuring green bond proceeds are aligned to Paris Agreement greenhouse gas emissions reduction targets

Corporate credit engagement via Ares

Sustainability-Linked Loans (SLLs) are increasingly utilised by private lenders. Ares issued its first SLL nearly 2 years ago, with the aim of creating economic incentives for companies to improve through pre-defined Sustainability Performance Targets (SPTs).

Ares worked with portfolio company RSK Group (RSK), a leading UK-based global environmental consultancy business, to which it has been a sole lender since 2018. In 2021, to support the mutual interest in improving ESG-related outcomes, Ares and RSK worked together to structure a refinancing of RSK's existing facilities with ESG-linked objectives.

The SPTs are broadly focused on carbon intensity reduction and continual improvement to health and safety management and ethics. RSK has also committed to donate a minimum of 50% of margin benefits towards sustainability-linked initiatives or charitable causes. This was the first SLL structured by Ares, and the largest private credit SLL issued at the time.

Since then, Ares has structured SLLs for many portfolio companies, collaborating with them to understand their specific ESG-related goals and to identify meaningful SPTs.



For more information on engagements carried out on the Scheme's behalf, please see the Scheme's latest stewardship report: [BTPS Portal - Sustainable investment](#)

Strategy continued

Advocacy

BTPS recognises the importance of third-party cooperation in achieving its goals, and will advocate for index and data providers, ratings agencies, financial industry groups and consultants to urgently improve climate change data and disclosures. This is Pillar 4 of the net zero goal.

Medium and longer-term considerations

Over the next 5 years, BTPS will use its influence to advocate for net zero-aligned policy and regulation with policy makers, governments, the investment industry and other stakeholders.

It will encourage the creation of government programmes to mobilise investments in clean and resilient growth. In alignment with BTPS, Brightwell will also incentivise staff to achieve net zero and offset its own operational emissions.

Over the longer term, our advocacy goals and actions will evolve based on the changing needs required to promote Paris alignment and global decarbonisation.



4 Advocacy			
	Climate action	2023 progress	2024 focus
15	Call for improved climate data from key stakeholders in the financial system	<ul style="list-style-type: none"> Fed into PLSA/IA/ABI Carbon Emissions Template, to standardise climate data reporting in the industry. Collaborated with Brunel Pension Partnership, USS, the Church of England Pensions Board & RPMI Railpen to develop practical tools to help asset owners better manage responsible investment, climate change & stewardship reporting requirements. 	<ul style="list-style-type: none"> Collaborating with peers to push industry for improved climate data.
16	Advocate for net zero-aligned policies with policy makers, governments, and the investment industry	<ul style="list-style-type: none"> Signed TPI response to TCFD consultation on forward-looking financial sector metrics, urging a more cautious approach to adopting portfolio alignment metrics. Signed 2021 Global Investor Statement to Governments on the Climate Crisis, calling for governments to raise their climate ambition & implement robust net zero policies. 	<ul style="list-style-type: none"> Advocating for stronger & clearer net zero policies in UK & globally. Calling on regulators to set mandatory emission reporting requirements for all segments of investment industry.
17	Encourage government programmes to mobilise investment in clean growth	<ul style="list-style-type: none"> BTPS wrote to the UK government with other UK asset owners to express concern about the UK government's climate policy. We will continue to engage with the UK government to encourage continued support of climate-related initiatives and ambition. 	<ul style="list-style-type: none"> Advocating for more government programmes to catalyse green technology & climate transition investment opportunities.
18	Collaborate with industry groups and peers to promote net zero	<ul style="list-style-type: none"> Actively participated in NZAOA, IIGCC/PAII & OPSC investor group meetings & discussions. Continued chairing investor-led Assessing Sovereign Climate Opportunities and Risk (ASCOR) to create framework to assess current & future climate change governance, and performance of sovereign debt issuers & released project update. 	<ul style="list-style-type: none"> Playing active role in net zero investor groups. Continuing to chair ASCOR.
19	Include net zero in Brightwell's corporate objectives	<ul style="list-style-type: none"> Integrated net zero goal into Brightwell CEO & CIO personal objectives & Brightwell corporate objectives. Brightwell undertook carbon footprint assessments & created net zero strategy to reduce operational emissions. 	<ul style="list-style-type: none"> Encouraging Brightwell in implementing net zero strategy plan, establishing supplier management approach & annual targets.
20	Continue to offset Brightwell's operational emissions	<ul style="list-style-type: none"> Brightwell measures its operational emissions and offsets them with Climate Care, a specialist environmental and social impact company. 	<ul style="list-style-type: none"> Further developing Brightwell's net zero strategy to reduce emissions and offset purchases.

● Progressing well ● Progressing but behind target ● Weak progress

Climate scenario analysis

In this section, we explore climate change scenario analysis across the Scheme's assets, liabilities and covenant, and how our returns could be impacted under these scenarios.

What is climate scenario analysis?

Scenario analysis is a useful tool to begin understanding the implications of climate change for a business, and to prompt longer term strategic thinking about risks and opportunities. As the world transitions to a low carbon economy, trends are emerging which present real risks and opportunities for businesses. Technology trends, such as the continuing growth of electric vehicles and the declining costs of renewable energy, should be understood by business leaders and factored into their supply chains. Also, as climate change accelerates, there are increasingly frequent or severe physical impacts which will have implications for all companies with physical assets, and those whose value and supply chains are dependent on vulnerable resources or regions. Climate scenario analysis can therefore help investors analyse the potential financial and strategic implications of climate change on their investments.

Our approach to climate scenario analysis

The Trustee has a responsibility to manage the risk of climate change to Scheme funding, and the associated risks and opportunities within the Scheme's investment portfolio. The objective of the climate scenario analysis is to assess how robust the Scheme's investment strategy is to climate related risks, and help quantify the potential effects that climate change may impose on the Scheme's assets, liabilities and covenant. Although the Trustee recognises potential limitations of climate scenario analysis, including material uncertainty on assumptions, they believe the analysis helps to demonstrate that the Scheme's strategy is robust to the potential impact of climate change.

For several years, BTPS has undertaken climate change scenario analysis with Mercer to help determine the impact of different global warming scenarios on its assets. In line with regulatory requirements, in 2022 we ran a new set of scenarios, in partnership with Willis Towers Watson (WTW), on our assets and liabilities, and Penfida our covenant advisor, in partnership with BT Group, on the covenant arrangements. This year we ran the exercise with WTW to reflect the significant changes to the investment portfolio over the last twelve months.

Transition & physical risks

As part of the analysis, the Trustee has categorised the potential impact of climate change into physical risks and transition risks:

- **Transition risks** - This relates to the risks and opportunities arising from efforts made to transition towards a net zero economy (both domestically and globally) to limit climate change. These risks and opportunities are generally expected to occur in the medium term, with some perhaps occurring in the short term. Risks arising could include regulatory or societal changes rendering parts of the business of invested companies worthless. For example, fossil fuels 'in the ground' which become economically unviable to extract due to either a lack of a suitable market or regulations preventing their extraction. Opportunities include early investment in assets which are likely to benefit from climate change adaptations, such as green energy providers.
- **Physical risks** - This relates to the direct impact of climate change on the Scheme and its members. These risks are expected to be longer-term in nature, but they are also expected to be limited in scope to the effects of climate change-related weather and other natural events on the businesses of invested companies, and the effect of changing temperatures on the mortality of Scheme members. These could have varying effects on the funding and investment strategy of the Scheme, but the direction and size of the effects is unlikely to be clear for a considerable period.

Climate scenario analysis continued

Asset & liabilities scenario analysis

Time horizons

The Trustee has explored the potential effects of climate change over a range of different time horizons for the Scheme using 31 December 2022 as the baseline.

- **Short term** – 1 year – A one year period over which the Scheme may be impacted by climate-driven shocks.
- **Medium term** – 12 years – The period to 2034 in which the Scheme is expected to de-risk linearly to the long-term portfolio. The impact of climate over this time horizon may be a result of climate-driven shocks, and/or the slower accumulation of costs arising from climate change, and the actions taken to mitigate or respond to it. Transition risks are likely to dominate the climate risk over this time period.
- **Long term** – 13 years + – The period from 2034 onwards, in which the Scheme is expected to maintain the de-risked portfolio. Physical risks are likely to dominate the climate risk over this time period.

How is life expectancy impacted by climate change?

Life expectancy under possible future scenarios is impossible to predict accurately and will depend on complex interactions between various factors. In the UK, there are positive and negative outcomes, and direct and indirect impacts from increases in temperatures.

Direct impacts relate to increases in global (and UK) temperatures throughout the year:

Reduction in mortality rates	Increase in mortality rates
Milder winter (so a reduction in excess winter deaths)	Increased summer heatwaves (so an increase in excess summer deaths)
Weather-related disruption and larger swings in temperature	

Indirect impacts are comparable to the transition risks on the asset side, arising due to changes in society to combat or adapt to climate change:

Reductions in mortality rates	Increase in mortality rates
Economic gains from positive action on climate change	Deterioration in health services (due to weaker economies)
Healthier diets (e.g. less red meat)	Less healthy diets (e.g. price increases for fresh produce)
Healthier lifestyles (e.g. warmer weather encourages more outdoor activity)	Disruptions to water supplies
Healthier environments (e.g. less pollution)	Less healthy environment (if pollution levels do not fall)

Climate scenario analysis continued

Climate scenario pathways

The table opposite summarises the four scenarios considered. These scenarios are, in part, defined through their success, or otherwise, in meeting the Paris Agreement target of limiting warming to below 2 degrees and ideally 1.5 degrees celsius. The scenarios differ in the size of the physical risks, based on the resulting temperature impacts, but also on the size of the transition risks. The climate emergency and **inevitable policy response** scenarios represent bigger transition risks due to the more immediate and disorderly nature of the scenarios. The lowest common denominator scenario represents the greatest physical risk due to the slow pace of transition towards a low carbon economy. Typically, if transition cost is high, then physical cost is expected to be somewhat lower (as the impacts have been mitigated), and vice versa.

	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 - coordinated 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 coordinated manner. Companies and consumers take most 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
Temperature rise (vs. pre-industrial levels)	~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
Life expectancy improvement	Negligible improvement	Some improvement	Very strong improvement	Strong improvement

Climate scenario analysis continued

Modelling methodology & limitations

In each of the scenarios considered, separate transition and physical costs for asset classes have been derived by assessing the impact on corporate cashflows. For transition risks this was done by assessing the impact of increased carbon prices, whilst the physical risk impacts are derived using Morgan Stanley Capital International (MSCI) assessment of individual asset impacts. The asset class impacts have been translated into annual year-by-year impacts based on qualitative views regarding the pace at which costs will be incurred. Despite the increasingly well publicised limitations to climate scenario analysis, much of which we agree with, overall we find it a useful part of the climate risk management process, but are cautious not to over interpret the results. Additionally, it is important to recognise that scenario lens is one lens we use to evaluate climate risk impacts but, like all scenario analysis, is considered as part of a wider risk framework and cannot be used in isolation. We summarise some of the main limitations below:

- Climate scenario analysis requires projecting future emissions and temperature rise, translating these into physical and transition risk and converting these risks into a financial impact. The complexity and uncertainty in each of these steps means that we treat the output as more qualitative than quantitative.
- The focus on corporate cashflows means the analysis is best applied to corporate assets (such as equities and corporate credit) and that for other return-seeking asset classes the impact is more approximate. It also means sovereign credit, such as gilts, are assumed to have no impact, with no scenario-specific path for risk-free rates and inflation modelled, albeit the Scheme is well hedged against the first order impact of these risks.

- Financial returns are driven by what is priced into assets versus what unfolds. It is impossible to know with any accuracy what degree of climate risk is being factored into asset prices which adds a layer of difficulty to the conversion of risk into investment losses.
- Furthermore, the impacts of climate change will differ widely by both geography and sector. BTPS is, for example, expected to move increasingly into UK-based assets which will provide a more nuanced sensitivity to climate risk.
- Physical risk analysis typically excludes the impact of tipping points i.e. critical thresholds that, when crossed, lead to large and often irreversible changes in the climate. The presence of tipping points likely means that physical risks are underestimated in most climate models. However, due to its maturity, BTPS is mostly exposed to transition risk rather than physical risk which means this particular shortcoming is less relevant.

Scheme Impact

Base case

This is the central funding projection against which the climate scenarios are considered. It projects forwards, using Willis Towers Watson's investment model, the Scheme's assets and liabilities (on the Technical Provisions (TP) basis) as at 31 December 2022. It assumes that the asset allocation at that date de-risks linearly to the long-term portfolio by 2034. We expect that current market pricing, which is to some extent built into the model, only allows for a small amount of transition risk (similar to the lowest common denominator scenario) and makes no allowance for physical risk. This is a prudent view, that leads to bigger climate scenario impacts than would have been modelled

under a less prudent view on current market pricing, designed to reflect the uncertainty of climate outcomes and the purpose of the analysis in assessing the potential size of the risk. Under this projection, the Scheme is expected to reach full funding in 2030.

Assets

Shocks to the asset returns were applied at an asset class level. As at the date of analysis, the Scheme held a portfolio comprising largely of UK government bonds and UK credit but also noteworthy allocations to secure income assets, real estate and return-seeking equities (the latter two absent from the terminal portfolio from 2034). Under all scenarios, most asset classes were expected to be negatively impacted to varying degrees by the climate transition and associated physical risk. The exception was UK government bonds on which we expect climate outcomes to have a limited price impact.

Liabilities

Life expectancy is assumed to be impacted in several ways, both directly and indirectly. These include the potential for warmer winters, impacts on lifestyles and air quality, and the physical impact of increased natural disasters. Overall, life expectancies are expected to improve, relative to the base case, in the Global Coordinated Action scenario and deteriorate to different degrees in all other scenarios. Other than the impact on mortality and longevity assumptions, the Scheme's liabilities are assumed not to change with no other changes to the Technical Provisions basis needed.

Climate scenario analysis continued

	Lowest common denominator	Inevitable policy response	Global coordinated action	Climate emergency
Projected 2035 funding level (relative to base case)	105% (+3%)	95% (-7%)	96% (-6%)	94% (-8%)
Change in funding level based on immediate climate shock	-3.2%	-12.1%	-8.0%	-11.1%

The table above summarises the results of the analysis. There are two different perspectives in which the impact on the Scheme is analysed: firstly, if the impact materialises as an immediate climate shock and is immediately priced into markets resulting in a change to the current funding levels; and secondly, if the impact materialises through time. The impact of a shock is likely to be more material to the Scheme, as the earlier negative outcomes are priced in, the more impactful they are to a shorter-term path-dependent investor like the Scheme, whilst the investment portfolio is also expected to de-risk through time. Additionally, it has assumed that in a shock event markets would overprice the risk (as has been seen historically) which means a bigger initial impact before some of this impact unwinds in later years as markets recover. The analysis of projected (2035) funding levels shows that the impact of climate change can compound over time to produce noticeable differences in future funding and justifies the importance we attach to the issue.

Transition risks are likely to be more costly than physical costs due to the short time horizon of the Scheme and the fact that the Scheme will be materially de-risked by the time physical risks begin to bite. 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. Due to the increase in life expectancies assumed under the global coordinated action scenario, this scenario can also be seen to have a relatively material impact on the funding level in a shock scenario. Similar to other risk analysis considered by the Trustee, the size of these potential shocks is measured by a 95% Value at Risk (which is a model-derived figure of the potential increase in deficit the Scheme could experience due to adverse investment performance that would be expected to occur once every 20 years). The results of the scenario shocks suggest that whilst the climate risk is material, it is not disproportionate to the level of investment risk the Scheme is exposed to as part of the overall investment strategy.

Climate scenario analysis continued

Conclusions

The conclusions drawn from the scenario analysis, based on the potential impact of climate change on the Scheme over the different time periods defined, are as follows:

- **Short term** – The biggest potential impact of climate change on the Scheme would be a climate shock in a high transition scenario. Such an event could have a material impact on the funding level, however, it is of an equivalent magnitude to other downside scenarios to investment performance that we model with an expected once in 20-year occurrence.
- **Medium term** – In the medium term, the Scheme is also exposed to high transition scenarios and may see a deterioration in the funding level as a result of transition costs as well as potential improvements to longevity.
- **Long term** – In the longer term, the Scheme is expected to be materially de-risked and holding asset classes, such as investment grade corporate debt, that are less exposed to the physical risks that are likely to be prevalent. The Scheme is therefore less exposed to climate risks in the long term.

The Scheme already has in place detailed ongoing monitoring of investment risk and stress scenarios as part of the funding strategy, and climate change risk is an extension of that overall investment risk process. The results of the climate stress tests above show that the Scheme's investment strategy is not immune from the potential impact of climate change, and therefore that considering climate risk when setting allocations and in the implementation of the strategy is critical. Key areas the Trustee will focus on are asset allocation, strategy implementation and a deeper assessment of investment grade credit, and the secured income portfolios which form the core of the expected long term Scheme portfolio.

We recognise the value in undertaking climate scenario analysis as part of our wider evaluation of potential long-term outcomes for the Scheme. In this context, scenario analysis offers one approach for assessing the progression of the Scheme's funding position, but should not be seen as the definitive answer. The indirect impacts of climate change, including the interaction with other risks (such as geopolitical risk), are difficult to accurately model. How markets interpret climate risks over time is also inherently uncertain, and this could have a more direct impact on the Scheme's funding position. The way scenario analysis is constructed continues to adapt and improve, and we will continue to keep up-to-date with the latest approaches.



Climate scenario analysis continued

Covenant

The Trustee has considered the impact of climate change on the BT sponsor covenant in the context of the wider telecom sector, information provided by BT and scenario analysis undertaken by WTW on the Scheme's funding position.

Based on this information, the Trustee's covenant adviser, Penfida, has concluded that:

- As a major global telecommunications company, BT faces several risks relating to the ongoing climate change crisis with the level of carbon emissions generated by the global telecommunications industry remaining material.
- However, relative to other industries (e.g. oil & gas, or steel production), the telecommunications sector is not considered an emissions-intensive sector, with 180 tons of CO₂ produced per million Euros of revenues which is in line with the carbon intensity of the MSCI Europe Index and slightly below the MSCI World Index¹. In contrast to other sectors, telecommunications operators expect the impacts and reactions to climate change to have a net positive impact on the sector, with total opportunities outweighing the costs by 1.8% of revenue, mostly due to increased demand for products and services².
- Furthermore, the telecommunications sector has a unique role to play in helping other sectors abate or reduce emissions including, for example, by enabling remote working and thereby avoiding travel emissions.
- Additionally, based on third party assessments, BT's positioning with respect to climate change initiatives relative to peers and the wider market (including its net zero target) is favourable³.
- BT is targeting netzero (Scope 1 & 2) emissions for its own business by March 2031, and net zero (Scope 3) emissions for its suppliers and customers by March 2041, which puts it in a reasonable position to address climate change-related risks. Actions taken by BT to meet this target include purchasing 100% of its electricity from renewable sources, where markets allow, and transitioning its fleet to zero emissions or electric vehicle models. Whilst BT's Scope 1 + 2 carbon emissions remained relatively stable and its Scope 3 carbon emissions increased by c.5% in FY23, BT has maintained its net zero targets.
- A comparison of the impact of climate change relative to BT's base case expectations suggests that the covenant provided by BT to the Scheme is expected to remain resilient under the climate change scenarios identified and modelled by BT Group.

¹Oliver Wyman. (2021). The next level of emission reductions in telecom operators.

²Ibid

³MSCI ESG Rating, May 2023

Key 2024 focus

The Trustee will continue to monitor BT's resilience to the risks posed by climate change and its progress towards its targets in determining the extent to which its strategy would need to change.

Risk management

Next, we explain our processes for identifying, assessing and managing climate-related risks and how we integrate these into our overall risk management framework.

There are 3 core aspects to climate risk and its effective management within the Scheme:

1. Enterprise risk management

This is the overarching framework governing and setting out how risks are monitored and managed, including climate risk.

The sections below provide more information across each of these areas. In addition, day-to-day management of the Scheme's investments are delegated to Brightwell, including the monitoring and managing of the associated risks. The Enterprise Risk Management Framework (ERMF) is designed to ensure that these risks are managed effectively, proportionately and in-line with the Trustee Board's expectations.

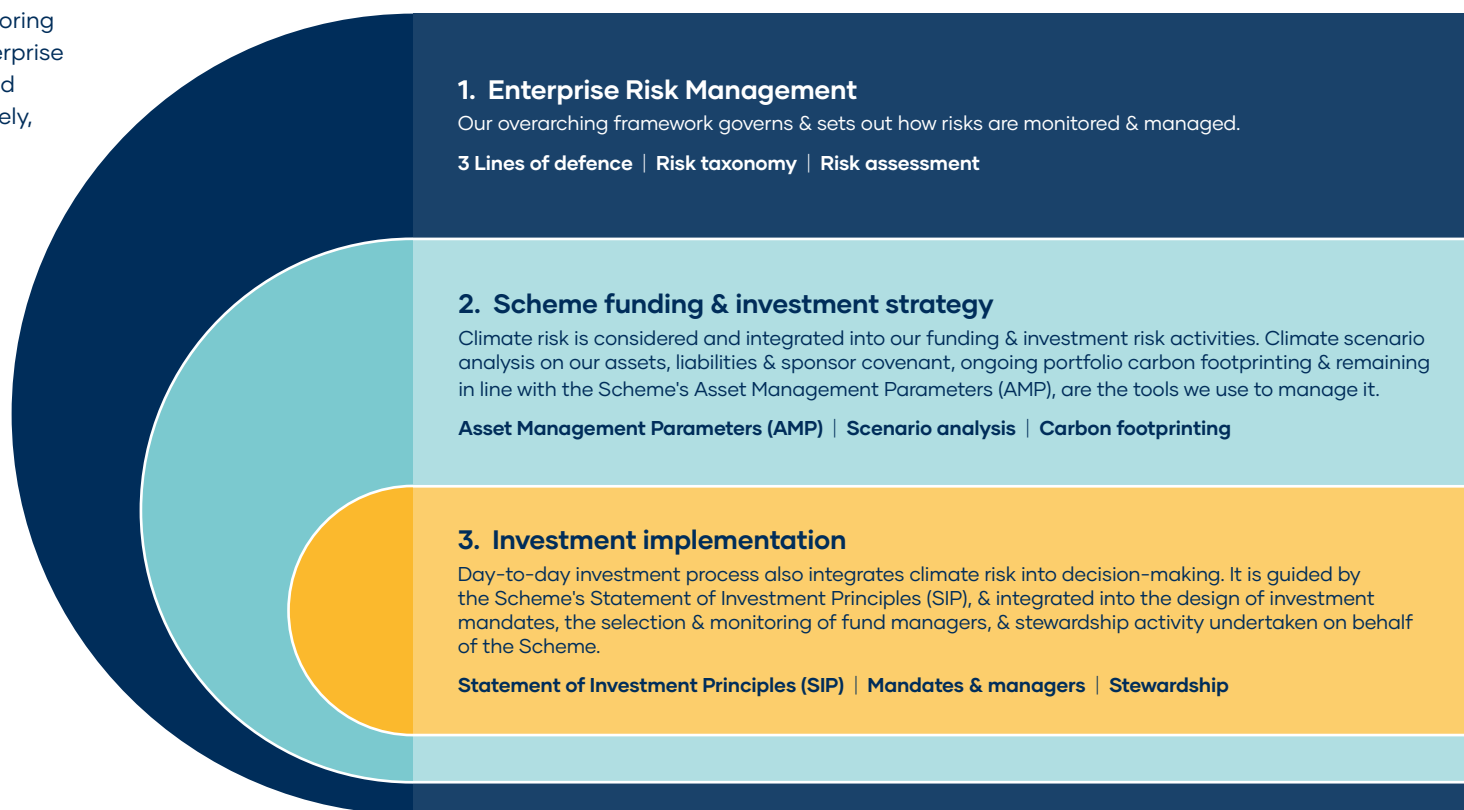
We are committed to identifying, monitoring and managing risks by determining the likelihood of a risk materialising and the impact of a risk on the Scheme, having appropriate mitigating controls in place and, when required, taking the actions to avoid, transfer or accept the risks.

2. Scheme funding & investment strategy

Climate risk forms a key risk factor that we consider and integrate from a funding and investment perspective. Climate scenario analysis on our assets, liabilities and sponsor covenant is a key part of this, together with ongoing carbon footprinting of our portfolio.

3. Investment implementation

Our day-to-day investment process also integrates climate risk into our decision-making, particularly around the design of investment mandates, the selection and monitoring of fund managers, and stewardship activity undertaken on behalf of the Scheme.



Risk management continued

Enterprise Risk Management Framework (ERMF)

The Scheme's goal is to be net zero by 2035, and interim targets are set and reported on annually. The purpose of the ERMF is to support the achievement of the Scheme's objectives by providing an integrated approach when considering and managing risk across the business. Processes for identifying, assessing and managing environmental, social and governance (ESG) and climate change risks, including scenario analysis, are being developed.

Brightwell has adopted a 'three lines of defence' governance model which provides a consistent, transparent and clearly documented allocation of accountability, and segregation of functional responsibilities. This segregation of responsibility helps to establish a control framework that improves understanding and encourages continuous improvement.

- The first line of defence leads and oversees the business while owning the risks and managing them on a day-to-day basis. The first line risk owners are also responsible for identifying, measuring, assessing and monitoring the risks. The CIO owns the investment risks and is responsible for investment teams who specifically identify and manage climate-related risks.

- The Investment Risk and Operational Risk Teams are part of the second line of defence and are responsible for designing the framework, risk management oversight and challenge to the first line. Work is underway to integrate the climate risk metrics into second line oversight activities and Trustee Investment Committee reporting.
- The third line of defence is the internal audit function, which provides independent assurance on the adequacy of the design and effectiveness of the first and second lines of defence.

Risk Taxonomy

The ERMF taxonomy defines the risk landscape, and provides a common language and description of the level one and level two risk categories. Level one risks are defined at a high-level, with level two risks being more detailed subcategories.

Strategic risk is a level one risk category with ESG risk being a level two within that category. ESG risk is defined as "an adverse sustainability impact due to an environmental (including climate changes), social, or governance event, or condition arising".

As the ERMF and our wider capabilities are developed, this will enable appropriate risk appetites to be set and enable ESG and climate risks to be monitored against specific targets.

Risk Assessment

The risk management system and processes support the execution of the ERMF, including the maintenance of its taxonomy and controls, risk events and issue mitigations, and reporting and escalation requirements.

Reporting provides assurance to key stakeholders that there is a clear and comprehensive ERMF in place to manage the Scheme risk environment, along with corresponding controls to effectively mitigate those risks.

Climate risk is considered as an enduring (ongoing) risk which may adversely impact the delivery of the Scheme's funding strategy. Whilst the scope and frequency of our controls are being improved, high-risk exposures and incidents are reported to the Investment Committee. BTPS performs an annual performance review of the Scheme comparing outcomes against expectations and investment beliefs. Regular asset class deep-dives include coverage of responsible investment and climate risk. An assessment of the Scheme's exposures to high and low carbon assets, transition and physical risks, and scenario analysis will also be conducted annually as part of the Trustee net zero deep-dive.

Risk management continued

Scheme funding & investment strategy

The Scheme also manages the risks of climate change through its funding and investment strategy. This is done in three ways:

Asset Management Parameters (AMP)

Guidelines set to ensure long-term funding goals, risk profiles and other metrics, including climate performance, are maintained and achieved

Climate scenario analysis

Undertaken across the 3 main axes of our funding status: liabilities, assets and the sponsor covenant

Carbon footprinting

Conducted annually, across several climate metrics, to track historical performance and forward looking key performance indicators (KPIs).

Asset Management Parameters

The AMP or Asset Management Parameters are the guidelines within which the Scheme's investment portfolio is managed on a day-to-day basis. The AMP is set by the Trustee Investment Committee (IC) and reviewed regularly to ensure it is consistent with the long-term funding goals and risk profile required to meet our long-term pension promises. The AMP sets out the primary investment objectives and constraints guiding implementation. Since 2020, when climate change was explicitly referenced in the Scheme's SIP, the net zero emissions objective has been included in the AMP in order to achieve this goal.

Specific climate risk metrics have been integrated into the AMP and will be reported to the Trustee on an ongoing basis. From a risk perspective, the first line of defence investment team seeks to ensure that the Scheme's investment strategy and implementation are consistent with the AMP. The second line of defence risk team monitor portfolio compliance with the constraints set out in the AMP, challenging the first line of defence functions to ensure adherence to the AMP limits. The third line of defence, the internal audit function, seeks to ensure that the first and second lines have robust policies and processes to manage within the AMP limits, as well as seek assurance and evidence around the controls in place to appropriately manage the Scheme within the AMP.

Scenario analysis

For several years, BTPS has undertaken climate change scenario analysis to help determine the impact of different global warming scenarios on its assets. Beginning in 2015, the Scheme, together with several other institutional investors, partnered with Mercer on their study investigating the potential impact of climate change on investment returns and their resilience. As part of this work, the impact of different climate warming scenarios were evaluated, ranging from 2°C, 3°C and 4°C. This work had important implications in highlighting the magnitude of climate risk and was a contributing factor in BTPS setting its net zero goal in 2020.

Since then, we have further developed our scenario analysis to capture the potential impact climate change may have on Scheme liabilities and the corporate sponsor covenant.

For this analysis, BTPS utilises the expertise of external advisors, notably WTW in the case of asset and liability climate risk modelling, and Penfida, for covenant risk modelling. Please turn to page 25 for further information on the analysis and key Trustee considerations.

Risk management continued

Carbon footprinting

Carbon footprinting plays an important role in monitoring and managing climate risk in our portfolio design and construction. This activity is currently performed by the first line of defence assisted by third party providers.

With the Scheme's longer-term Net Zero 2035 goal, as well as interim carbon reduction targets that are set to ensure the journey towards the long-term goal, footprinting allows us to evaluate progress and take action as required.

Annual monitoring of the Scheme's climate and emissions metrics allows us to adjust the portfolio as part of the de-risking glidepath to remain within the expected carbon reduction corridor. It also means we can estimate our absolute and emissions intensity footprint for the overall portfolio and different asset classes.

Eight key metrics are tracked and reported to the Trustee as part of the annual net zero deep-dive, which is a detailed analysis of the Scheme's progress against its Net Zero 2035 goal. Please see page 37 for more information on our metric and target setting processes.

Footprinting also helps us identify our highest emitting investments which, in turn, gives direction to our net zero stewardship activities.

For more information on stewardship carried out on the Scheme's behalf, please see the Scheme's latest stewardship report: **BTPS Portal - Sustainable investment**.



Risk management continued

Investment implementation

The Scheme's day-to-day investment process also integrates climate risk into decision-making, particularly around its investment principles, the design of investment mandates, the selection and monitoring of fund managers, and stewardship activity undertaken on behalf of the Scheme.

Statement of Investment Principles

The Statement of Investment Principles (SIP) sets out the principles governing how decisions about investments are made, and has been prepared in accordance with all relevant legislation and best practice guidelines. The SIP refers to climate change specifically, as it is viewed as a key, long-term risk which may have material, adverse impacts on the Scheme. The Trustee believes that reducing exposure to carbon emissions over time will improve investment outcomes and reduce the impact of potential adverse outcomes associated with future climate risk. The Trustee also believes that active stewardship (i.e. exercising ownership rights and undertaking engagement activities) can improve long-term risk-adjusted returns and has appointed an external adviser as the Scheme's primary provider of stewardship services.

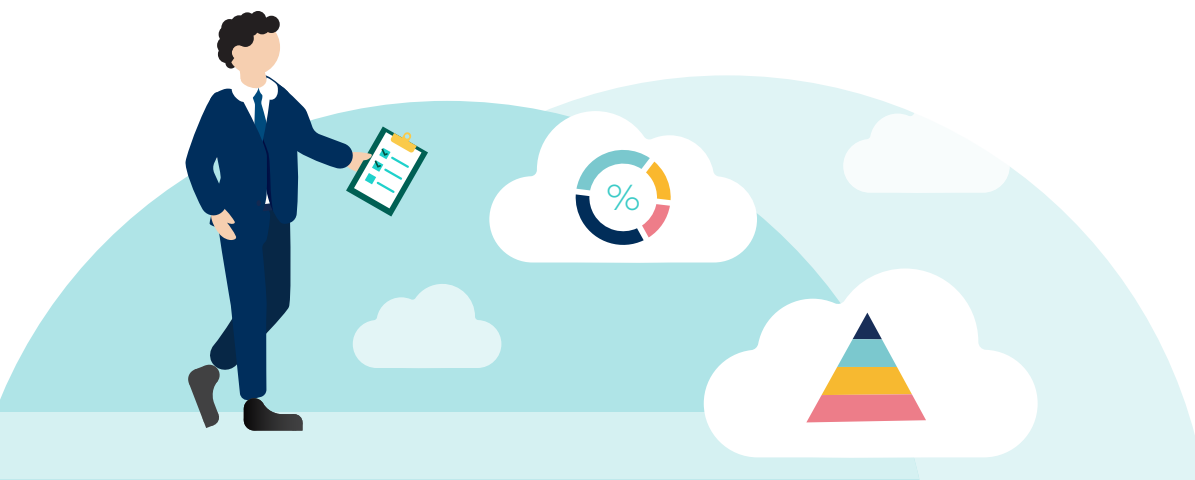
Managers & mandates

As detailed in the Strategy section, implementation of the Scheme's net zero goal is centred on 4 key pillars. Of these, there are a subset that are important in appropriately managing climate risk associated with implementation. In particular:

- **Design of investment mandates** – Ensuring the investment mandates given to fund managers seek to embed carbon reduction objectives and reporting requirements. Over time an increasing number of investment mandates will include climate objectives and constraints, helping manage overall Scheme climate risk.
- **Selection of fund managers** – Ensuring the fund managers responsible for managing BTPS assets consider and integrate climate risk as part of their investment process. It is expected that the fund managers employed by BTPS help mitigate climate risk through their processes and adherence to their mandate objectives that will include net zero emissions objectives. Ensuring managers operate in this way, and meet their emissions goals, is another key risk management activity.

Stewardship

As noted in the Stewardship section of the report, we have long supported and encouraged our managers and stewardship provider, Federated Hermes EOS, to use voting and engagement as tools to push our investments to address climate change. We view stewardship as such a key tool that it is one of four pillars of our net zero goal in helping manage climate risks. We believe in being active owners of our assets and expect our equity fund managers to use their voting powers to support appropriate climate change-related shareholder resolutions, and all our managers to regularly engage with company executives and boards on climate change. As part of our Net Zero Stewardship Programme, we expect all our fund managers, across all asset classes, to engage with investments in our portfolio to establish credible net zero transition plans. For more information, please see the Stewardship section of the TCFD report.



Key focus 2024

The Trustee will continue to assess how we can better integrate climate risk into the investment decision-making process and how Brightwell can advance its investment systems to better integrate climate data.

Metrics and targets

In this final section, we discuss the metrics and targets we have set to assess and progress our net zero goal and climate-related risks and opportunities. We look at our performance since 2020 and explore the limitations and challenges with climate data.

In line with The Department of Work and Pensions (DWP) TCFD regulations, occupational pension schemes are now required to report on at least four metrics to measure and track climate-related performance. We have selected the following metrics and targets, which will be reviewed triennially.

These metrics and targets are subject to change over time, either due to regulation, improvements in data or changes required to goals.

2021 Scheme-wide climate metrics & targets

Metric	Description	Rationale for inclusion	2025 Target
Absolute emissions, also known as total carbon emissions (tCO₂e, scope 1&2)	Total carbon emissions attributable to the portfolio, at a given point in time. Tonnes of carbon dioxide & equivalents (tCO ₂ e).	Statutory guidance. Helps set baseline & track emission evolution.	-
Carbon footprint, also known as financed emissions (tCO₂e/\$m invested, scope 1&2)	The amount of tCO ₂ e emitted per million dollars of BTPS' investments.	Statutory guidance. Helps compare portfolios & perform attribution analyses.	At least 25% reduction in equity & corporate credit investments.
Weighted average carbon intensity (WACI, tCO₂e/\$m revenues, scope 1&2)	Measure of carbon emissions normalised by million dollars company revenues.	Enables comparison of portfolio, its sectoral exposure with benchmark & measures a portfolio's exposure to carbon intensive companies. It can also adjust for impact of expected decline in portfolio size, low data coverage levels for certain asset classes & alignment with real world change.	At least 25% reduction for equity & corporate credit investments.
Portfolio alignment (%)	Proportion of equity & credit portfolio that has emission reduction targets in line with the Paris Agreement goals.	Assesses percentage of portfolio with approved, science-based emission reduction targets aligned with Paris Agreement. Helps focus stewardship efforts on investments with no targets.	At least 50% increase in equity & corporate credit investments.
Portfolio GHG data coverage (%)	Percentage of equity & credit portfolio with emissions data available.	Identifies parts of portfolio lacking emissions data. We are reliant on fund managers & data providers to improve this but can push policy makers to require better disclosure.	-
Company reported data (%)	Percentage of portfolio with company reported emissions.	Highlights what proportion of emissions are reported by companies vs. estimated by data providers. We are reliant on fund managers & data providers to improve this but can push policy makers to require better disclosure.	-

Metrics and targets continued

2022-2023 Equity & corporate credit emissions data Scopes 1 & 2

As at 30th June 2023	Absolute emissions (tCO ₂ e, scaled to 100% coverage)	Carbon footprint (tCO ₂ e/\$m invested)	WACI (tCO ₂ e/\$m revenues)	Portfolio alignment (%)	Portfolio GHG data coverage (%)	Company reported data (%)
Listed equities	96,923	32.1	65.4	45.1% ¹	100.0%	75.3%
Comparator - MSCI ACWI	174,626	57.8	142.0	-	99.9%	-
Listed investment grade credit	537,755	49.2	142.5	30.8% ²	78.5%	59.7%
Comparator - BBG Global Agg Corporate	712,096	65.2	215.0	-	86.8%	-
BTPS total equity & corporate credit portfolio	634,678	45.8	127.1	33.6%	82.8%	62.8%
Infrastructure	213,214	95.9	571.7	-	100%	-
Real estate	24,629	7.6	-	-	75%	-
Government bonds	1,726,678	112.3	112.3	-	100%	-

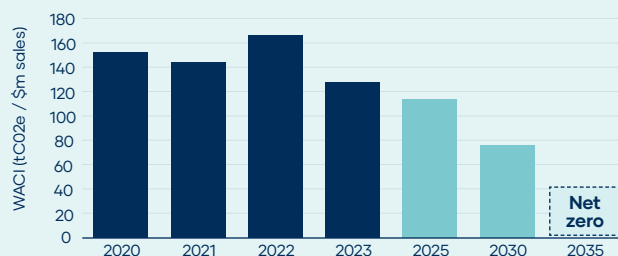
¹ A further 25.8% have committed to align but do not have an SBTi approved target.

² A further 10.2% have committed to align but do not have an SBTi approved target.

Metrics and targets continued

Key findings

Equity & corporate credit WACI performance vs. net zero targets



Since the 2020 baseline year, BTPS' equity and credit portfolio carbon intensity, measured using the Weighted Average Carbon Intensity (WACI, as detailed above) has fallen by 16%. At the same time, our absolute emissions from these asset classes have reduced by 51%, although a large part of this can be attributed to asset sales.

We recognize that due to all the moving parts year-on-year changes in emissions can be quite volatile and seeing long-term progress towards net zero is the key focus.

There are a couple of key factors that have contributed to the fall in WACI over the year:

1. The main driver is the redemption from some of the higher emissions intensity equity mandates. As a result, the remaining equity exposure is, for now, heavily exposed to service companies, which understandably operate with much lower carbon footprints.
2. The second factor is the high level of inflation over the period which, all else equal, lowers the WACI, which is quoted relative to \$1m of sales.

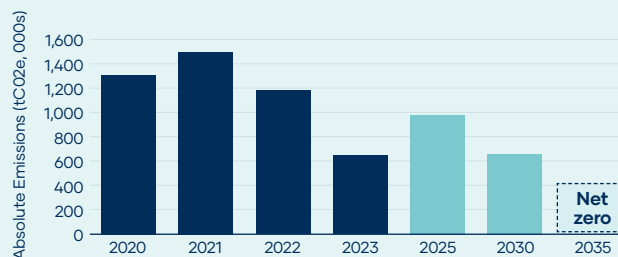
The significant reduction in absolute emissions (on the listed assets in our portfolio) is mostly a function of asset sales, predominantly from the listed equity portfolio in the second half of 2022. However, the Scheme has also seen a reduction in absolute emissions from the listed credit portfolio of 36% which reflect changes in the underlying portfolio. While we do not wish to over-interpret short term changes in the carbon footprint of our listed assets, it is encouraging that on all key carbon metrics the portfolio has trended lower since 2020. We are also encouraged that for both the listed equity and credit portfolios the carbon footprint is smaller than it would be for a comparable sized investment in corresponding benchmarks.

As equally important as the backward-looking carbon footprint metrics are the alignment and disclosure trends. We are encouraged by the trend of increased corporate disclosure, especially with the credit portfolio which is in relative terms the growing part of the portfolio. In regard to alignment, we are pleased to see an ever-growing number of portfolio companies that have had, or are committed to, receiving a transition plan approved by SBTi. This gives us confidence to expect further reductions in emissions in subsequent years.

For the first time we have included the carbon footprint of infrastructure, real estate and government bonds. Together with equities and credit, these exposures make up over 70% of the portfolio. The carbon footprints of real estate, government bonds and, to a lesser extent, infrastructure, are not directly comparable to equities and corporate credit. For these reasons, we continue to split out the emissions by asset class. The BTPS infrastructure allocation has experienced a reduction in gross emissions of 8% since 2020. By 2025, the entire allocation will either have board approved emission reduction targets or alignment with a 1.5 degree warming scenario. The real estate allocation has a significantly lower carbon footprint than it's peer group and has a 2030 net zero target for operational emissions.

There is a lack of standardisation when it comes to how emissions should be accounted for in the case of government bonds and the problem of double counting has not yet been resolved. Nevertheless, under current calculation approaches, the emissions associated with government bonds are significantly higher than any other part of the portfolio, in both absolute and normalised terms.

Equity & corporate credit absolute emissions performance vs. net zero targets



Metrics and targets continued

Emissions data is continually improving. More companies are now reporting their emissions, others are improving the depth and scope of their emissions reporting, and specialist data providers are competing to provide more comprehensive information. These improvements generally result in capturing a more detailed and accurate picture of portfolio emissions over time. It is quite likely that continued improvements in both current and historic data coverage and quality will lead to restatement of historical emissions. This can make year-on-year comparisons more challenging, but over time, as data collection improves, these swings will reduce.

BTPS' net zero goal has two aims: to reduce emissions in the portfolio and to invest in transition investment opportunities. Decarbonising BTPS' portfolio is an important priority however, it will not necessarily aid the overall global transition. Instead, using our influence to push companies will likely prove more powerful than divesting heavy emitters to reach an emissions goal.

In addition, monitoring the Scheme's exposure to investments that aid the global transition is key.

Finally, like all other investors setting net zero goals, we are only able to go as fast as the wider macro-economic conditions and policies allow us. Our goal is to achieve net zero by 2035 however, we are reliant on real world change. If global leaders and policy makers do not set strong net zero goals with supporting policies, it will be challenging to meet net zero whilst also achieving our primary objective of meeting member pension promises.

Key 2024 focus

Over the next 12 months, BTPS will continue to push a number of initiatives to achieve our 2025 emission targets, to remain on track for the 2035 goal.

These include:

- Improving our emission data and attribution of year-on-year changes
- Creating change through our net zero stewardship programme, and strongly focusing on our managers pushing investments to set net zero targets, particularly in our corporate credit mandates
- Focusing fund manager discussions on the quality of companies held, both in our equity and long-term credit mandates
- Continuing to work with our infrastructure, real estate, and private market managers to improve the consistency and comparability of data
- Calling for strong policy maker action to require companies and different asset classes to disclose more data
- Continuing to proactively contribute to the improvement in accounting methodologies through continuing our chair role within the ASCOR project, our participation in the Net Zero Asset Owner Alliance (AOA), Paris Aligned Investment Initiative (PAII), the Transition Pathway Initiative (TPI), and supporting the ESG Data Convergence Initiative via our managers and broader market engagement.



Appendix 1: Data Quality and Limitations

At present, climate and carbon data availability varies significantly across companies, geographies and asset classes. While we purchase emissions data from a third-party data provider, this only covers equity and corporate credit investments. This represents about a third of our portfolio.

We supplement this coverage with manager provided information on infrastructure and real estate emissions. We continue to work with our asset managers, especially for private exposures, to increase coverage over time. Like many investors, BTPS is dependent on the quality and completeness of climate data and of net zero methodologies for different asset classes.

Much improvement across the industry is still required which is something Brightwell is actively contributing to.

- 1. Entity mapping** – Companies may be represented more than once if they issue financial instruments in different forms. To reduce this risk we have made our best efforts to ensure that the correct identification has occurred, however there is still the risk that there are errors.
- 2. Carbon apportionment** – Many different factors can impact the calculation of enterprise value or total capital, e.g. negative equity value or a lack of enterprise value for banks and insurers. Consequently, this could heavily impact an issuer's calculated emissions intensity. Again, while we have made efforts to account for these issues, the calculations may be incorrect.
- 3. Scope 3 emissions** – The Trustee has, in so far as it is able, tried to obtain Scope 1, 2 and 3 GHG emissions from across the portfolio. Unfortunately, obtaining scope 3 emissions is far harder due to poor data quality, weak reporting, changing estimation methodologies and the potential for double-counting, but we have included it as far as we are able.
- 4. Real estate** – We have reported emissions associated with the Schemes' ownership of real estate for the first time this year. These numbers were sourced from an independent third party (GRESB).
- 5. Infrastructure** – We have reported emissions associated with investments into direct infrastructure for the first time this year. These numbers were sourced from the underlying investment manager.
- 6. Private markets** – In such as private credit and equity, data is weaker as investments are in smaller companies or different asset classes that do not have an emissions reporting methodology. To support improvement in private equity reporting, we support the **ESG Data Convergence Initiative**, led by the Institutional Limited Partners Association (ILPA). We also call on regulators to request that these different markets better report climate data.
- 7. Sovereign debt** – Like all defined benefit schemes, BTPS has significant investments in government bonds, also known as sovereign debt. This is because sovereign debt is a key risk management tool to hedge against inflation and match liabilities. Sovereign debt emissions can be calculated in many ways however, this lack of emissions accounting agreement means there is a risk of double counting emissions, emissions numbers which are achieved are not comparable to equity and corporate credit emissions calculations, and there is currently no way of assessing any forward-looking climate information related to sovereign debt. As a result, we continue to support industry efforts to align sovereign debt accounting methodology via NZAOA and our chair position of the ASCOR project.



Appendix 2: Emissions Calculation Methodologies

Methodologies⁷

Enterprise Value including Cash

Enterprise Value including Cash (EVIC) is an alternative measure to Enterprise Value (EV) used to estimate the value of a company by adding back cash and cash equivalents to EV. The underlying data used for the EVIC calculation is sourced from a company's accounting year-end annual filings.

$$EVIC = \text{Market capitalization at fiscal year-end date} + \text{Preferred Stock} + \text{Minority Interest} + \text{Total Debt}$$

Absolute emissions

This metric measures the total greenhouse gas emissions (GHGs) attributable to a portfolio. Trustees are recommended to report this number by the Department of Work and Pensions (DWP) regulation, covering at least scopes 1 and 2 GHGs.

$$\sum_n^i \left(\frac{\text{current value of investment}_i}{\text{issuer's EVIC}_i} \times \text{issuer's Scope 1 and Scope 2 GHG emissions}_i \right)$$

Carbon footprint

This metric normalises financed emissions by a total value invested in a portfolio and measures the emission impact of a portfolio per million US dollar invested. It allows for like-for-like comparisons across different portfolios and the contribution of individual issues can be examined to identify large relative contributors to overall emissions. Trustees are recommended to report this number by DWP regulation.

$$\frac{\sum_n^i \left(\frac{\text{current value of investment}_i}{\text{issuer's EVIC}_i} \times \text{issuer's Scope 1 and Scope 2 GHG emissions}_i \right)}{\text{current portfolio value (\$M)}}$$

Weighted Average Carbon Intensity

Weighted Average Carbon Intensity (WACI) is a measure of carbon emissions normalised by revenues. Since revenues are a repeatable comparison point across issuers, WACI can be used for analysis across portfolios, sectors and asset classes. Companies with high emissions and low revenues are also more likely to be vulnerable to carbon pricing therefore, this metric is useful from a risk analysis perspective and can highlight potential exposure to transition risks.

$$\sum_n^i \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \times \frac{\text{issuer's Scope 1 and Scope 2 GHG emissions}_i}{\text{issuer's \$M revenue}_i} \right)$$

Portfolio alignment

This metric measures the proportion of equity and credit portfolio that has emission reduction targets in-line with the Paris Agreement goals and helps BTPS focus stewardship efforts on investments with no targets. This year, the Trustee has assessed the percentage of the portfolio with approved, science-based emission reduction targets, also known as SBTi targets, aligned with the Paris Agreement. Science-based targets provide a clearly defined pathway for companies and financial institutions to reduce greenhouse gas (GHG) emissions, helping prevent the worst impacts of climate change and future-proof business growth. Targets are considered 'science-based' if they are in-line with what the latest climate science deems necessary to meet the goals of the Paris Agreement; limiting global warming to 1.5°C above pre-industrial levels.

How portfolio alignment is calculated may however change over time as methodologies and data improve, particularly in relation to how we can calculate alignment as per guidance in the NZIF net zero stewardship toolkit. Trustees are recommended to report this number by DWP regulation.

⁷ As established by MSCI ESG Research LLC

Appendix 3: Scope 3 Emissions metrics for equities and corporate bonds

	Absolute emissions (tCO ₂ e, scaled to 100% coverage)	Carbon footprint (tCO ₂ e/\$m invested)	WACI (tCO ₂ e/\$m revenues)	Portfolio GHG data coverage (%)
Listed equities	1,526,877	506.1	913.5	98.30%
<i>Comparator - MSCI ACWI</i>	1,145,288	379.3	1037.8	99.80%
Listed credit	3,802,592	347.6	766.6	55.40%
<i>Comparator - BBG Global Agg Corporate</i>	4,354,952	398.4	981.0	86.80%

Scope 3

For the first time this year we are also reporting, where available, estimated Scope 3 emissions. Scope 3 comprises emissions that are not produced by the company itself but by those that it is indirectly responsible for, up and down its value chain. These are typically much larger than Scope 1 & 2 emissions. Apart from the potential of double counting by summing up Scope 3 emissions across a portfolio of companies, disclosure of Scope 3 data remains rare and most of the coverage in the table above relates to estimated values by MSCI. As a result, the Scheme, similar to other asset owners, continues to prioritise reduction in and monitoring of Scope 1& 2 emissions.

Appendix 4: Glossary of terms

2°C scenario

An internationally agreed threshold to limit the rise in global temperatures to below 2°C from pre-industrial levels.

Absolute return

This allocation seeks to generate returns irrespective of the direction of markets. Managers within this allocation will typically manage their portfolios without close regard to a specific market benchmark.

Active ownership

The active exercising of shareholder rights to improve the long-term value of a company.

Actively managed

Investments that are selected by investment managers with the aim of outperforming a particular benchmark index.

Additional Voluntary Contribution (AVC)

A contribution paid by a member of an occupational pension scheme to secure additional benefits.

Asset classes

Groupings of investments such as equities (stocks), fixed income (bonds), cash and cash equivalents, real estate, commodities, futures and other financial derivatives.

Bond (or corporate credit)

A type of debt security issued by a firm and sold to investors. The company gets capital and in return the investor is paid a pre-established fixed or variable interest rate.

BREEAM

A third party certification of the assessment of a real asset's environmental, social and economic sustainability performance.

CA100+

CA100+ is a coalition of over 400 global investors with around \$40 trillion in AUM focused on engagement with the largest emitters for enhanced governance, strategy, actions and disclosure around climate change.

Carbon footprint

The amount of carbon dioxide released into the atmosphere because of the activities of a particular organisation. Most often expressed as tonnes of CO₂ emission per USD\$ million of revenues.

Climate change

The long-term global shift in weather patterns due to man-made GHG emissions.

Corporate governance

The system of rules, practices and processes by which a company is directed and controlled.

Credit default swap

A credit default swap is a contract which transfers the credit risk of an issuer from one party to another party.

Covenant

A measure of the ability of the employer to meet its obligations to the Scheme.

Custodian

A custodian or custodian bank is a financial institution that holds customers' securities for safekeeping to prevent them from being stolen or lost. The custodian may hold stocks or other assets in electronic or physical form.

Deferred beneficiaries

All those who have a right to be paid benefits by the Scheme at a future date, but are not currently active members of the Scheme (mainly former employees).

Derivative

A financial contract whose price is derived from the movement in an underlying asset, e.g. a single security or basket of securities, interest rates, inflation levels, exchange rates or index movements. Examples of derivative instruments are futures, forwards, options and swaps.

Engagement

The practice of shareholders entering into dialogue with management of companies to change or influence the way in which that company is run.

Equities

Shares directly held in companies contained well below 2°C or 1.5°C.

Equity

A method of raising fresh capital by selling shares of the company to public, institutional investors, or financial institutions. The people who buy shares are referred to as shareholders of the company because they have received ownership interest in the company.

Appendix 4: Glossary of terms

ESG

Environmental, social and governance issues that constitute the three pillars of Responsible Investments. E, S, and G are the three central factors in measuring the sustainability qualities of an investment.

ESG integration

The incorporation of ESG factors and analysis into investment decisions.

ESG mainstreaming and integration

The incorporation of ESG factors and analysis into investment decisions.

Exposure

The level of risk to a particular asset, asset type, sector, market or government.

Fiduciary duty

The duties (or equivalent obligations) that exist to ensure that those who manage other people's money act in the interests of beneficiaries, rather than serving their own interests.

Financial Conduct Authority (FCA)

The conduct regulator for nearly 60,000 financial services firms and financial markets in the UK, and the prudential supervisor for 49,000 firms, setting specific standards for 19,000 firms. It seeks to promote the safety and soundness of the firms it regulates.

Fixed interest securities

Investments on which a fixed rate of interest is received.

Funding Position

The funding position of a scheme is how its current market value of assets compares with its liabilities. It can be expressed as a ratio or percentage of the scheme's assets and liabilities (known as the funding level).

Futures and options contracts

A futures contract is a firm agreement to buy or sell a security or a quantity of securities at a future date; an option confers the right, but no obligation, to complete a similar transaction at a predetermined price.

Gilt

Sterling bond issued by the UK Government.

Government bond

Debt-based investment, where money is loaned to a government in return for an agreed rate of interest. Governments use them to raise funds that can be spent on new projects or infrastructure, and investors can use them to get a set return paid at regular intervals.

Green bonds

A bond that is issued to raise capital for the development of environmentally friendly projects or assets.

Greenhouse gas emissions (GHG)

The main GHGs in the Earth's atmosphere are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and ozone. These gases absorb and re-emit heat thereby keeping the planet's atmosphere warmer than it otherwise would be. Human activities, such as the burning of fossil fuels, are increasing the levels of GHGs in the atmosphere, causing global warming and climate change. The gases are categorised into three scopes.

Scope 1 covers direct emissions from the reporting company's owned or controlled sources. Scope 2 covers indirect emissions from purchased electricity, steam energy, heating and cooling, and Scope 3 includes all other indirect emissions that occur in the company's value chain.

GRESB

Assesses and benchmarks the environmental, social and governance (ESG) and other related performance of infrastructure and buildings, providing standardised and validated data to the capital markets.

Indenture (or debenture)

A legal and binding agreement, contract or document between bond issuers and bondholders detailing provisions and clauses associated with a credit offering.

Index-linked securities

Securities on which the rate of interest and the capital value are linked to the rate of inflation.

Infrastructure

Investments in 'real assets' which contain physical assets such as bridges, roads, highways, sewage systems or energy.

Institutional Investor Group on Climate Change (IIGCC)

A forum for collaboration by institutional investors on the investor implications of climate.

Intergovernmental Panel on Climate Change (IPCC)

The United Nations intergovernmental body for assessing the science of climate change. The IPCC's assessment reports supported the creation of the Paris Agreement.

Appendix 4: Glossary of terms

Investment Management Agreement (IMA)

A formal document that governs the arrangement between a company/individual (investment manager) providing investment management services and the investor (client).

Liability matching

An investment strategy that matches future asset sales and income streams against the timing of expected future expenses. For a pension fund it is a form of risk management where it seeks to mitigate or hedge the risk of failing to meet.

Long-term assets

Investments other than those in which funds are held on a temporary basis, e.g. interest-earning deposits and short-dated government securities.

Low-carbon economy

An economy based on low-carbon power sources with minimal carbon emissions into the environment. It also implies a world where the temperature increase is contained well below 2°C or 1.5°C.

Market value

The best estimate of the price for which assets could be sold at a given date.

Negative emissions technologies

Mechanisms for the absorption and storage of carbon and other atmospheric greenhouse gases, which are considered vital to attaining net zero carbon emissions.

Net zero

Achieving net zero emissions (absolute scope 1-3) in the investment value chain and investing in transition solutions to reduce or remove carbon emissions from the atmosphere.

Net Zero Asset Owners Alliance

An asset owner alliance committing to transitioning their investment portfolios to net zero GHG emissions by 2050, and playing a key role in helping the world deliver on a 1.5°C target and addressing Article 2.1c of the Paris Agreement.

Paris Agreement

The Paris Agreement was reached at COP21 in 2015. Its aim is to ensure global warming in the 21st century remains well below 2°C above the average level recorded for the period 1850 to 1900 and to support efforts to limit global warming to 1.5°C.

Passively managed

Where investments are held in the same proportions as a selected index (e.g. the FTSE All-Share Index) rather than managers being allowed to choose their own investments.

Pooled Investment Vehicles (PIVs)

Investment vehicles such as managed funds, limited partnerships and unit trusts that combine capital of many investors to allocate according to a particular investment strategy.

Private equity

Investments in companies that are not publicly traded.

Proxy voting

A proxy vote is a ballot cast by one person on behalf of another. One of the benefits of being a shareholder is the right to vote on certain corporate matters. Since most shareholders cannot attend the annual and special meetings at which the voting occurs, corporations provide shareholders with the option to cast a proxy vote. Shareholders may vote at the Annual or Extraordinary General Meetings (AGM/ EGMs) of the companies in which they invest.

Real estate

Investments in office buildings, industrial parks, apartments or retail complexes.

Responsible investment

Incorporating corporate environmental, social and governance (ESG) factors into investment decision-making to help investors identify future risks and opportunities.

Science Based Targets initiative (SBTi)

Defines and promotes best practice in emissions reductions and net-zero targets in line with climate science.

Securities lending

Loaning shares of stock, commodities, derivative contracts or other securities to other investors or firms.

Share

A unit of ownership in a company or financial asset.

Appendix 4: Glossary of terms

Stewardship

The responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society.

Sustainable investment

Aiming to generate long-term financial returns while contributing positively to society and planet.

Task Force on Climate-related Financial Disclosures (TCFD)

Will develop voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders.

The Scheme

The BT Pension Scheme.

The Transition Pathway Initiative (TPI)

Co-founded in 2016 by the Environment Agency Pension Fund and the Church of England National Investing Bodies. The initiative assesses how companies are preparing for the transition to a low-carbon economy and will form the basis for engagement with companies.

Trustee Directors

Directors of BT Pension Scheme Trustees Limited, the corporate Trustee of the BT Pension Scheme (the Trustee). A Director of the Trustee is also a member of the Trustee Board.

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