

# The Mineworkers' Pension Scheme TCFD Report

For scheme year ending September 2025



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## Introduction

The Taskforce on Climate-related Financial Disclosures (TCFD) allows the regulator, companies and investors to better understand their financial exposure to climate risk. As required by UK government legislation, the Mineworkers' Pension Scheme ("the Scheme") published its first report in 2023 and is now publishing its fourth report. This will be available to members and other interested parties and provides detail of how the Scheme is addressing the risks and opportunities associated with climate change and the climate transition.

### About the Scheme

The Scheme is one of the larger occupational pension schemes in the UK, providing benefits for just over 114,000 pensioners and deferred members as at the end of September 2025. The Scheme was established on 1 January 1952. The coal industry was privatised in December 1994 and because of this, contributing members of the Scheme became deferred members. The Coal Industry Act 1994 established the parameters under which the Scheme operates, with the Government in place as the Guarantor.

Trustees of The Mineworkers' Pension Scheme Limited ("the Trustee") have ultimate responsibility for decision-making on investment matters. Coal Pension Trustees Investment Limited ("CPTI") is responsible for providing investment advice and investment management services to the Trustee.

As of 30 September 2025, total Scheme assets were valued at £10.5bn.

### The Scheme's approach to Climate and TCFD Summary

The Trustee's fiduciary duty is to act in the best interests of members, with the primary objective of maximising total pensions for all members over the full life of the Scheme. This is done by assessing risk and return prospects across markets. The Scheme recognises climate change and the climate transition as significant sources of risk and opportunity, with ongoing impact on asset pricing, making climate-related issues legitimate concerns for pension fund trustees.

In 2021, the Trustee ratified climate change and the climate transition as a strategic investment theme.

2025 summary: 2025 continued the pattern of high emissions, warming global temperatures and renewables deployment. The past 11 years, 2015 to 2025, will individually have been the eleven warmest years in the 176-year observational record, with the past three years being the three warmest years on record. The past three years (2023-2025) also marked the first period where the three-year average exceeded 1.5°C above pre-industrial levels. Concentrations of heat-trapping greenhouse gases and ocean heat content, which both reached record levels in 2024, continued to rise in 2025. (Data from World Meteorological Organisation)

Governments worldwide in 2025 continued to balance energy security concerns, inflationary pressure in supply chains, the cost-of-living crisis, geopolitical uncertainty, and the rapid scaling of AI infrastructure. The rollout of AI has significantly increased the demand for renewables and consequently the pricing of renewable infrastructure share prices, however the scale of the demand and who will pay for it are ongoing issues of contention. While climate progress slowed in the US, China and India continued to lead global growth in renewable energy and electric vehicle adoption. Record energy demand and climate-related extremes highlighted the vulnerability of global systems, strengthening the case for better climate risk governance, stronger data, and forward looking scenario analysis for long-term investment decision-making.

The Trustee's fourth TCFD report restates the Scheme's governance and risk framework for tackling climate change risks and opportunities. It also addresses areas in need of improvement, highlighting ongoing challenges with data coverage, methodologies, and other areas where progress is still required. Much work is being done across the data supply chain to improve and understand the data, models and assumptions; however, significant hurdles remain and therefore many of the estimates in this report are subject to considerable uncertainty.

The Trustee has set an ambitious target for achieving carbon emissions data coverage across the portfolio, with this target extended in 2024. While meaningful progress has been made, the pace of improvement has now eased, and without significant changes in the portfolio or policy landscape, it may be necessary to reassess this target ahead of the next reporting cycle.

The Scheme, since incorporating Climate Change as a theme, has made progress in reducing exposure to near-term, high-risk areas and increasing investments with positive expected financial returns. CPTI continues to adapt the approach to climate in the portfolio as global progress and priorities continue to change (speeding up in some areas and slowing in others). This year the key change was to narrow the focus of the climate approach – removing a broad overlay from the passive equities mandate. This reflects that the climate transition is expected to move at different speeds across different economies and sectors, meaning a blanket approach is ineffective. This portfolio change led to an increase in Scheme equity emissions, moving in line with the broad market. CPTI and the Trustee also reviewed conviction and overlap in mandates incorporating climate opportunities. CPTI retains high conviction in exposure to climate opportunities via commodities and listed infrastructure as well as noting the increased exposure to renewables across all areas of the market as this technology becomes more dominant.

While emissions and intensity numbers for the portfolio are expected to fluctuate through time due to asset allocation changes, exposure to “Paris-

aligned” investments (which may become “2 degree Aligned” investments) is expected to gradually increase with broad market progress.

#### *Climate Metrics*

As required by regulation, the Trustee has committed to report on the following metrics, which are reported across all of the Scheme’s assets as far as is possible:

- **Total carbon emissions** – measures the absolute tonnes of carbon dioxide emissions for which an investor is responsible. Total emissions are what must be reduced in order to limit the carbon dioxide in the atmosphere and the degree of planetary warming. In line with regulations, the Scheme has reported on Scope 1 (direct emissions), Scope 2 (purchased emissions) and Scope 3 (supply chain emissions).
- **Carbon intensity** – an efficiency metric based on absolute emissions relative to the Enterprise Value Including Cash (EVIC). EVIC is a measure of asset size so allows comparison of carbon efficiency.
- **Data coverage** – the proportion of the Scheme where reported (not proxied) Scope 1 and 2 carbon emissions data is available.
- **Paris Alignment** - per TCFD regulation, the Scheme has reported on the extent to which its assets are Paris Aligned in this TCFD report.

In line with the statutory guidance, the Trustee has also agreed a target for this report. The Trustee has chosen a target based on the third metric as follows (noting that the Trustee reviewed and extended the target in 2024):

- Increase the proportion of the Scheme covered by reported (not proxied) Scope 1 and 2 carbon emissions data to 90% by the end of 2027.

Since measurement of the Scheme’s emissions began at the end of September 2021, the proportion of assets where data is available has increased from 57% to 94% at the end of September 2025. However much of the data is still from proxies rather than directly reported by companies or assets. Actual reported data has increased by 22%, from 41% to 63%. These numbers will vary in the near term as data and methodologies continue to evolve across the whole industry and as the Scheme’s asset allocation changes. The Trustee will seek to take steps to ensure data quality improves and will seek continued assurance it is following best practice in data collection and aggregation.

The Scheme has observed a decline in both absolute emissions and emissions intensity from September 2021 to September 2025, with a roughly 29% reduction in estimated emissions intensity, though noting an increase over the most recent reporting year primarily driven by the removal of the climate overlay within the passive equity portfolio as discussed earlier. There is no specific emissions reduction target, and the Trustee expects emissions to fluctuate, both as markets evolve and if the Scheme allocates to higher starting emissions areas. For example, the Scheme’s investments in emerging market credit and listed infrastructure have significantly higher emissions intensity than many of the Scheme’s other asset classes – this reflects that emerging markets and infrastructure assets generally have higher starting emissions. The Trustee is comfortable with this given the overseeing managers’ focus on future transition plans in each case.

The Scheme also continues to monitor Paris Alignment to gauge the portfolio’s alignment with the 1.5-degree Celsius goal of the Paris Agreement, albeit the 1.5 degree target may become a 2 degree target depending on UK legislation.

Whilst not a formally selected metric, CPTI has continued to track investment in “climate opportunities”, tracking investments specifically contributing to the transition currently, for example renewables. This remains in line with the benchmark.

## Conclusion

During 2025, governments continued to balance energy security, affordability and economic pressures alongside long term climate goals. Shifts in U.S. federal climate policy have increased the role of state-level action, while scrutiny of ESG investing has reinforced the need for clear, resilient approaches from asset managers.

Global energy systems are also changing quickly. Demand is rising, supply chains remain under strain, and access to critical minerals is a growing concern. Despite that, progress across emerging economies has remained notable. Record renewable deployment across China and the Global South in 2024 positioned these regions to drive further clean energy growth over the course of 2025, although complete data for the full year is not yet available.

Within this environment, the Scheme has maintained a consistent climate risk approach while sharpening its focus on key asset classes such as real estate, infrastructure and commodities. Data quality has improved, with reported emissions coverage rising to 63% and bringing the Scheme closer to its 90% target across public equity, private equity and property.

Looking ahead, the Trustee remains committed to reducing unrewarded risks and identifying climate-related opportunities that support the Scheme’s long term financial position. Continued policy support and investment in climate solutions will be important to fully capture these opportunities. While meaningful progress has been made, the Trustee recognises that further work is required as regulatory, market and data challenges continue to evolve.

## Section 1 – Governance

Since the Scheme’s last TCFD report there have been no significant changes to the governance framework set out, maintaining the same formalised governance framework for managing climate risks and opportunities. The

Committee of Management (COM) oversees climate strategy, approves climate policies, monitors metrics, and reports on climate targets, while the Investment Sub-Committee (ISC) manages implementation.

CPTI advises on investment management and climate risks. Climate risk and performance are assessed regularly, and the Trustee undertakes training to ensure ongoing expertise in this area. Further details on governance are provided later in the report in the [detailed governance section](#).

## Section 2 – Strategy, risks, opportunities, time frames

This section highlights how the Trustee, on an ongoing basis, identifies climate-related risks and opportunities which it considers will have an effect over the short, medium, and long term on the Scheme's investment strategy and funding strategy. It also demonstrates how the Trustee considers where climate change, and actions to address climate change, might contribute positively to anticipated returns or to reduced risk. In addition, this section sets out progress over the past Scheme year.

### Appropriate Time Periods over which the Scheme assesses Strategy:

**Short term:** Everything up to 3 years in the future. This would cover the Scheme's next actuarial valuation (undertaken every 3 years) and is in line with the Scheme's economic scenario modelling, which is used to assess risk and asset allocation.

Over the short term the most material impact to the Scheme's assets associated with climate is likely to be Transition Risk and Opportunity. The Scheme has made a number of investments in the climate theme to take advantage of market moves likely to occur over this time period. The Scheme has also focused on understanding and engaging on exposure to laggard companies who operate at the lowest levels of environmental performance.

Even over the short term, the Scheme has already experienced the impact of some physical risks to the Real Asset portfolio, for example: (i) flood risk and retrofitting requirements in the property portfolio; and (ii) greater stranding risk and investment requirement in the UK infrastructure holdings alongside weather damage and higher insurance costs.

**Medium term:** Defined as the period between 3 and 10 years. The end of this period is aligned with long term expected return forecasting which is done over 10 years. Over 50% of the Scheme's future payments (in real terms) are expected to be made over the next 10 years. During this period Transition Risk and Opportunity, Physical Risk and potentially Stranded Asset risk in some of the least efficient technologies, properties and companies are all relevant.

**Long term:** Defined as anything beyond 10 years up until 35 years (2060) when only 1% of the Scheme's future payments (in real terms) are expected to remain. All risks and opportunities are relevant over this period, however the Scheme's risk taking capacity is likely to be greater in the medium term than the long term.

## Climate Related Risks and Opportunities - Investments

### Responsibility

The Trustee is responsible for setting the climate strategy and managing and monitoring climate risk as with all other areas of risk and strategy. Like other areas of investment, the Trustee delegates the implementation of the strategy and the management and monitoring of risk to CPTI who use external investment managers, data providers and advisors to assist.

### High Level Strategy

In 2021, the Trustee formally recognised climate change as a key investment theme over the next decade, emphasising the need to assess and strategically

position assets to manage risks and leverage opportunities, in line with the Trustee’s fiduciary duty. Since the creation of the Theme, and especially over 2024 and 2025, there has been a notable shift in sentiment around climate change from some Governments and investors. At the same time geopolitics and the race for AI dominance have significantly increased the demand for energy whilst electrification technology has continued to decrease in price and accessibility. All of the above factors have shifted the pace of transition – faster in some areas and slower in others, nuance is more important than broad tilts and market dynamics and pricing can change very quickly.

In light of these changes, CPTI, on behalf of the Trustee, continues to seek the best investment opportunities related to the climate transition, as well as seeking to limit the Scheme’s exposure to climate risk that is not adequately compensated. Overall, the Scheme’s climate alignment must move in concert with the markets in which it invests as moving too fast or too slow could create adverse impacts for the Scheme.

During the most recent Scheme year, work on climate risks and opportunities focused on reassessing the climate strategy, particularly the divergence in pace of the climate transition across regions and sectors. This review resulted in the removal of the climate tilt from the passive equity allocation as noted earlier, to bring exposures in line with the broader market. This reflects the belief that the transition will be more nuanced and cannot be successfully captured systematically. Conviction and overlap were also reassessed for active mandates, leading to reconfirmation of the positive climate drivers around the Scheme’s investments in commodities and listed infrastructure as well as the ongoing upgrade of the property portfolio.

During 2025 substantial work was carried out to refresh the climate scenario analysis underpinning this report. CPTI reviewed various third-party modelling options and chose to use MSCI modelling for public assets and to work with real asset managers for complementary insights. This process deepened CPTI’s understanding of the data and highlighted key physical, transition and policy

risks requiring continued monitoring by the Trustee. Following the analysis, CPTI engaged with managers on companies flagged by MSCI as having elevated climate risks and is now integrating ongoing monitoring of these risks into routine portfolio oversight.

### **Risks and Opportunities**

The Trustee continues to work to build an understanding of the possible impacts of climate across all areas of the portfolio. Each of the following areas of risk and opportunity are expected to be material to the Scheme:

- Physical Risk
- Transition Risk including Stranded Asset Risk
- Climate Opportunities and Solutions.

### **Understanding Scheme Exposure to Physical Risk**

As the Scheme reports for 2025, it is clear that climate change is already influencing global economic conditions. Understanding and responding to climate-related risks helps ensure the Scheme continues to act in members’ long- term- interests, supporting stable and resilient pension outcomes over time.

In terms of physical damages in 2025 global economic losses from natural catastrophes are estimated to be around \$224–\$260 billion; insured losses ≈ \$108–\$127 billion (the 6th straight year above \$100 bn). This is despite no significant hurricanes hitting the US last year. The key driver of losses is now severe convective storms (SCS: hail, tornadoes, straight-line winds) and wildfires. The US is, as we write this, experiencing extreme winter storms and snow fall leaving hundreds and thousands without power in temperatures well below zero. The EU in 2025 experienced its highest wildfire emissions on record. Clearly investments in adaptation and climate resilience will remain a

global priority in the years ahead. Ensuring our managers are on top of risks to the assets in the Scheme's portfolio remains a priority.

The Scheme has already started to see the impact of physical risk on the portfolio, and some of these are described in the case studies provided within the [Climate Scenario Analysis](#).

### **MPS Approach to Transition and Stranded Asset Risk**

Transition risk refers to how assets will perform under a transition to a low carbon economy. This can be an orderly and gradual scenario, or a more disorganised scenario when regulation comes in suddenly, over a shorter period, and with greater market impact. Transition risk also incorporates shifting consumer preferences towards environmentally friendly products and services. A number of case studies relating to Scheme assets exposed to Transition risk have been included within the [Climate Scenario Analysis](#).

Stranded asset risk refers to the risk that an asset currently assumed to have value may lose much or all of its worth in the future. An asset's worth is based on its assumed future cashflows and therefore if these are lower, or last for less time the asset is worth less. An asset can be stranded for regulatory reasons (i.e. not allowed to profit from the asset), or economic reasons (no longer profitable). Given a high proportion of the Scheme's liabilities will be met over the next decade, stranded asset risk is lower for this Scheme than many others. As such, the first focus in this area is on assets with near term risks to pricing or profitability, or assets that expected to become difficult to sell over the medium term. This is likely to evolve as the transition progresses.

CPTI, on behalf of the Scheme seeks to understand this risk through careful engagement with managers, particularly on assets or companies that are clear laggards within their sectors. The Scheme has not adopted any exclusions in this area nor a Net Zero target.

As part of understanding transition and stranded asset risks, it is important to recognise how energy system pressures are evolving. While electricity demand is rising quickly as more of the economy electrifies and AI data centres grow the rapid rollout of renewables across the globe has meant that the use of Coal for example may have already peaked. The IEA's *Coal 2025* report expects global coal demand to reach its peak in 2025, China's coal demand in 2025 is expected to rise only +0.5% from 2024, after which the IEA projects a gradual decline through 2030. The UK used no coal for electricity generation in 2025. At the same time the overall increase in energy demand means natural gas will remain a key part of the transition, that said the cost and capability of batteries is progressing rapidly. Both the huge surge in expected electricity demand and the widespread blackout experienced across Spain's power grid in 2025 have sharpened the focus on grid stability and storage. Over the past three years, massive batteries have become a viable answer to keeping grids functioning with renewables. In California, solar and batteries are up and gas generation is down 37% since 2020. In Western Australia – ironically, a major gas producer – gas generation is down more than two thirds since 2011. In 2022, there was only one such battery worldwide. As of October, there were 42 operating and 200 in the works. As recently as two years ago, the ability to discharge power for an hour was relatively cutting-edge. Now spreading solar out over 24 hours can be cost-competitive with gas.

For schemes, this evolving landscape heightens the importance of assessing potential stranded asset exposures within legacy fossil fuel infrastructure while ensuring alignment with an orderly transition, particularly as the energy system becomes increasingly dependent on robust grids, storage, reliable low-carbon power sources, and critical mineral supply chains.

The Scheme, like the vast majority of large asset pools and the market as a whole, has exposure to transition and stranded asset risk. Determining when assets are likely to become stranded and the right time to exit these in favour of other investments to maximise the financial benefits requires careful consideration, additionally the shortening time horizon of the Scheme means

that stranded asset risk is likely less impactful for this Scheme than other investors.

The following case study provides a live example of the Scheme’s exposure to a stranded asset which is in the process of being transitioned:



**Transitioning Asset Case Study – The Howard Centre (Delancey)**

In 2024, the Howard Centre was identified as one of the portfolio’s most carbon intensive assets and therefore **at risk** without targeted intervention of becoming misaligned against the Paris agreed decarbonisation pathway to limit global warming – also known as **stranding**.

This risk stems from increasing regulatory and market pressure on high carbon emitting buildings, expected introduction of carbon pricing regulation, and the growing cost of operating carbon intensive assets, all of which could reduce long term profitability and asset value. The most carbon intensive assets will

be inherently more exposed to stranded asset risk as regulation tightens and the cost of carbon increases.

To address this, Delancey commissioned a Net Zero Carbon Audit, which outlined both operational and capital measures to reduce emissions and improve long term resilience.

The audit recommended behavioural optimisation of the Building Management System (BMS), stronger tenant engagement and revised heating/cooling setpoints, alongside higher cost retrofits such as skylight replacement, full LED upgrades, gas removal and a rooftop PV array. Due to budget constraints, the team prioritised degassing landlord areas, progressive LED replacement and optimisation of BMS controls to reduce out-of-hours energy use.

Gas was removed from landlord spaces in March 2025, lowering Scope 1 emissions, and 30 fluorescent lamps were replaced with high efficiency LEDs as part of a phased upgrade strategy. These actions have already achieved a 7% reduction in whole building carbon emissions year-on-year, marking clear progress in transitioning a potentially stranded asset.

Next steps include developing a **detailed decarbonisation roadmap** that strengthens behavioural initiatives, deepens tenant collaboration and plans for future retrofit investments.

<sup>1</sup> Scope 1 emissions are those resulting from consumption of fossil fuels on site. For real estate, this predominantly means emissions from landlord-controlled gas consumption on site.

Further examples of investments exposed to Transition risk are included within the [Climate Scenario Analysis](#).

## Climate Opportunities

The Trustee recognises potential investment opportunities arising from the climate transition, new technology, and changing consumer preferences across various asset classes. It is clear the pace of adoption of transition technologies will continue to be volatile and differ significantly across sectors and geographies. To capitalise on these opportunities, the Scheme has made investments in public equity and commodities which consider the impact of the transition and climate change alongside other effects. Agricultural commodities in particular are expected to be influenced by physical climate risks, potentially reducing supply and increasing prices, presenting a compelling opportunity. The Real Asset managers are also focused on aligning capital expenditure planning and sales with consideration of likely risk and repricing around climate transition.

Whilst not an official metric or target which has been included in this report, the Trustee has continued to monitor the level of investment exposure in climate opportunities (as defined by MSCI for public markets and direct manager input in private markets).

Overall, like many pension schemes, as the Scheme matures, its ability to invest in more climate opportunities may reduce. Large exposure to legacy private assets and the Scheme's strategy to improve liquidity also limits the ability to add to climate opportunities.

The following case studies provide examples of the Scheme's investments in climate opportunities. The first example is via Ninety One, one of the Scheme's public equity managers as at the report date, focussed on companies believed to contribute to positive environmental change through sustainable decarbonisation. Additional examples are drawn from the Scheme's Listed Infrastructure and Illiquid Credit portfolios, demonstrating the range of climate-focused opportunities across asset classes.

Further Climate Opportunity examples are provided within the [Climate Scenario Analysis](#).

### Climate Opportunity Case Study - Canadian Pacific Kansas City (Ninety One Global Equity)

**Investment rationale:** CPKC offers a compelling climate opportunity through its potential to deliver meaningful emissions abatement in North American freight transport, a hard-to-abate, high-emissions sector. Its hydrogen locomotive programme, launched in 2020, supports the transition away from diesel, providing a scalable pathway to cut operational emissions across rail freight while aligning with Ninety One's climate strategy and contributing to SDG 13 (Climate Action) and SDG 9 (Industry, Innovation and Infrastructure).

**Structural growth:** Hydrogen is emerging as the most viable solution for heavy transport where electrification is limited. Its proprietary modular conversion kits and partnership with CSX enhance technical capability and support broader commercial deployment. Scaling is underway, with six hydrogen locomotives expected by 2025 and four in 2026, alongside efforts to gather sufficient data to enable fleet-wide adoption within five years.

**Sustainable returns:** Phase 1 testing has matched diesel performance, confirming technical feasibility. When scaled, the programme is expected to deliver around a 10% emissions reduction and potentially up to 80% operating cost savings under optimal conditions. CPKC may also monetise its engineering IP, creating additional clean transport revenue streams that support long-term, sustainable returns.

**Metrics & engagement:** Key metrics include testing outcomes, emissions projections, rollout milestones, and cost saving potential. Engagement has centred on programme progress, scaling plans, and governance, including discussions with senior leaders. Ongoing monitoring will focus on deployment results, reporting transparency, and broader commercial opportunities.

### Climate Opportunity Case Study – National Grid (Listed Infrastructure Manager)

**Investment rationale:** National Grid is a strong example of how the Scheme’s investments can benefit from the global shift to cleaner energy. As more renewable power comes online and electricity demand grows, modern, resilient energy networks are essential. National Grid’s critical role in the UK’s transformation makes it a compelling long term investment for the Scheme.

**Structural growth:** To support the transition, National Grid plans to invest £60bn by 2029 to upgrade and decarbonise its UK and US networks. Most of this funding will go into strengthening electricity grids, directly supporting the UK’s Clean Power 2030 ambitions and responding to growing demand for electricity as the economy electrifies.

**Sustainable returns:** The Scheme’s investment manager has engaged with National Grid’s leadership over several years to understand how the company is managing both the risks and opportunities created by this major transition. Recent discussions with the Chair covered regulatory changes, progress on large projects and oversight of the company’s long term strategy. Following this engagement, the manager remains confident in National Grid’s ability to deliver strong, long term, risk adjusted returns for members.

**Metrics & Engagement:** National Grid continues to implement its five year investment plan, with ongoing monitoring of project delivery, regulatory developments and progress against decarbonisation goals. The manager will maintain close engagement with the company’s leadership to ensure transition risks are well managed and that members continue to benefit from the opportunities created by the move to a low carbon economy.

### Climate Opportunity Case Study - Investment Highlight on Scaling4Impact (Newmarket)

**Investment Rationale:** Scaling4Impact is Newmarket’s climate-aligned partnership with IDB Invest, launched in 2024 and expanded in 2025. Through the transaction, Newmarket shares part of the credit risk on a ~\$1.5 billion diversified loan portfolio across Latin America and the Caribbean. This risk-sharing lets IDB Invest lower the capital it must hold against the loans, freeing balance-sheet capacity to finance more climate-aligned projects.

**Transition Impact:** The structure is designed to be catalytic. It has allowed IDB Invest to add \$500 million in new lending for green and high-impact projects, with another \$250 million unlocked when the structure expanded in 2025. These funds back renewable energy, sustainable infrastructure, stronger financial systems, and inclusive economic growth across the region. The 2025 expansion was also the first time a multilateral development bank increased an originate-to-share securitisation after launch, showing that this model can scale and draw more private capital into climate investments.

**Financial & Sustainable Returns:** Scaling4Impact gives Newmarket diversified exposure to emerging-market credit while helping IDB Invest increase financing for climate-positive activities. The structure supports long-term decarbonisation and sustainable development in the region, aligning financial returns with clear environmental and social benefits.

#### Metrics & Monitoring

- ~\$1.5 billion reference portfolio
- >\$750 million incremental lending capacity unlocked
- First multilateral originate-to-share securitization successfully expanded after launch

Newmarket works closely with IDB Invest to track portfolio performance, monitor climate-aligned deployment of funds, and identify opportunities to further scale private-sector participation in the energy transition.

## How the Scheme Implements its Climate Strategy

The Scheme looks to consider where relevant climate risk and opportunity alongside other areas at all levels of investment. From overall asset allocation to manager assessment, hiring and firing, mandate design, manager agreements and reporting requirements.

### 1) Strategy changes

In terms of high-level changes to funding strategy, asset allocation and planning, given the relatively short time horizon of the Scheme these are expected to be minimal. That said the Scheme has made a commitment to commodities, for which the climate transition is expected to be one key driver of growth in many of the underlying exposures.

### 2) Manager assessment

For all new appointments and ongoing monitoring, CPTI assesses external fund managers' understanding of and positioning around climate change, looking for assurance that risk is appropriately considered and priced, and opportunities are not being missed. This is documented as part of each investment decision and in ongoing monitoring. A manager's approach to stewardship and engagement in this area is also a key consideration.

### 3) Exclusions and reporting requirements

Where appropriate CPTI is seeking to explicitly set out the expectations around TCFD reporting in order to improve data coverage. CPTI is also adding requirements around reporting on some of the worst environmental offenders and those which have breached any of the UN Global Compact's 10 Principles as well as laggards in any of the E, S or G categories. This enables CPTI to focus its engagement with managers.

## Stewardship

The Trustee views stewardship as a key tool for enhancing value through reducing risk and focusing on opportunities. Climate change has been formally identified as a key focus of the Scheme's stewardship efforts.

The Scheme's role as a steward applies across all assets and geographies in which the Scheme invests. As the Scheme delegates the management of individual assets to its investment managers, the Scheme's key levers of control and influence in stewardship are (a) the appointment of aligned managers and stewardship providers; and (b) ongoing engagement, oversight and challenge of those managers and providers.

Since the Scheme's last report, a new Emerging Market Equity mandate with Schroders was funded. The below case study provides detail of the team's engagement approach within Emerging market equity.

### Climate Stewardship Engagement – Samsung Electronics (Schroders Emerging Market Equity)

**Rationale:** Samsung Electronics remains a priority engagement due to its significant exposure to climate and natural capital risks as a major global technology manufacturer. In 2025, Schroders assessed progress on renewable energy adoption, water stewardship and the development of SBTi aligned targets. A key focus was also Samsung's management of Scope 3 emissions across a vast supply chain, particularly given policy limits in South Korea that restrict mandatory supplier climate targets.

#### Engagement Goals:

- Assess progress on renewable energy transition and emissions reduction plans.
- Understand national constraints to renewable sourcing and the impact of rising AI-related electricity demand.

- Review development of SBTi targets, especially for the Device Experience division.
- Evaluate Samsung's approach to Scope 3 management under regulatory limitations.
- Examine ongoing water efficiency and stewardship initiatives.

**Schroders's Actions:** In Q3 2025, Schroders challenged Samsung on the slow pace of renewable energy adoption and concerns that emissions goals should not impede business growth. Schroders reviewed progress toward SBTi alignment for the Device Experience division and examined improvements in Scope 3 disclosure, despite the inability to impose binding supplier KPIs. Discussions also covered supplier training on GHG measurement and efforts to advance water efficiency and reuse at manufacturing sites.

**Outcomes and Next Steps:** Samsung has strengthened its climate strategy, progressed SBTi development and improved supplier engagement to enhance Scope 3 data quality within existing policy constraints. Water stewardship continues to advance through efficiency and reuse initiatives. Renewable sourcing remains constrained by limited national supply and rising AI-driven energy demand, yet Samsung's long term decarbonisation trajectory is improving. Schroders will maintain engagement in 2026, prioritising renewable sourcing and advocating for policy changes to support broader supplier participation.

This next case study illustrates how Delancey, the Scheme's property manager, is embedding robust climate focused stewardship across its development activity. It highlights the practical measures being implemented to enhance transparency, reduce carbon impacts and drive responsible practices throughout the supply chain.

### Stewardship in Property – Delancey (Plot 500, Proxima Park)

In 2025, Delancey strengthened its Sustainable Development Guide by introducing project specific briefs and mandatory Green Working Practices (GWP) for contractors. These practices require justification for any fossil fuelled plant, the use of 100% renewable electricity for plant and machinery where feasible, a Considerate Constructors Scheme score of 40 or above, active site waste management planning targeting more than 98% diversion from landfill, and the adoption of low carbon, responsibly sourced materials. Contractors are required to report monthly on progress against these sustainability commitments.

Harmonix Construction, Delancey's development partner for Plot 500, adopted this GWP framework and created its own GWP and social value trackers. Their monthly reporting captures Scope 1–3 emissions, compliance with plant justification policies, use of local labour within a 50mile radius, waste segregation and recycling performance, supply chain modern slavery checks, and wider community contributions. The project remains in delivery, with performance reviewed monthly and feedback incorporated continually.

The project's material and site choices are expected to cut carbon by about 610 tonnes, mainly through lower-carbon steel and concrete. Additional savings come from cleaner temporary fuels, low-emission cladding and reuse of materials.

The Plot 500 development demonstrates how Delancey is embedding sustainability into routine development activity, improving transparency and raising environmental and social performance across its supply chain. Final outcomes on carbon, resource efficiency and social value will be assessed at project completion.

## Collaborative Engagements

Whilst the Scheme is not a direct member of any climate-related collaborative engagement groups, many of the Scheme's managers and service providers are. Despite the current political landscape which has caused a number of market participants to withdraw from such initiatives, CPTI are encouraged to report that EOS and two of the Scheme's strategic partner investment managers remain steadfast members of these groups.

## Monitoring and Engagement on Exclusions, Laggards and Controversies

In line with the Scheme's Stewardship Policy the Scheme will focus stewardship on material factors relating to environmental, social or governance issues.

CPTI has access to data from two ESG data providers, MSCI and Sustainalytics via EOS, which facilitates the process of monitoring these factors. Within private markets, some limited data is available from external providers, but monitoring largely relies on ongoing engagement with managers and oversight of their activities.

Alongside monitoring compliance with its Exclusions Policy, the Trustee also monitors the Scheme's exposure to ESG laggards, controversies and UNGC Watchlist companies on a regular basis. Where the data providers highlight a relevant holding, CPTI will contact the manager responsible for the position and engage with them on their rationale for holding and understanding of the risk and the data provider's view. This rationale will be documented, and CPTI will continue to engage on a regular basis whilst the position is held. This engagement will also feed into CPTI's overall view of the manager's approach.

An example of CPTI engagement with regards to the Exclusion Policy is provided below.

### **Exclusion Policy engagement: Request to purchase a company considered in violation of UNGC by MSCI**

A manager of a new mandate contacted CPTI to request permission to invest in a company that MSCI deem a UNGC violator. However, there was not enough evidence of an incorrect status and the business case was therefore not deemed sufficient to agree an exemption to the Trustee Policy before the asset was purchased.

## Voting

The Scheme seeks, wherever practicable, to vote on every resolution at all meetings of companies in its portfolios. Voting is regarded as an important part of the Scheme's stewardship activities and as a means of achieving positive change.

CPTI monitors the Scheme's voting activity across key themes, including climate related matters and relevant shareholder resolutions which CPTI expect to be considered by managers and third-party engagement providers during voting. Although voting is carried out by external parties, CPTI reviews the outcomes to maintain a clear understanding of how decisions are being made and to support its own constructive engagement where needed.

An example of where the Scheme has voted against management on a climate resolution is included below along with a connected example of where they were able to vote in favour.

### **Voting Case study: EOS - Volkswagen**

Volkswagen has faced significant governance and environmental controversies in recent years, including its involvement in the end-of-life vehicle recycling cartel and the diesel emissions scandal, which has resulted in more than €30 billion in fines and compensation. The end-of-life vehicle recycling cartel refers to a long-running illegal agreement among major global

car manufacturers and their trade association to collude on the terms of recycling old vehicles in the EU.

EOS withheld support for the supervisory board members responsible for oversight during the period of cartel-related misconduct, signalling concern about their performance. Their concerns are heightened by the continuing lack of independence on the supervisory board, which includes only one independent member. This limited independent oversight raises questions about the board's ability to effectively challenge management on climate strategy, environmental compliance, and broader risk management.

For context, EOS also had concerns about Mercedes-Benz's involvement in the same scandal, but this was mitigated by the fact that it had blown the whistle on the scheme, bringing it to the European Commission's attention. As a result, EOS was able to recommend supporting the resolution confirming that the supervisory board members had fulfilled their duties appropriately.

## Climate Related Risks and Opportunities – Funding

### Funding Strategy

The Trustee's primary funding objective is to maximise total pensions for all members over the full life of the Scheme. In order to meet the funding objective, the Scheme's assets need to generate a return well in excess of that available on "risk-free" assets such as UK Government Bonds. As such, to generate the returns needed, the Scheme invests in a high proportion of return seeking assets.

Ultimately, if the Scheme's funding strategy is unsuccessful (i.e. there are insufficient assets available to meet members' benefit payments), funding will be provided by the UK Government who is the Scheme's Guarantor.

## Climate Related Risks and Opportunities

Given the Scheme invests in return seeking assets, the biggest climate related risk and opportunities to the funding strategy are those that impact such investments. These risks and opportunities have been covered in detail above.

Climate change could also impact the level of benefit payments that the Scheme makes to members, either as a result of changes in mortality levels or due to changes to future levels of inflation. Here, the maturity of the Scheme is likely to be a key factor, as the average age of members (weighted by pension amount) is around 72 and around 50% of the Scheme's future payments (in real terms) are expected to be made over the next 10 years.

So, for climate change to have a meaningful impact on the future benefit payments from the Scheme it is likely that these impacts will need to happen in the next 10 years.

It is unlikely that climate change is going to have a material impact on the life expectancy of the Scheme's members (and therefore the associated pension payments to members), particularly given the vast majority of members live in the UK where the physical risks of climate change are less extreme, relative to other parts of the world. And whilst, for example, climate change could increase the number of heat-related deaths in the summer, this may well be offset by a reduction in cold-related deaths in the winter.

A more meaningful area of impact on future benefit payments could be the impact climate change has on inflation, as around 50% of members' benefits increase each year in line with inflation. As discussed earlier in this report, CPTI's work in this area is ongoing, and they will refine its understanding of the inflationary and deflationary impacts of climate change over time as they consider the findings from the completed scenario analysis alongside other emerging insights.

**Covenant Risk**

Whilst the Scheme does not have a sponsoring employer, should the Scheme's funding strategy fail, funding will be provided by the UK Government under the terms of the Government guarantee. As such, climate change is not expected to affect the ability of the Scheme's sponsor to support the Scheme.

**Overall Progress on Strategy**

The Trustee continues to work to integrate climate risk and opportunity throughout the funding strategy. Whilst some areas, for example physical risk and climate scenarios, remain in early stages, regular reporting and discussion on transition risk and opportunities has been rolled out across the majority of Scheme assets for a number of years. Qualitative understanding and interrogation of climate risks and opportunities is a key part of manager selection and monitoring, and climate change is a core focus of the Scheme's stewardship efforts.

**Section 3 – Risk management and monitoring**

The Trustee's goal is to identify, monitor and manage climate risks and opportunity alongside other key relevant risks across the whole portfolio, public and private. Whilst this remains a work in progress for the Scheme and wider industry, the Trustee now has a substantial level of information included in regular reporting around risks and opportunities in this area.

**Risk Appetite**

Although the Trustee's overall risk appetite has not changed, climate-related considerations have shaped how risk is deployed across the portfolio. This includes reducing exposure where climate risks are material and underpriced, and increasing exposure where climate-related opportunities, such as those in global infrastructure and commodities are expected to offer stronger long term returns. These adjustments represent a reallocation within the existing risk appetite, not an expansion of it.

**How the Trustee Assesses the Risks and Opportunities**

Qualitative assessment helps evaluate how scenarios may affect asset classes, sectors and regions, supported by detailed discussions with managers and research providers. CPTI draws on qualitative risk assessments from MSCI and stewardship insights from EOS (the Scheme's stewardship provider). Discussion of both company and broad market/asset class risks and opportunities are also part of regular ongoing conversations with the Scheme's managers, advisors and broader network including ESG and stewardship collaborative groups. Given limited data coverage and quality in parts of the portfolio, combining qualitative insight with quantitative analysis remains essential.

In preparing regular reporting for the Investment sub-Committee (ISC), CPT and CPTI collate reports using data directly extracted from tools available in-

house in conjunction with data sourced from third party managers. The reports are designed, reviewed and overseen by the Head of Responsible Investment and signed off by the CIO before being presented to the Trustee.

The following quantitative data is reported to ISC regularly:

- Carbon emissions and intensity across the portfolio (Scope 1, 2 and 3)
- Degree of Paris Alignment
- Level of investment in climate opportunities
- ESG laggards
- Controversy exposure

At present, full coverage of the portfolio is not available but CPTI continues to work to build this up through new data providers and engagement with managers. In the absence of reported data, appropriate proxies will be used. There is currently limited data and understanding around physical risk, however climate risk and opportunity scenario analysis – both quantitative and qualitative is another key tool to gain understanding of risk and opportunities.

### Monitoring of Risk Metrics

The ISC is presented with climate risks and TCFD metrics on a regular basis. The Trustee Board formally reviews climate risks (including metrics and targets) at least once a year ahead of the publication of the Scheme’s TCFD report.

The TCFD recommends that trustees should increase the frequency of monitoring if risk levels approach pre-determined risk appetites. The Trustee has not yet determined tolerances in this area given data and methodologies are still being constructed but will continue to develop its approach as discussed in greater detail below.

To the extent possible, climate risk metrics are monitored for every asset class in the portfolio, however some areas remain a work in progress. More broadly the Trustee acknowledges that all areas of its assets and the broader economy are exposed to some level of climate risk and opportunity and that these risks are systemic and cannot be fully divested or diversified away.

## Section 4 – Scenario Analysis

### Introduction

As required every three years, the Trustee has undertaken new climate scenario analysis in 2025 as part of this report. Scenario analysis is a helpful tool for assessing the Scheme’s resilience to different future outcomes.

The analysis highlights how different climate pathways could impact the value, risk and resilience of the Scheme over time.

### MPS Liquid Portfolio – High Level Scenario Analysis Results and conclusion

Under the central scenario (NGFS 2°C Disorderly) the portfolio is **projected to lose 8.1% of its value by 2050** due to the combined effects of disruptive policy action, physical climate risks and only modest gains from climate-related opportunities. This is subject to significant uncertainty and assumes the portfolio and companies remain static with risks unmanaged which of course is not the expectation for actual management. That said the analysis reinforces that climate risk is a material consideration for the Trustee and **underscores the need for integrated, forward-looking strategies to safeguard value and harness opportunities.**

## Key takeaways

Whilst data and modelling remain flawed there are some high-level conclusions that can be reached from the analysis and from deeper dives in real assets.

- Policy-driven transition costs and physical hazards (coastal flooding, river low-flow and extreme heat) are expected to have significant impacts.
- Magnitude of impact varies significantly by industrial sector and asset location and may occur outside of the Scheme's investment horizon - however some areas of the portfolio are already being impacted.
- Select mandates (e.g. Listed Infrastructure) and select assets exhibit elevated risk profiles requiring greater monitoring/engagement.

The scenario analysis exercise proved valuable, particularly through the inclusion of case studies that illustrated how climate change could affect Scheme assets, with real assets already experiencing noticeable impacts.

The analysis underscores the importance of continued engagement with high-risk managers and assets to ensure risks are being mitigated effectively.

The full Climate Scenario Analysis along with relevant case studies can be found in [Appendix 1](#).

## Section 5 - Metrics and Targets

### Overview

In compliance with TCFD regulations, the Trustee agreed three climate metrics and a target in 2021. Two of these metrics, total carbon emissions and carbon intensity, are required by statutory guidance. The third metric, data quality, was also agreed in 2021 alongside an ambitious target of 90% reported emissions by the end of 2024. Toward the end of 2024, the Trustee acknowledged that this target will not be met and, following review, extended the target to 2027. A fourth metric on Paris Alignment was added in 2023 to meet regulatory requirements.

CPTI, on behalf of the Trustee, is engaging with the Scheme's investment managers to improve data availability across the Scheme's assets. Enhanced data on emissions and trends will enable the Trustee to measure the impact of portfolio changes and engagement success. Subsequent pages detail Scheme data under the mentioned metrics.

Over the previous three TCFD cycles there has been steady improvement in reported emissions data across most asset classes. However, the progress in improvement has now levelled out. From here it is difficult to envisage significant further improvements in the level of data the Scheme can collect on its financed emissions. Given the above, it may be necessary to reassess the Trustee's TCFD target ahead of the next report.

### Carbon Emissions Data Quality/Coverage by Asset Class

**Data Quality:** The accuracy, completeness, and reliability of information pertaining to carbon emissions, used to effectively assess the Scheme's financed carbon emissions.

#### Figure 1

The following table shows the data quality currently available by asset class and at the total Scheme level as of 30<sup>th</sup> September 2025:

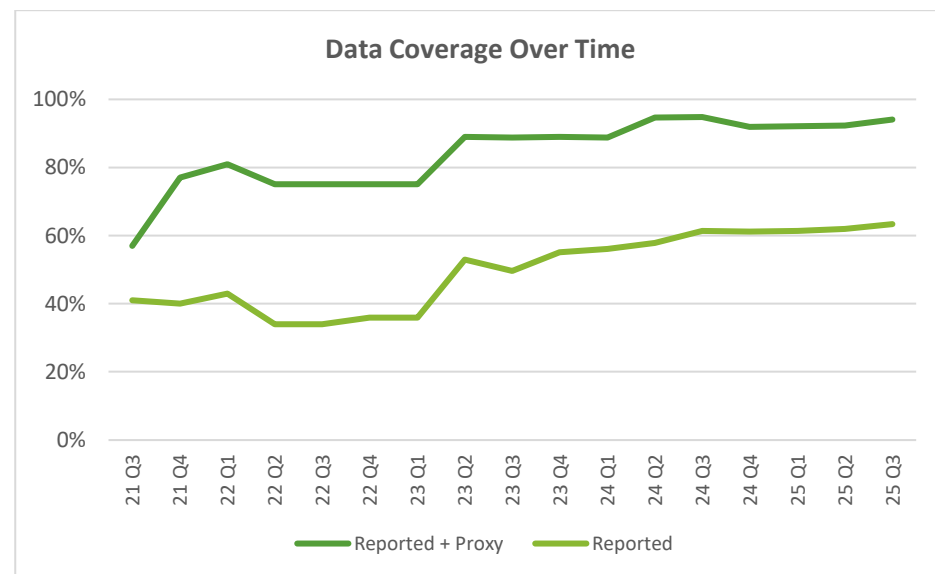
Asset Class	% coverage (including proxy and reported data)	% coverage (reported data only)	% of total Scheme NAV (excluding cash)
Public equity	99%	88%	43%
Private equity	87%	25%	17%
Private debt	4%	0%	3%
Government bonds*	100%	100%	5%
Investment grade credit	94%	91%	3%
EMD Corporate	100%	95%	3%
EMD Sovereign	100%	100%	3%
HY Securitised Credit	100%	0%	5%
Special situations debt	100%	3%	9%
Infrastructure	83%	79%	2%
Property	100%	84%	8%
<b>Total (reflecting asset allocation)</b>	<b>94%</b>	<b>63%</b>	<b>100%</b>

Sources: MSCI, eFront and managers; \*Absolute emissions data is not available for government bonds as there is not yet an agreed methodology of apportioning this data to investors. Therefore, coverage for government bonds relates to carbon intensity metrics only.

\*The Methodologies section includes information about assets where there is currently no accepted methodology of reporting carbon emissions and have therefore been excluded from the total calculation.

From 30<sup>th</sup> September 2021, when measurement of the Scheme’s emissions began, to 30<sup>th</sup> September 2025, data coverage has increased by 37% including both proxy and reported data, and by 22% for coverage of reported data only. Figure 2 below shows the trend in data quality through time.

**Figure 2**



**Total Scheme Scope 1 and 2 Carbon Emissions and Intensity**

**Carbon Emissions:** refers to the absolute greenhouse gas emissions associated with the portfolio, expressed in tons of CO2. Total emissions are what must be reduced in order to limit the carbon dioxide in the atmosphere and the degree of planetary warming.

**Carbon Intensity:** is the portfolio’s exposure to carbon-intensive companies, expressed in tons of CO2 per the enterprise value of the company/asset including cash (EVIC). It allows a comparison between companies and assets of varied sizes.

**Scope 1 & 2:** Scope 1 and 2 emissions are those directly produced by the companies/assets through burning fossil fuels or indirectly through purchased energy.

**Figure 3**

The following table shows the Scope 1 and 2 carbon emissions and intensity by asset class and at the total Scheme level as of 30<sup>th</sup> September 2025:

Asset Class	Scheme emissions (thousands of tonnes of CO2)	Benchmark emissions (thousands of tonnes of CO2)		Scheme Intensity (EVIC)	Benchmark Intensity (EVIC)	
		230	300 <sup>1</sup>		57	74 <sup>1</sup>
Public equity	272	230	300 <sup>1</sup>	69	57	74 <sup>1</sup>
Private equity	88	94 <sup>2</sup>		53	57 <sup>2</sup>	
Private debt	0	3		28	127	
Government bonds	N/A	N/A		166	TBC	
Investment grade credit	6	22		28	94	
EMD Corporate	153	148		576	558	
EMD Sovereign <sup>4</sup>	N/A	N/A		1177	TBC	
HY Securitised Credit	17	TBC		36	TBC	
Special situations debt	83	120		99	143	
Infrastructure	14	TBC		74	TBC	
Property	2	TBC		3	TBC	
<b>Total<sup>3</sup></b>	<b>635</b>	<b>467<sup>3</sup></b>		<b>77</b>	<b>57</b>	

Public market and Property carbon data shown to end September 2024, all other data as of December 2023.

<sup>1</sup> Secondary benchmark shown for public equity emissions and intensity represents the public equity AIP benchmark.

<sup>2</sup> FTSE All World benchmark (the primary benchmark) used as a proxy for Private equity benchmark.

<sup>3</sup> The benchmark total is the Scope 1 and scope 2 emissions of the FTSE All World Index for the asset value CPTI have data for.

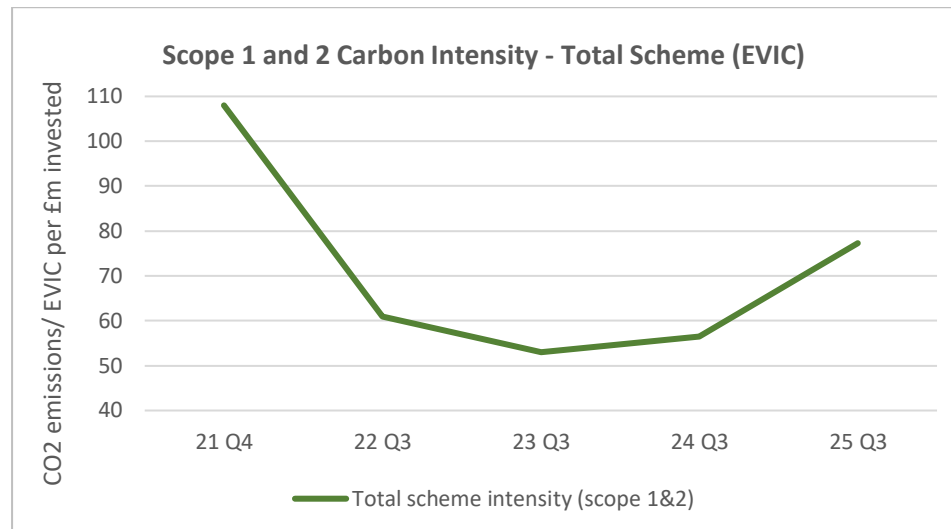
<sup>4</sup> The Scheme does not report absolute emissions as there is currently no agreed methodology of apportioning country-level emissions to investors. The Methodologies section includes information about assets where there is currently no accepted methodology of reporting carbon emissions and have therefore been excluded from the total calculation.

Scope 1 and 2 total carbon emissions are reported at each asset class level where possible and aggregated at the Scheme level. The Scheme is focused on collecting reported data for Scope 1 and 2 emissions but will use proxied data to fill in any gaps. The metrics and methodology in each asset class have been chosen in-line with industry consensus, more information can be found in the [methodologies](#) section.

As indicated in the table above (Figure 3), the Scheme’s absolute emissions and emissions intensity are both slightly higher than the relative benchmarks at the total portfolio as of 30<sup>th</sup> September 2025.

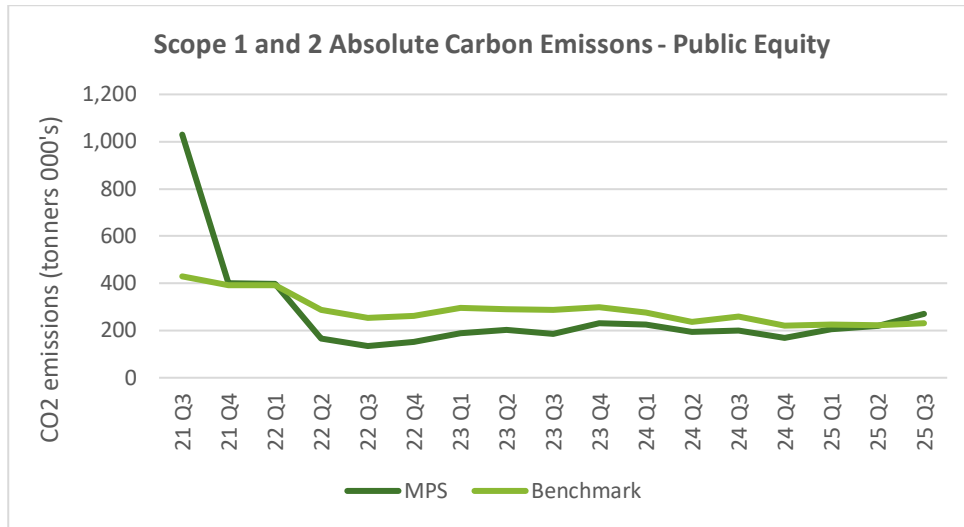
Total Scheme carbon intensity has fallen since reporting began (see figure 4), reflecting the impact of the Scheme’s approach, which takes account of climate-related risks and opportunities but also overall changes in the market. There has been an increase in recent periods mainly due to the removal of the climate overlay in the passive equity portfolio (as discussed earlier) and higher emissions associated with Emerging Market Corporate Debt, where issuers typically operate in more carbon intensive sectors and have slower structural decarbonisation pathways. Overall, the Scheme continues to maintain a lower carbon intensity than at the starting point, however, the Scheme has no formal emissions targets and some fluctuation is expected as asset allocations change.

**Figure 4**



Figures 5 and 6 show the total carbon emissions and carbon emissions intensity for the Scheme’s public equity portfolio at the end of each quarter from Q4 2021 when the metrics were agreed, and tracking began. Reviewing emissions in the public equity portfolio, where emissions data availability is consistent and the allocation is material to the Scheme, is helpful to see trends over time. In each case, changes through time are shown as well as the comparison with the relevant asset class benchmark.

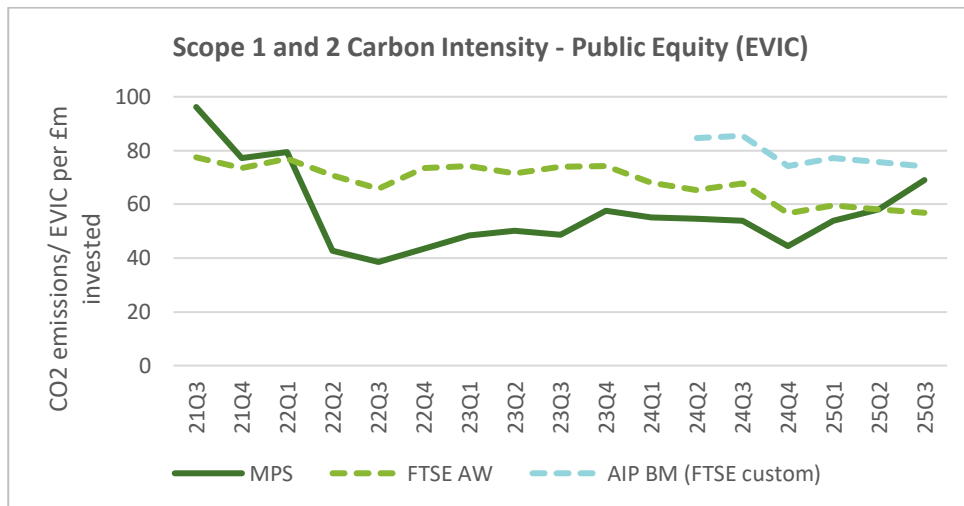
**Figure 5**



Both absolute carbon emissions and carbon intensity within the public equity portfolio have fallen since tracking of these measures commenced. The trends shown in Figures 5 and 6 illustrate the changes made to the portfolios in respect of emissions intensity since September 2021. These reductions predominantly relate to the transition of the passive mandate in Q4 2021, the termination of a semi-active equity mandate in Q2 2022 and the introduction of climate focused equity mandates that by design will have lower carbon emissions intensity.

Over the reporting year, emissions intensity has increased as a result of the removal of the climate overlay in passive public equity (noted above) and whilst they are now slightly above the FTSE All World index, they remain below the trustee benchmark (AIP) which reflects the regional exposures of the public equity portfolio - the regionally weighted Trustee benchmark is weighted at 40% Americas, 30% Asia-Pacific and 30% EMEA. The Scheme’s emissions intensity is expected to vary up and down through time with asset class shifts and regional and sector views.

**Figure 6**



Source: MSCI

**Scope 3 Carbon Emissions**

**Scope 3:** refers to indirect greenhouse gas emissions both upstream and downstream of an organisation’s main operations.

**Upstream:** refers to indirect greenhouse gas emissions that occur prior to the company’s operations, including those from the production and manufacture of purchased goods and services.

**Downstream:** refers to indirect greenhouse gas emissions that occur after the company’s operations, including those from the distribution, use, and end-of-life stages of sold goods and services.

Scope 3 emissions account for most of the total emissions of companies in the FTSE All World benchmark, as they capture the full lifecycle impact of

products. Focusing only on Scopes 1 and 2 risks missing major supply chain impacts and reducing transparency. Understanding Scope 3 is therefore critical for effective governance, risk management and long term planning.

Measuring Scope 3 remains challenging due to limited data, inconsistent supplier methods and the risk of double or triple counting as emissions pass through value chains. This overlap is deliberate, promoting shared accountability and magnifying the effect of reductions. Because reported data is scarce and variable, modelled estimates are considered best practice for comparability.

In this TCFD report, Scope 3 emissions for public assets are based on MSCI estimates aligned with the Greenhouse Gas Protocol. Reporting currently covers public markets and real estate only. CPTI plans to extend this to other asset classes as data quality improves, but current coverage is too limited to include them.

The following two tables show the Scope 1, 2 and 3 carbon emissions and intensity by asset class and at the total Scheme level as of 30<sup>th</sup> September 2025:

**Figure 7**

Asset class (NAV)	Carbon emissions (thousands of tonnes of CO <sub>2</sub> )			
	Scheme Scope 1 & 2	Scheme Scope 3	Scheme Scope 1, 2 & 3	Benchmark Scope 1, 2 & 3
Public equity (£4.0bn)	272	1,826	2,098	1,891   2,331 <sup>1</sup>
Investment grade credit (£243m)	6	87	93	131
Property (£815m) <sup>2</sup>	2	11	13	TBC

**Figure 8**

Asset class (NAV)	Carbon intensity (EVIC/NAV)			
	Scheme Scope 1 & 2	Scheme Scope 3	Scheme Scope 1, 2 & 3	Benchmark Scope 1, 2 & 3
Public equity (£4.0bn)	69	464	533	468   576 <sup>1</sup>
Investment grade credit (£243m)	28	449	477	575
Property (£815m) <sup>2</sup>	3	14	17	TBC

<sup>1</sup> Secondary benchmark shown for public equity emissions and intensity represents the public equity AIP benchmark.

<sup>2</sup> Scope 3 property emissions and emissions intensity relate only to the Delancey Portfolio.

The Scheme's public equity portfolio shows slightly higher Scope 3 emissions than the FTSE All World Index, mainly due to overweight positions in utilities and healthcare, where end user fuel combustion drives particularly high emissions. In contrast, when compared with the public equity AIP benchmark, the Scheme's Scope 3 emissions and intensity are marginally lower. This reflects favourable stock selection, particularly within industrials, metals, mining and energy.

The investment grade credit portfolio's emissions are below the Bloomberg Global Aggregate Corporate Index.

As covered earlier in the report, the metric used to calculate carbon intensity for public equity and investment grade credit is *tons of CO<sub>2</sub> per the enterprise value of the company/asset including cash (EVIC)*. For real estate, *tons of CO<sub>2</sub> per the Gross asset value* is used. The chosen metric aligns well with EVIC due to the fact that both metrics consider the total value of the assets and, as such, are somewhat comparable.

## Paris Alignment

Global data shows that 2024 was the first year on record with global temperatures exceeding 1.5°C above preindustrial levels. Combined with the exceptional warmth of 2023, the two year average now sits above 1.5°C—an important marker for climate risk assessment, despite the Paris Agreement focusing on multi-decade averages rather than individual years. Full global climate data for 2025 is not yet available.

Whilst the Scheme has not committed to a Net Zero target, and whilst the likelihood of the threshold being breached has increased, the Paris Agreement remains relevant in understanding the portfolio’s climate transition risk. As regulation and investment patterns rapidly shift around the climate transition, it is critical for investors to understand the cost and path for each company or asset to reposition for Net Zero in the same way they consider other major investment scenarios.

The Trustee notes that, as with Net Zero, the Scheme is not required to set a Paris Alignment commitment although the Scheme is required to report on the extent to which its assets are Paris Aligned or not.

The Trustee measures Paris Alignment using a binary target, with CPTI assessing each portfolio’s companies or assets using data from MSCI or directly from managers. This is straightforward for some asset classes but more complex — or occasionally not possible — for others, as outlined in the [methodologies](#) section. An asset is considered “Paris Aligned” if it is on a **credible**, appropriately paced **pathway to Net Zero**, rather than already at Net Zero. Figure 9 below shows the portfolio’s look through Paris Alignment as at the end of September 2025.

**Figure 9**

Asset class	% of asset class that is Paris Aligned as at September 2025
Investment grade credit	55%
Property	53%
Public equity	48%
Infrastructure	36%
Emerging market debt	6%
Private equity; Private debt; Special situations debt	<i>No Data</i>
Liquid securitised assets; Government bonds; Hedge funds; Commodities; and Other *	<i>N/A</i>
<b>Total portfolio alignment</b>	<b>25%</b>
<b>Alignment of assets where data has been provided</b>	<b>44%</b>
<b>FTSE All World alignment (science-based targets)</b>	<b>52%</b>

Source: Investment Managers/SBTi; \* asset classes for which Paris Alignment is not an applicable metric.

Whilst there were notable improvements in some asset classes over the year mainly due to assets with low alignment being sold, there is no real change at the Scheme despite an increase in FTSE All World alignment. The Scheme’s lag compared to the benchmark reflects both the removal of the passive equity overlay and differences in the equity portfolio versus the FTSE AW.

Through time the level of Paris Alignment across the portfolio is expected to increase as managers seek to incorporate transition risk and opportunities, and as individual assets and companies make progress in clarifying their transition plans and timing. This however is very dependent on global government policy.

CPTI believe all companies and assets should understand the cost and practicality of becoming Paris Aligned. Assets without a plan, or where costs are too high, face a greater risk of becoming stranded. This metric is therefore monitored closely. The definition of Paris Alignment may also shift over time as temperature increases already in the system become clearer.

## Climate Opportunities

Though not an official metric or target, the Trustee is focused on capturing climate-related investment opportunities where relevant for their investment horizon. CPTI reports to the Trustee the current level of investment in quantitatively assessed *climate opportunities*.

The table below shows the percentage of the portfolio that is invested in the quantitatively assessed climate opportunities (as defined by MSCI for public markets and direct manager input in private markets).

### **Figure 10**

Percentage of assets (excluding cash and low-risk bonds) invested in current (not future transition) Climate Opportunities (shown only for the asset classes invested in Climate Opportunities)

Asset class	September 2025
Commodities	100%
Emerging market debt	12%
Infrastructure	39%
Public equity	12%
Private debt	2%
<b>Private equity</b>	<b>1%</b>
<b>Total of growth assets</b>	<b>11%</b>
<b>Benchmark (FTSE AW)</b>	16%

The Scheme's total exposure to climate opportunities has remained stable over the year, below the FTSE AW benchmark which has increased by 2% to 16%. Overall, like many pension schemes, as the Scheme matures, its ability to invest in more climate opportunities may reduce. Large exposure to legacy private assets and the Scheme's requirement to reduce illiquidity also limit the ability to add to climate opportunities.

Examples of some of the Scheme's climate transition opportunities are provided in the case studies within [Appendix 1](#).

## Section 6 – Conclusion

This fourth statutory TCFD Report demonstrates the Mineworkers' Pension Scheme Trustee's continued commitment to understanding and managing the financial risks and opportunities presented by climate change. Over the past year, the Scheme has maintained its strategic focus on climate risk, adapting its approach in response to evolving market conditions, regulatory developments, and the maturing profile of the Scheme.

The Trustee has made meaningful progress in improving data coverage and quality, with reported carbon emissions data now available for 63% of assets and overall coverage rising to 94%. While the ambitious target of 90% reported data by 2024 was not met, the extension to 2027 reflects both the complexity of the challenge and the Trustee's determination to drive further improvements.

The Scheme's carbon intensity has materially decreased since reporting began, although recent increases, primarily due to the removal of the climate overlay in passive equities and higher exposure to emerging market debt, highlight the dynamic nature of portfolio emissions and the need for ongoing monitoring.

Throughout 2025, the Scheme has continued to balance climate objectives with its fiduciary duty to members, recognising the shortening duration of the Scheme's liabilities versus the longer time needed for certain areas of climate transition. Investments in climate opportunities and stewardship initiatives remain a focus. The Scheme's approach to Paris Alignment and Net Zero remains pragmatic, focusing on credible transition plans and ongoing engagement with managers and companies.

Climate scenario analysis conducted this year underscores the importance of integrated, forward-looking strategies to safeguard value and harness opportunities. The modelling suggests that, under a central disorderly

transition scenario, the portfolio could face a material reduction in value, reinforcing the need for robust risk management and continued engagement with high-risk assets and managers.

Looking ahead, the Trustee remains committed to reducing unrewarded risks, capturing climate-related opportunities, and supporting the Scheme's long-term financial position.

The evolving regulatory, market, and data landscape will require ongoing adaptation and collaboration with asset managers, data providers, and other stakeholders. While significant challenges remain, the Scheme is well positioned to respond proactively, ensuring that climate considerations are fully integrated into investment decision-making and stewardship activities.

## Governance in detail

As set out in the first TCFD report, The Trustee has an established governance framework for considering all investment opportunities and risks. The Trustee’s approach to governance of climate, outlined below, was formalised in 2021 in the context of this and as an extension of existing governance arrangements. This section is largely unchanged since the Scheme’s second TCFD report.

### Committee of Management (“COM”)

COM consists of all ten members of the Trustee board. COM retains responsibility for all key areas of policy which includes the overarching Responsible Investment (“RI”) Policy. Climate has been an important theme within the RI policy and the most recent review of the policy in 2021 resulted in a dedicated section on climate ([link](#)). The key roles retained by COM are as follows:

- Managing the risk of climate on Funding Strategy.
- Approve and regularly review the RI policy, which includes a specific climate policy.
- Provide clear guidance to the Investment Sub-Committee within the Terms of Reference for overseeing implementation of COMs policy regarding climate.
- Establish climate metrics to monitor and report publicly as part of TCFD requirements. In 2021, COM agreed the following key metrics to report on:
  - Absolute carbon emissions across the portfolio.
  - Carbon emissions intensity across the portfolio.
  - Percentage of the portfolio on which acceptable (reported not proxied) carbon emissions data is available.

- In 2023, as required by the TCFD regulation, COM also agreed to report on Scope 3 emissions and the degree of Paris Alignment across the Scheme’s assets.
- Establish a climate target and report progress towards this target as part of TCFD requirements. In 2021, COM agreed the following target:
  - Increase the proportion of the Scheme on which acceptable (reported not proxied) carbon emissions data (Scope 1 and 2) is available to 90% by the end of 2024. In 2024 this target was extended to 2027.
- Review progress against the climate data target, and whether the target remains relevant or needs replacing.
- Publish an annual TCFD Report within 7 months of the end of each Scheme year on a publicly available website, accessible free of charge.
- Ensure knowledge and understanding of climate issues across the Trustee and its advisors are sufficient to address the issues presented.

### Investment Sub-Committee (“ISC”)

ISC consists of four of the ten-member Trustee board and currently has two independent investment advisers who are non-voting members of the sub-committee. COM delegates to ISC the ongoing oversight of investment risks and opportunities, including those relating to climate. ISC is responsible for:

- Implementation of investment strategy.
- Monitoring the agreed climate metrics to be reported publicly as part of the TCFD reporting, as well as any additional metrics that ISC believe are appropriate.
- Reviewing progress against the established climate target as set out above and acting as necessary to ensure the Scheme remains on track.
- Reviewing whether the agreed climate metrics should be changed through time and making any proposals to COM.
- Reviewing the climate scenario analysis and agreeing any investment changes required as a result.

- Setting and reviewing any additional metrics relating to climate and broader ESG risks as part of ongoing investment activity; and
- Overseeing CPTI's implementation of climate risk management and opportunity capture.

Climate and broader ESG metrics are reported in each quarterly ISC meeting pack. COM formally reviews the climate data and metrics following the end of each Scheme year.

### **Coal Pension Trustees Investment Limited ("CPTI")**

CPTI is responsible for providing investment advice and investment management services to the Trustee. As set out in its Investment Management Agreement, CPTI is responsible for the implementation of the Scheme's RI policy, including in relation to climate and advising the Trustee on ongoing management issues. This includes:

- Ensuring climate risks and opportunities are assessed and addressed across all areas of the portfolio.
- Ensuring that the Scheme's providers are aligned in their management and reporting of climate risk and opportunity and stewardship of the Scheme's assets.
- Ensuring investment thinking evolves to stay on top of a fast-changing opportunity set.
- Advising the Trustee on governance, risk and opportunities, metrics and targets.
- Ensuring the TCFD mandated scenario analysis is conducted; and
- Providing all required reporting and market information.

### **Risk management**

The ISC receives regular information on carbon emissions data, the level of investment in quantitatively assessed current climate opportunities and investments in potentially risky areas such as ESG laggards and controversies. This is discussed as part of the regular meeting agenda. The Scheme (and the market more broadly) is yet to build out an approach to systematically analyse physical risk data. Beyond these regular quantitative updates, CPTI assesses climate risks and opportunities as part of all regular review meetings with managers and any new manager due diligence. It is also a focus of all stewardship discussions. CPTI or the Trustee may also identify areas of risk and opportunities through external meetings, training and their own networks and studies. All of this is then fed back into the ongoing qualitative and quantitative evaluation of risks and opportunities.

Whilst there is no one risk indicator or target around climate change, the Trustee believes through the combination of the below, as well as ongoing developments, a good picture of potential risk and opportunity is being built:

- Monitoring carbon emissions and intensity data on an absolute basis and versus the benchmark.
- Monitoring investment in climate opportunities.
- Monitoring exposure to laggards and controversies and engaging on these.

The Risk and Assurance Sub Committee ("RASC"), which consists of four of the ten-member Trustee board, is responsible for overseeing overall compliance with policies and risk tolerances. As above, there are no formal risk limits or tolerances set for climate change. Aside from any issues raised by the sub-committees, COM will formally review climate risk annually before publishing the Scheme's TCFD report.

### **Knowledge, understanding and training**

The Trustee is required by regulation to have the necessary expertise in relation to climate-related risks and opportunities and to ensure adequate knowledge from those appointed to advise it. The Trustee and its advisors look to regularly enhance their knowledge in this area as detailed below. Through COM and sub-committee meetings, the Trustee will challenge CPTI to ensure it takes adequate steps to identify, assess and manage any climate-related risks and opportunities on behalf of the Scheme. The Trustee has discussed climate change related issues at a number of ISC and COM meetings across the year.

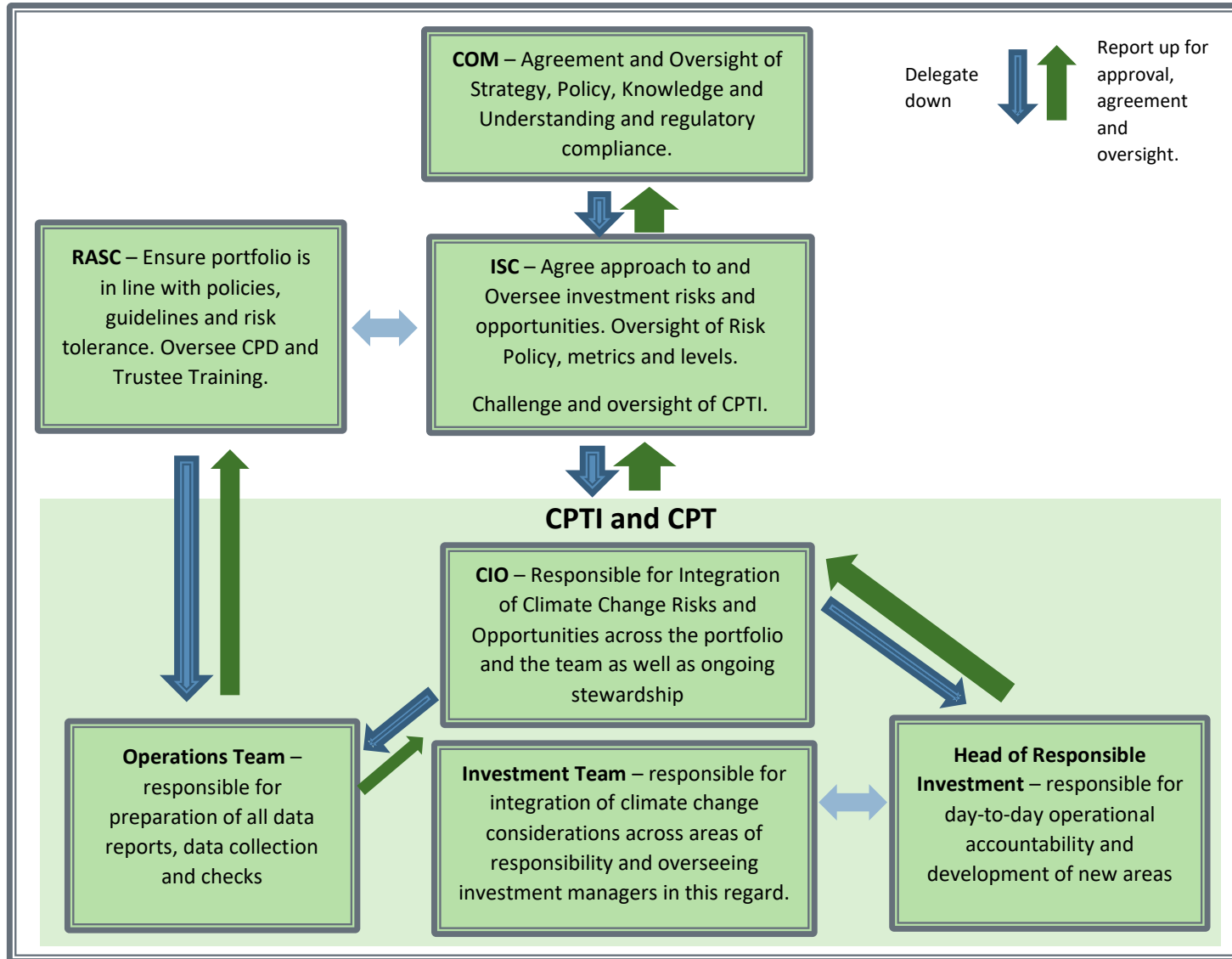
Trustee training is undertaken at Trustee meetings, sub-committee meetings and through other external training as appropriate and is monitored through a training register by Coal Pension Trustees. Coal Pension Trustees Services Limited is the in-house executive function for the two closed Coal Industry pension schemes, the Mineworkers' Pension Scheme (MPS) and the British Coal Staff Superannuation Scheme (BCSSS). CPT is the parent company of CPTI. The training register enables CPT to keep a watching brief of those subjects the Trustee Directors are voluntarily pursuing, with a view to providing supplementary training on matters of particular interest and to identify any gaps in the Trustee Directors knowledge and arrange for this to be addressed.

Due to the fact that there has been no update from the Regulator regarding mandatory climate disclosures, there has been no need of further training in this area during 2025, however since revised Climate Scenario analysis was due with this report, the Trustee did have a Training, Knowledge and Understanding session on the new Scenario analysis that has been included within this report.

The Trustee also has two independent investment advisors who attend all ISC meetings and provide expert investment opinions and challenge.

All CPTI Senior Managers and certified staff are required to fulfil training and competency requirements and are internally certified under the FCA's Senior Managers and Certification Regime (SM&CR). CPTI employees are given access to ongoing training, including training on climate-related risks and opportunities each year.

## Climate Oversight Governance Structure



## Methodologies

The following section goes into detail on the methodologies used to calculate the metrics relating the Scheme's TCFD report, as well as identifying the data resources used by CPTI. Any changes to methodologies or resources over the reporting year have been covered earlier in the report.

### Data quality

CPTI assesses reported data coverage using information from independent data providers in public markets (public equity and credit). Government bond and high-yielding credit data is provided by the managers. Reported data is available on the majority of Real Assets which is received directly from the managers and based predominantly on actual energy use. In private equity and private debt, limited reported information is available. The managers provided some level of reported data based on underlying company information and the remaining portion of data is approximated via proxies based on company sector and geography. Where CPTI identify emissions data reported by underlying private companies, this will also be included as quality data. The data collected is aggregated at the asset class level and then shown at the portfolio level in the main body of the report.

As of 30<sup>th</sup> September 2025, 63% of the Scheme's data comes from reported company or asset data. As such, the actual carbon emissions of the Scheme could differ significantly from what is reported in this report using best estimates and proxies, as well as noting the level of unreported data. That said, the most robust methodologies are being used for estimates and the Trustee has clear sight of the areas of the portfolio that are more or less carbon intensive. As some areas of the portfolio are not currently covered, the total absolute emissions number in this report is expected to be an underestimate. Increasing data coverage and accuracy is a key focus for the Trustee. Where proxy data is used, this is based on the actual sector and regions of the assets where available and thus is expected to be an indicative (if not accurate) estimate of actual data.

In line with DWP guidance, some asset classes have been excluded from the metrics and targets data due to there being no way to calculate or indeed assign emissions to them. Such asset classes can include derivatives, hedging instruments, commodities, types of private credit and structured products. Specifically for the Scheme, the majority of excluded assets are cash, derivative based assets such as Brevan Howard (the hedge fund manager) and commodities, which represent 8.7% of total Scheme valuation as at end September 2025. The total reported data coverage shown in the main report excludes these assets.

In the case of commodities, where investments are made through liquid futures instead of direct physical commodity purchases, determining emissions is challenging due to the absence of a specific emissions-generating entity linked to the futures. Additionally, the complex nature of measuring emissions from commodities like cotton, influenced by factors such as type, usage, and harvesting methods, coupled with a lack of sufficient data, supports the decision to exclude this asset class from total portfolio-level emissions reporting.

Similarly, hedge funds pose a challenge as there is no clear emissions-generating entity associated with instruments like rate and currency futures. Brevan Howard notes the absence of an industry standard for calculating emissions in the instruments they trade, reinforcing the practical impossibility of assigning emissions to this asset class.

### Carbon Emissions and Intensity

While there is little ambiguity when it comes to calculating carbon emissions, there are a number of different methods for calculating carbon intensity. The Trustee has chosen to calculate the majority of the Scheme's intensity based on absolute emissions relative to the enterprise value of the company/asset including cash (EVIC) (the only outlier being government bonds, as per below). This metric has been chosen as it is in-line with industry consensus, although there is a greater degree of variability in metrics used here versus absolute emissions and the metric used may change in future. Additional metrics are monitored where appropriate for particular assets, for example looking at

intensity/sales in public equities and intensity per square meter in real estate or per unit of energy produced in certain infrastructure assets. Scope 3 emissions and intensity are shown in the main body of the report where possible – currently this is just proxy data for public assets and some reported data provided by the property manager.

Methodologies used for calculating carbon emissions and intensity figures differ across asset classes. These are outlined below:

Public equity and corporate credit: For public equity and corporate credit, Scope 1 and 2 carbon data is sourced from MSCI or the manager and is based primarily on company reported emissions, with proxy data used to supplement any gaps. Carbon emissions are apportioned to the investor, based on investors share of the EVIC of a company. Scope 3 emissions are estimated for all public market investments.

Property: Scope 1 and 2 property emissions are received from the managers on an annual basis and are based on landlord energy use only. Scope 3 emissions are calculated using consumption data (meter readings and invoices) for tenant-controlled supplies/assets, multiplied by applicable emission factors.

Infrastructure: Scope 1 and 2 infrastructure emissions are received from the managers on an annual basis, based on reported energy use at the asset level.

Private equity and private credit: Private equity fund data is a combination of reported data and estimated data through ClarityAI provided by eFront. The majority of reported data is collected by CPTI, based on reported asset level data, some of which has also been assured by the manager.

For private credit, data is a combination of data received from investment managers and a proxy based on a 50/50 public equity/loan index.

Government bonds: Government bond emissions intensity is calculated as the emissions of a country shown per **GDP** (source: World Bank and manager). The Scheme does not report absolute emissions as there is currently no agreed

methodology of apportioning country-level emissions to investors. Emissions per **GDP** is a better metric than emissions per capita for comparing government bond emissions intensity because it accounts for economic productivity differences, enables fairer comparisons across developed and emerging markets, aligns with sovereign risk factors, and provides a more stable measure over time.

Securitised: Data for securitised assets has been calculated and provided by the manager using proxy estimates based on a similar securitised fund. Proxies are created at the deal level, quantifying expected carbon from each underlying asset backing the particular securitisation.

### Paris alignment

The approach taken to assessing Paris Alignment for each asset class is outlined below:

#### Public equities and corporate credit

CPTI has assessed Paris Alignment in public markets based on a single metric: whether or not a company has a carbon emissions reduction target approved by the Science Based Targets initiative (SBTi). 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. CPTI note that using this metric alone may not be a true representation of the Scheme alignment – on one side, a company may be aligned but not yet have had its target approved by SBTi, on the other, some companies may have had SBTi targets approved but could rely on partial offsets (which are newly being considered by SBTi).

As with public markets, CPTI has assessed Paris Alignment in the emerging market debt portfolio, though only for the portion of that portfolio that is invested in corporate bonds (there is no agreed methodology as of yet to deem whether or not a government bond is Paris Aligned.) The same SBTi metric is used here.

Infrastructure:

The infrastructure holdings exhibit varying degrees of alignment. One manager has identified their holdings as 100% Paris Aligned, reflecting investments tailored to support a low-carbon economy. Conversely, another manager has not yet conducted a formal assessment against Science Based Targets for climate impact, resulting in their holdings being categorised as "Not Aligned" for the current reporting period. The Scheme is in the process of exiting some of this latter portfolio and some was sold over the reporting year.

Real estate:

Carbon Risk Real Estate Monitor (CRREM) analysis (based on benchmark assumptions of carbon intensity) shows the level of assets that will be stranded by 2050, and which are therefore not Paris Aligned. Currently, 85% real estate assets are stranded by 2050 according to CRREM analysis. As this statistic does not take account of asset improvement plans, Delancey also looks at the proportion that is currently aligned with the CRREM decarbonisation pathway to help direct intervention efforts. Currently, 58% of the portfolio is aligned.

Other asset classes:

The Scheme's Private Debt, Private Equity and Special Situations Debt allocations include a large number of commitments made several years ago. These assets are in gradual run-off, many of which are expected to be paid out to the Scheme over the next several years. Given this CPTI are mainly focusing the Paris Alignment assessment on the remainder of the Scheme's assets.

For some asset classes in which the Scheme is invested such as government bonds, securitised credit, commodities and hedge funds, there is no current market accepted methodology for assessing Paris Alignment and thus these portfolios have been classified as N/A and will be excluded from the overall calculation – noting what percentage of the total portfolio falls under this category.

Following engagement last year regarding the possible labelling of "green gilts" as Paris aligned investments, the team continues to apply the Paris Alignment metric on a binary Aligned/Not Aligned basis, with the option to explore a more graduated scale in future.

**Climate opportunities**

The quantitative assessment of the current (not future) *Climate Opportunities* bucket includes the following within each asset class:

1. **Public equities:** Companies that MSCI classifies as "solutions" for the transition; or companies deriving more than 25% of their revenue from clean technology. These screens are applied across **all** public equity mandates, not just those that fall within the theme.
2. **Commodities and Infrastructure (real):** The managers of the commodities and Greencoat portfolios have confirmed that the entire portfolios are climate opportunities. As such 100% of the Scheme's commodities are opportunities and 30% of the Scheme's infrastructure portfolio are opportunities (Greencoat represents 30% of the infrastructure portfolio).
3. **Emerging market debt:** Focusing on bonds which are "labelled issuance" (green, social or sustainably linked); and/or corporate bonds identified by the manager as "transition enablers". The manager has confirmed that 15% of the portfolio (once removing for double counting) was invested in such bonds.

The *Climate Opportunities* metric accounts for a lower percentage of the growth portfolio compared to the *Climate Theme* and reflects a more conservative measure.

Appendix 1 – Scenario Analysis



# Climate Scenario Analysis 2025

Coal Pension Trustees Investment Limited : Authorised and regulated by the Financial Conduct Authority



## Introduction: Purpose

Why are we doing Climate Scenario Analysis?	What is the purpose of the analysis?
<ul style="list-style-type: none"> <li>The TCFD requires the Scheme to conduct climate scenario analysis at least every 3 years.</li> <li>Scenario analysis is also a helpful tool for assessing the Scheme’s resilience to different future outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>The analysis highlights how different climate pathways could impact the value, risk, and resilience of the Scheme over time.</li> <li>It can be a useful tool to know whether the Scheme is likely to face losses because of climate transition/damage and where climate-related opportunities might emerge that could lead to future gains.</li> </ul>
Context of doing the analysis in 2025	How have we conducted the analysis?
<ul style="list-style-type: none"> <li>There remain significant concerns as to the accuracy, relevance and coverage of existing models and data (see overleaf).</li> <li>Whilst work is being done to develop shorter term scenarios and more meaningful physical risk scenarios, these are not yet at a stage to be used by the Scheme.</li> </ul>	<ul style="list-style-type: none"> <li>CPTI met with a number of third-party providers over 2024 to explore their models.</li> <li>None of these providers are yet able to model climate scenarios over time-horizons more relevant to the Scheme and there were significant concerns around data coverage and accuracy.</li> <li>CPTI’s own data access and knowledge of this modelling has progressed significantly over the past three years. As such CPTI has utilised standard MSCI modelling on the Scheme’s public assets and sought additional insight on the Scheme’s real assets in conjunction with the managers of these assets.</li> </ul>

## Introduction: Limitations to the analysis

### Data limitations

- ⊘ Analysis limited to identifiable public assets
  - Analysis is not applicable across private assets and also excludes securitised credit and derivatives exposures such as commodities and hedge funds.
  - That said the analysis is generally based on rough location and sector information rather than detailed look-through and thus we expect the indicative outcomes for public assets to also be relevant for the majority of private assets.
- ⊘ For physical risk analysis to be truly accurate and complete, exact locations of all assets, workforces, customer bases and full supply chains needs to be known
  - This complete data set does not exist yet and means the results of the data are based on proxies and estimations of both the assets held and the likely path of climate transition and climate change.

### Modelling limitations

- ⊘ Scientists do not know accurately what the result of global warming will be, in particular there are various tipping points expected to exponentially increase problematic changes, and it is unclear when these will be reached.
- ⊘ Changing weather patterns and damages are occurring significantly faster than predicated and in different locations.
- ⊘ The scenarios remain very long-term, and this doesn't align with the Scheme's time-horizon – it is impossible to separate out the impact to assess over the relevant timeframe for our assets.
- ⊘ The scenario modelling assumes assets are held constant over this very long period.
- ⊘ Many factors remain outside the scope of analysis – e.g. mass immigration and conflict caused by climate change.

### 3 Climate Scenarios

Per regulation, CPTI has analysed the impact of 3 climate scenarios, of which **2°C Disorderly is the selected central scenario** based on current policy expectations. All scenarios are modelled over 25 years to 2050.

Scenario	Description	Risks and impact
2°C Orderly	Global warming reaches 2°C above pre-industrial levels, and the transition to a low-carbon economy is <b>well-managed and predictable</b> .	The key risk here is transition risk – i.e. the cost to companies of regulation and spending to reach net zero – e.g. carbon tax, retrofitting. Stranded asset risk will also be high in this scenario.
2°C Disorderly	Global warming reaches 2°C above pre-industrial levels, and the transition to a low-carbon economy is characterized by <b>significant disruptions and surprises</b> .	As above the risk here is transition risk, the cost is higher here given the lack of planning. Given the delay in action, physical damage is also higher in this scenario.
3°C	Global warming reaches 3°C above pre-industrial levels, and there are significant physical damages to assets and cost to GDP.	This scenario includes the highest impact of asset damage. Other sources of models also include a 4 degree scenario. Any of these scenarios are expected to significantly underestimate the actual cost to assets.

CPTI note that the analysis has **not** been conducted under a 1.5°C scenario, this is because the team believe it is **very unlikely** that global temperature rises will now be limited to 1.5°C.

**Methodology** – the climate analysis is produced by MSCi using their proprietary models, incorporating the scenarios developed by The Network for Greening the Financial System (NGFS), other frameworks and data sources. The NGFS is a global network of central banks and financial supervisors and aims to accelerate the scaling up of green finance and develop recommendations for central banks' roles in addressing climate change.





Mineworkers' Pension Scheme

# MPS Liquid Portfolio: High Level Results

The below table shows the cumulative impact of the 3 climate scenarios on MPS' public assets through to 2050. The impact is split into 3 areas – the negative and positive impact of changing regulation/consumer preferences and physical damages. The analysis assumes all positions are held constant with no active management or changes over the next 25 years. Here we assume the public assets modelled are a reasonable proxy for the broader portfolio.

Predicted Value change on MPS Public Assets*	Climate Transition Regulation Impact on Scheme Total Value (%)			Physical Impact on Scheme Total Value (%)			Opportunities Impact on Scheme Total Value (%)			Aggregated Impact on Scheme Total Value (%)		
	2°C	2°C	3°C	2°C	2°C	3°C	2°C	2°C	3°C	2°C	2°C	3°C
	Disorderly	Orderly	Hot House World	Disorderly	Orderly	Hot House World	Disorderly	Orderly	Hot House World	Disorderly	Orderly	Hot House World
	-4.9	-2.5	-2.1	-3.9	-3.9	-5.0	0.7	0.6	0.4	-8.1	-5.8	-6.7

**Under the central scenario (NGFS 2°C Disorderly) the portfolio is projected to lose 8.1% of its value by 2050 due to the combined effects of disruptive policy action, physical climate risks with only modest gains from climate-related opportunities. The actual timing and magnitude of the impacts is impossible to quantify.**

\*The above analysis has been conducted on the following MPS portfolios– Public Equity in its entirety, CFC (Investment Grade Credit only) and Emerging Markets Debt (Corporate Bonds only) as of 31 March 2025.



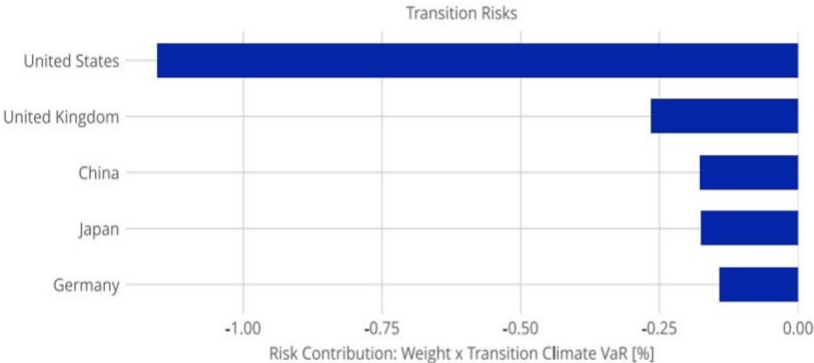
# Scenario Analysis Results – Deeper Dive

Top 5 biggest contributors to Climate VaR downside risk:

Security	Portfolio Name	Policy Risk	Physical Risk	Aggregated Risk	Weight (%)	Climate VaR Risk Contribution
West Japan Railway	BlackRock Infrastructure	-12.8%	<b>-91.8%</b>	-100.0%	0.18%	-0.18%
Valero Energy	BlackRock Passive / Wellington Value	<b>-100.0%</b>	-28.2%	-100.0%	0.12%	-0.12%
Societe Generale	BlackRock Passive / Wellington Value	-2.3%	<b>-89.8%</b>	-92.1%	0.12%	-0.11%
Engie	BlackRock Passive / Wellington Value	<b>-47.1%</b>	-15.3%	-55.9%	0.18%	-0.10%
Hindalco Industries	BlackRock Passive / Schroders EM	<b>-79.2%</b>	-3.5%	-82.7%	0.12%	-0.10%

**Public Equity Regional Exposure to transition policy risk**

The bar chart below displays the countries/regions with the highest contribution to the MPS total results, this reflects both the weighting of the region and the risk of individual companies.



**Transition Risk: United States**

- Transition Climate VaR (modelled value fall) Contribution: -1.84%.
- Particular drivers include
  - Utilities, industrials and energy companies with significant carbon footprints and limited transition planning.
  - Insufficient green revenues to offset policy costs in many US firms



## Climate opportunities

The modelling suggests that the Scheme will make less than 1% from Climate Opportunities over 25 years.

**We expect this to be a significant underestimate for the following reasons:**

- Modelling captures only identifiable public assets – it ignores investments such as Greencoat Solar, Hycap and Commodities, all of which we expect to do very well in a climate transition.
- Modelling assumes portfolio and individual corporates remain as they are today – i.e. it ignores transition opportunities, this is particularly clear in the modelling of the BR Infrastructure portfolio.

MSCI modelling identifies the following passive companies as some of the key areas of gain in a climate transition – **our expectation is that the transition opportunities in BlackRock Passive Equity and Ninety One Global Equity, as well as commodities and private infrastructure are likely to be far more significant in addition to any future investments or sales yet to be made.** This highlights the limitations of the modelling in terms of both risk and opportunity.

Company Name and Opportunity	Portfolio Name	Tech Opportunities Climate VaR
<b>ENEOS</b> - Carbon capture, carbon storage expansion and renewable energy ventures	BlackRock Passive	100%
<b>SIMS Metal*</b> - Advanced Metals recycling	BlackRock Passive	100%
<b>AMPOL (Australian Motorists Petrol Company)</b> - Renewable fuels (SAF and renewable diesel), infrastructure asset repurposing, energy transition services.	BlackRock Passive	70%
<b>VEOLIA ENVIRONMENT</b> - Acts as a catalyst for broader climate resilience and ecological transformation, using its integrated services as both impact drivers and revenue engines.	BlackRock Passive	45%
<b>SK INNOVATION</b> - Battery manufacturing and low-carbon technologies	BlackRock Passive	38%

\*See company scenario analysis example on page 28 for further detail.



Mineworkers' Pension Scheme

# MPS Liquid Portfolio: Physical Risk – Top 10 Companies

**Top 10 Physical Risk Climate VaR Companies**

Security	Physical Risk Climate VaR Contribution	Primary Physical Risk Hazard
West Japan Railway Company	-0.20%	Coastal Flooding
SOCIETE GENERALE SA	-0.13%	Coastal Flooding
Contemporary Amperex Technology Co., Ltd.	-0.08%	Coastal Flooding
BORALEX INC.	-0.07%	Low River Flow
Iberdrola, S.A.	-0.07%	Low River Flow
POWER GRID CORPORATION OF INDIA LIMITED	-0.06%	Extreme Heat
NEXTERA ENERGY, INC.	-0.05%	Tropical Cyclones
VALERO ENERGY CORPORATION	-0.04%	Low River Flow
CARDINAL HEALTH, INC.	-0.04%	Extreme Heat
NATIONAL GRID PLC	-0.04%	Coastal Flooding

**River Low Flow and Coastal flooding** pose the biggest risks, contributing -4.0% and -1.6% in aggregate. For each mandate and company where high degrees of risk have been identified CPTI are actively engaging with the manager on their understanding of the risks, mitigations and opportunities.

**River Low Flow:**

- Major climate risk for thermal and hydropower plants over the coming decades.
- Thermal plants require river water for cooling and steam; hydropower depends on river flow.
- Rising temperatures increase the likelihood of drought and reduced river flow.
- Reduced water availability can limit electricity generation capacity.

**Coastal Flooding:**

- Driven by sea-level rise from glacier melt and ocean warming (thermal expansion).
- Sea levels have risen 8–9 inches since 1880; rate of rise is accelerating.
- High tides and storm surges pose major risk to coastal infrastructure.
- Coastal areas are small in size but often highly populated and economically valuable.
- Urbanisation and coastal development amplify future loss potential.



Mineworkers' Pension Scheme

# MPS Liquid Portfolio: BlackRock Listed Infrastructure

Mandate	Policy Climate VaR			Physical Climate VaR			Opportunities Climate VaR			Aggregated Climate VaR		
	2°C Disorderly	2°C Orderly	3°C NDC	2°C Disorderly	2°C Orderly	3°C NDC	2°C Disorderly	2°C Orderly	3°C NDC	2°C Disorderly	2°C Orderly	3°C NDC
BlackRock Listed Infra	-10.6	-4.2	-5.3	-8.7	-8.6	-10.4	1.9	1.8	0.8	-17.3	-11.0	-15.0

While most mandates show some level of climate risk exposure, the **Listed Infrastructure portfolio stands out with the highest aggregate risk under all scenarios**, largely due to exposure to high-emitting utilities and infrastructure assets. This is also partially due to a more easily modelled portfolio – i.e. it is clearer where assets are and thus how they will be affected. **A key drawback of the modelling is that it is assumed the companies held do not transition (the manager expects to deliver alpha through selecting companies that will transition and increase revenues as a result) and that the portfolio is held static.**

**Central Scenario: NGFS 2°C Disorderly**

- Highest overall Climate VaR across mandates: -17.3%
  - **Transition Risk:** Driven by carbon-intensive holdings like utilities and energy infrastructure.
  - **Physical Risk:** Concentrated in coastal flooding and river low flow events (e.g., West Japan Railway, PG&E, National Grid).
  - **Technology Opportunities:** Offset mainly by companies with strong low-carbon patent portfolios
  - (e.g. Enel, Boralex, United Utilities).
- Highest contributors to risk:
  - *West Japan Railway* → Physical risk from coastal flooding.
  - *Xcel Energy, PG&E, FirstEnergy* → Large transition risk due to scope 1–3 emissions.
  - *Boralex, Enel* → Key contributors to tech opportunity through low-carbon innovations.

**Whilst the modelling suffers from a number of shortfalls, it raises helpful areas for engagement and discussion with the manager and conversations around climate risk are ongoing with the team.**

Note: CPTI have written to the managers for views and will continue to engage through time.



## MPS Liabilities

- There are 2 key areas where MPS' liabilities could be affected by climate change and/or climate transition:
  - **If UK inflation rates change in future as a result of climate change/climate transition**
  - **If MPS members live longer or die sooner as a result of climate change/climate transition.**
- The impact on the liabilities is limited by the maturity of the Scheme - the average age of members is 72 and we expect that around 50% of the Scheme's future pension payments (in real terms) will be made within 10 years. So, for climate change/transition to have a meaningful impact on the liabilities, these impacts will need to happen soon.
- The scenario analysis modelling on previous pages does not consider the impact on the MPS liabilities. The MSCI scenarios do not consider inflation changes and generally there is no market consensus around how climate will impact inflation. However, if climate change/transition shifted inflation the results are expected to be as follows:

UK Inflation changes by	Sum of all expected future member payments changes by
+/- 0.25% pa today	+/- 1.7%
+/- 0.25% pa in 10 years	+/- 0.8%

- The impact climate change/transition will have on member life expectancy is extremely hard to predict. However, given the maturity of the Scheme it is not expected to be a key mortality impact. The MPS liability projections use broadly best estimate life expectancy assumptions that are reviewed on a triennial basis.
- The MPS has a UK Government Guarantee which means that if there are insufficient assets to meet member pension payments, then funding will be provided by UK government. This provides a resilience to the Trustees' funding strategy and means that employer covenant is less of a factor for MPS.



## MPS Real Assets: Approach to understanding climate risk

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### **Why real assets differ to public equities and credit**

- Physical assets are much more tangible
- We often own the entire asset, not like e.g. a fraction on Coca-Cola's manufacturing facility etc.
- We/the managers have full control over the assets and know exactly where they are based and how they run and have full responsibility for the assets
- Given the easier insight into physical/transition risk for real assets we have seen faster repricing of these assets according to this risk.

### **How we've done scenario analysis for these assets**

- Worked with the managers to conduct asset and portfolio specific analysis or case studies
- This is not proxy modelling as with public assets but a deeper investigation of the assets/portfolios

### **Opportunities in real assets**

We see significant opportunities for transition gains from a well managed real assets portfolio and greater detail on this is included in the main TCFD report.

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## MPS Real Estate: Delancey Analysis

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### Analysis results and Mitigation approach

Delancey partnered with Climate X, a leader in physical climate risk modelling and are using their tool to better understand physical climate risk exposure across the portfolio.

The tool includes a mitigation functionality where asset specific mitigation actions can be added to get a more accurate picture and test the implication of potential actions on overall exposure.

The scenario analysis has resulted in 3 of the **21 assets being classified as High Risk**.

These highest risk assets are the industrial assets (**Proxima Park in Waterlooville, Genesis in Basildon, and the student accommodation asset All Saints Green in Norwich**), all due to the surface water flood risk.

Details of two of the 3 assets are provided on the next page.

Asset level insight and proactive asset management is crucial in mitigating future costs and risks that are associated with these investments. We are confident that Delancey is actively considering and managing these risks through their screening tools as well as taking this into consideration when re-underwriting assets and putting together the annual business plan which factors in the capex budget and portfolio repositioning through the sales.

We have seen flood risk resulting in increased capex and delayed sales processes in the Delancey portfolio and both we and the manager continue to monitor this closely. Delancey notes that not mitigating any elevated risks at this point leads to inability to secure planning permission for development, offsets to rent increases and impacts on demand and rent levels. Delancey also notes it reduces buyer pools, lengthens sales processes and lowers value where not managed proactively.

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# MPS Real Estate: Delancey Case Studies

### Proxima Park

**Physical Risk:** Surface flooding

**Mitigation:**

The design includes extensive use of Sustainable Drainage Systems (SuDs). These mimic natural drainage in delivering effective surface water management, controlling surface water close to where it falls. Besides their primary objective, which is to efficiently manage stormwater runoff, the design incorporates native plants and wildlife-friendly habitats to additionally enhance the ecological value of the basin. The site level was raised by 2m prior to site works for Phase 1 and Phase 2. Phase 3 and 4 are yet to be complete. The development cost for these flood risk works was roughly 5% of the contract value. Without this mitigation Delancey does not believe it could secure planning permission. Without mitigation the Climate X model estimates losses for the site at £2.5m per year to 2050.



### Genesis, Basildon

**Physical Risk:** Surface flooding

**Summary:** The 4 industrial units (all rated EPC A), received planning permission in January 2017 and completed in January 2018.

**Mitigation:** The Drainage Strategy includes surface water attenuation tanks, high-capacity drainage channels, swales, land drains, and permeable car parking. Surface water will flow through storm manholes into the pipe and channel system, through the tanks, and be directed off-site through the south-west corner of the site. Delancey find that the size of the water attenuation tanks and channels have been designed for a 1 in 100-year flood event, aligned to the risk exposure their modelling finds (1% probability). They are therefore comfortable that no major interventions are required to further reduce the risk exposure, rather the focus is on maintenance and ensuring that drainage channels are not blocked. They will continue engaging with the property managers on this topic.





Mineworkers' Pension Scheme

# MPS Infrastructure: Dalmore (M25) and Greencoat (Solar Bolsover Moor Farm)

## **M25 – Extreme Weather shortening Lifespan of M25 Surfaces**

**Physical Risk:** Weather-related deterioration

**Summary:** During 2024, pavement replacement costs exceeded the budget due to unexpected weather-related deterioration. Asphalt surfaces over 15 years old have shown significant vulnerability to degradation, necessitating earlier-than-planned replacements. This accelerated schedule poses a risk of triggering a second costly resurfacing cycle before the 16-year concession period concludes.

Connect Plus M25 is proactively addressing this issue by collaborating with advisors to implement early interventions aimed at extending the life of the asphalt surfaces. These measures are designed to delay the need for full resurfacing, thereby minimising the financial impact and preserving the valuation over the remaining term of the concession. With effective mitigation strategies in place, the risk associated with weather-related pavement deterioration is expected to have a minimal effect on overall costs and valuation.

Reflecting the efforts Connect Plus M25 has made to understand and manage the M25's exposure to extreme weather and climate change, and the significant wider socio-economic benefit of enhancing the M25's climate resilience, the portfolio company has also been awarded a FAST-Infra Sustainable Infrastructure Label for its substantial contribution to Adaptation & Resilience.

### **Our Managers Role:**

Dalmore Capital's board representative and Sustainability Function collaborated to develop a strong climate adaptation response aligned with industry and international standards, while also integrating climate-related risks into the firm's valuation framework. Building on this, Dalmore's Director of Sustainability led the successful effort for Connect Plus M25 to obtain the FAST-Infra Sustainability Label. This initiative involved close coordination with the board representative, Connect Plus M25's COO, and other board members.

## **Bolsover Moor Solar Farm, Chesterfield**

**Physical Risk:** Surface flooding

**Summary:** The real-world impact of extreme weather events on infrastructure highlights how flooding linked to climate change disrupted operations at Bolsover Moor Solar Farm and necessitated long-term resilience measures.

This site, built in an area once dedicated to a limestone quarry, has suffered from flooding problems affecting the access road. Over the reporting year, severe flooding prevented safe access to the site from November 2023 through to May 2024. During this period, the operations and maintenance (OM) operator was unable to attend the site and maintenance services were suspended as a consequence of the Force Majeure event.

The Quarry operator, who is responsible on behalf of the Quarry owners to address the matter, was unable to put in place effective measures on time and therefore needed to make attempts to pump the water away from the access road. Thankfully, the asset performed relatively well with only an inverter module underperforming and no major damage on this occasion, however there is now a need to spend on building alternative access to the solar farm.



## MPS Real Assets: Schrodgers Securitised Credit

The securitised credit portfolio includes a high proportion of loans on physical assets – equipment and buildings. This presents tangible climate risks and opportunities summarised below.

### Areas where Climate Change leads to Opportunity

Climate-related events are creating secured lending opportunities across recovery, resilience and real estate:

#### **Disaster Recovery Lending:**

- Insured Advocacy Group (IAG): Provides high-yield, claim-secured funding for weather-related property repairs. Active across 24+ US states, with a proprietary contractor network and legal framework. This speeds up distribution of cash to damaged homes whilst insurance claims are settled.
- Recovery Logistics Finance: Offers asset-backed loans to first responders for mobile infrastructure, power, and transport. Funding secured by equipment or grants, supporting disaster affected communities.

#### **Climate Resilience Financing:**

- Global investment in resilience is projected to exceed \$300bn/year.
- Schrodgers is positioned to fund early programmes, including a state-backed home elevation scheme launching in Q4 2025 – reducing flood and storm surge vulnerability.

#### **Commercial Real Estate Retrofits:**

- EU regulations (e.g., Energy Performance of Buildings Directive) require energy upgrades to ageing building stock.
- Many CRE owners lack capital to meet standards, creating high-yield lending opportunities to fund insulation, HVAC, and renewable energy upgrades – helping avoid asset stranding.

### Climate Transition Risk

Climate transition risk is shaping credit decisions across housing, insurance, and commercial real estate markets:

#### **Housing & Insurance Dynamics:**

- Rising insurance costs in the US, particularly in coastal areas, are a growing concern. Schrodgers collaborates with mortgage originators to assess vulnerability via loan-level insurance data.

#### **Climate Integration in Underwriting:**

- Schrodgers uses the IDEALs ESG scorecard to assess exposure to climate risks and transition risk factors in CRE assets
- Climate-related stress scenarios are integrated into due diligence.

#### **CRE Market Trends:**

- Insurance costs are rising in high-risk geographies (e.g., Florida).
- Coupon rates in commercial mortgages remain driven by credit fundamentals, though climate risk is an increasing consideration.



*Image: Capital solutions investment - collateral (durable equipment), structure (financing)  
Emergency response logistics  
Source: Schrodgers Capital*



# Physical Risk Company Analysis: Societe Generale and EcoPetrol

### Summary Overview

Société Générale SA, held in the Wellington Value Equity and BlackRock Passive Equity portfolios, is significantly exposed to physical climate risks, with the most impactful hazard identified is **coastal flooding**, posing a notable threat to the bank's real assets.

### Geographical & Operational Context

- Headquartered in Paris, France, Société Générale operates through a global network of retail, corporate, and investment banking locations. The bank owns and leases assets across Europe and internationally, with a presence in both developed and emerging markets, some of which are vulnerable to climate-related physical hazards.
- These locations face high exposure to coastal flooding and cyclones, with projected asset damage and disruption potential significantly above average levels. The model indicates notable concentration of risk in these French overseas territories.

### Investment Implications

- Projected meaningful downside for asset valuation over the long term if adaptation strategies are not employed.
- Real estate in coastal regions and cyclone-prone areas may incur higher maintenance costs, insurance premiums, or even asset loss, potentially affecting operational continuity and long-term investor returns.
- These risks underscore the importance of resilience planning and geographic risk diversification to protect long-term value and operational stability.



### Summary Overview

EcoPetrol, Colombia's largest oil & gas company, held in the Ninety One Emerging Market Debt portfolio, is highly exposed to physical climate risk from **extreme heat**. With key infrastructure in Colombia, Peru, Brazil, and the US Gulf Coast, many of these facilities are located in regions prone to rising temperatures and tropical cyclones and therefore face significant productivity loss and cost implications due to ambient temperatures exceeding operational tolerances.

### Geographical & Operational Context

- Assets located in regions prone to rising temperatures.
- Labour-intensive operations vulnerable to heat-related disruptions
- Affects productivity, safety, and energy costs
- Extreme heat is the largest contributor to Ecopetrol's physical climate risk

### Investment Implications

- To protect its long-term viability, Ecopetrol must integrate climate resilience into its infrastructure planning, workforce safety protocols, and operational risk management frameworks.
- Investors and stakeholders should factor extreme heat risk into climate stress-testing models and engage with the company on disclosure and adaptation measures.



Note: CPTI have written to the managers for views and will continue to engage through time.

# Transition/Policy Risk Company Analysis: Valero & Hindalco

## Summary Overview

Valero Energy, held in the Wellington Global Value Equity portfolio, is a major US-based producer of transport fuels & petrochemicals. Valero faces **extreme transition risk** due to its reliance on fossil fuels and refining operations. The company is exposed to policy-driven disruptions, including decarbonisation mandates and emissions pricing.

### Climate Risk Assessment

- Significant exposure to transition risks driven by carbon pricing, regulations and Scope 3 emissions.
- Transition to a low-carbon economy could lead to demand shifts, regulatory burdens, and increased capital requirements.
- Has no SBTi target and is at risk of significant emission reduction requirements needed to align (52% reduction under 2°C). Valero's aggregated Policy Risk Climate VaR indicates severe potential decline in enterprise value due to climate-related regulations (emission caps, clean fuel standards & climate legislation).

### Investment Implications

- Potential asset stranding and declining returns.
- Increased compliance and reporting costs likely.
- Investors may demand clear transition strategies and emissions reduction targets.
- MSCI estimate a CVaR of up to \$3.1b, reflecting potential equity devaluation under aggressive transition scenarios.



## Summary Overview

Hindalco, held in the Schroders Emerging Market Equity and the BlackRock Passive Equity portfolios, is a global leader in aluminium and copper manufacturing, headquartered in Mumbai, India. It operates energy-intensive facilities across India and internationally.

Facing increasing scrutiny due to high carbon intensity of operations. Hindalco is highly exposed to **transition risk** driven by decarbonisation policies.

### Climate Risk Assessment

- Sector-wide push toward net-zero threatens conventional smelting operations.
- Risks amplified by coal-dependent power sources.
- It has no SBTi target and is at risk of significant emission reduction requirements needed to align (48% reduction under 2°C).
- Policy changes such as carbon pricing and renewable energy mandates.
- Investor pressure for ESG compliance and emissions transparency.
- Potential for import/export regulation targeting embedded emissions.

### Investment Implications

- Increased CAPEX required for decarbonising operations (e.g. electrification, recycling).
- Risk of stranded assets in fossil-fuelled smelting infrastructure.
- May impact cost of capital as financial institutions adopt stricter climate criteria.
- Strategic shift likely toward low-carbon products and green aluminium initiatives.



Note: CPTI have written to the managers for views and will continue to engage through time.

# Transition Opportunity Company Analysis: SIMS Limited and Vestas

## Summary Overview

Sims Limited, held in the BlackRock Passive Equity portfolio, is a global leader in metal and electronics recycling, well-positioned to benefit from the circular economy and climate transition.

The company shows strong upside potential, indicating **significant value creation opportunities** from its low-carbon business model.

## Technology Opportunity

- SIMS is forecasted to generate \$2.6b in additional profits through climate-aligned technologies. These gains are expected from Advanced recycling solutions, E-waste recovery and repurposing, data centre decommissioning and urban mining.
- As economies shift toward sustainability, SIMS technologies directly enable circular material use and carbon reduction across multiple sectors.
- Sims faces minimal policy transition risk due to its role in supporting the low-carbon transition. Rather than being penalised, its core business is likely to be incentivised through regulations favouring waste reduction, resource recovery, and green infrastructure.

## Conclusion and Investment Implications

- SIMS Limited's recycling-driven model and circular innovation place it at the heart of climate opportunity. With strong technology alignment, the company is strategically positioned for growth in a decarbonizing global economy.
- For investors, Sims offers a compelling climate-aligned opportunity. Its \$2.6 billion forecasted profit upside and low policy risk profile support strong long-term value potential in ESG and transition-focused portfolios.



## Summary Overview

Vestas, held in the Ninety One Global Equity portfolio, is a Danish leader in wind energy solutions, based in Aarhus.

Operates via Projects and Services segments.

Vestas offers turbines, maintenance, and data-driven consultancy and are strategically positioned to benefit from the global low-carbon Transition, with a maximum **technology opportunity** score.

## Technology Opportunity

- Significant potential winner in the transition to a low-carbon economy.
- Under 2°C and 1.5°C scenarios, Vestas records a +100% Technology Opportunity Climate VaR, demonstrating a strong upside potential due to its high extensive low-carbon patent portfolio and strong green revenues from turbine sales & services.
- Key innovations: Wind turbine safety systems, DC power backup solutions and structural adhesive tools.
- Forecasted green profits up to USD 101.8bn (1.5°C scenario)

## Policy Transition Risk

- Vestas faces some downside risks from future climate policy costs however, these are relatively low comparative to its growth potential.
- Strong alignment with climate policy goals limits downside.

## Conclusion and Investment Implications

- High-potential transition opportunity
- Global wind energy leadership and innovation drive growth
- Attractive to investors seeking climate-aligned, future-ready exposure.



## Conclusion & Next Steps

Under the central NGFS 2°C Disorderly scenario, the MPS portfolio is **modelled to lose 8% in value by 2050**, driven by both transition and physical risks over the next 25 years. **This underscores the need for integrated, forward-looking strategies to safeguard value and harness opportunities.**

### Key takeaways

- Whilst data and modelling remain flawed there are some high-level conclusions that can be reached from the analysis and from deeper dives in real assets.
- Policy-driven **transition costs** and **physical hazards** (coastal flooding, river low-flow and extreme heat) are expected to have significant impacts. The extent of this is determined by industrial sector and asset location.
- **Select mandates (e.g. Listed Infrastructure) and select assets exhibit elevated risk profiles requiring greater monitoring/engagement.**

### Recommended actions

- Continue engagement with high-risk managers and assets to ensure risks are being mitigated effectively.
- Continue to rerun scenario analysis every three years with consideration of this every year.
- Continue to consider climate risks and opportunities that are relevant within the Scheme's time-horizon.