Oxfordshire County Council Pension Fund
Taskforce on Climate-related Financial Disclosures Report 2021/22

Introduction

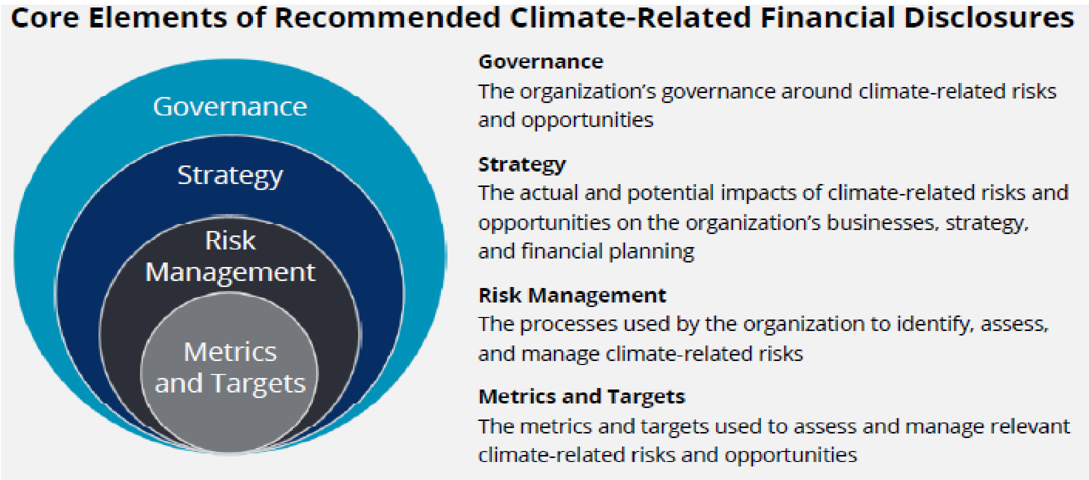
This is the Pension Fund's second report under the Taskforce on Climate-related Financial Disclosures (TCFD) framework. As well as reporting against the TCFD recommendations the report is intended to review the progress made against the Fund's Climate Change Policy and Implementation Plan which were agreed in June 2020.

Background

Mark Carney, when he was Chair of the Financial Stability Board, was instrumental in the launch of TCFD when it was created in 2015. In 2017 the TCFD released its recommendations for improved transparency by companies, asset managers, asset owners, banks, and insurance companies on how climate-related risks and opportunities are being managed. Supporters of the TCFD total over 3,000 organisations across 92 countries. The Task Force consists of 32 members from across the G20, representing both users and preparers of financial disclosures, and is currently chaired by Michael R. Bloomberg founder of Bloomberg L.P..

The TCFD was established to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit, and insurance underwriting decisions and, in turn, enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks. The four core elements of the recommended disclosures are detailed in Figure 1 below.

Figure 1



(Recommendations of the Task Force on Climate-related Financial Disclosures, 2017)

The TCFD recommendations on climate-related financial disclosures are intended to be widely adoptable and applicable to organisations across sectors and jurisdictions.

In November 2020, the UK Government announced its 'TCFD road-map' with a commitment to roll out across the finance sector by 2025. This is underway with regulators having made, or being in the process of making, TCFD based reporting mandatory and have published guidance on the implementation of the recommendations relevant to the sector in question. Figure 2 below shows the announced TCFD implementation plans in the UK.

Figure 2

Financial Conduct Authority	**Implementation Date**
UK Listed Companies	2021
Asset Managers and Workplace Personal Pensions	2022
Large UK-Registered Private Companies	2023
Department for Work & Pensions (DWP)	
Occupational Pension Schemes	2021

At present there is no requirement for LGPS funds to report under TCFD or consultation on the implementation in the LGPS. However, the Department for Levelling Up & Communities has stated that it intends for TCFD reporting in the LGPS to become mandatory in 2023 and intends to issue guidance by November 2022. The Pension Fund determined in its Climate Change Policy Implementation Plan that a TCFD report would be included in its 2020/21 Annual Report.

Below are details for the Fund under each of the TCFD's recommended disclosures.

<u>Governance</u>

TCFD Recommended Disclosure – a. Describe the board's oversight of climate-related risks and opportunities.

The Fund's governance arrangements are set out in its Governance Policy Statement. All functions relating to the management of the Pension Fund have been delegated by Oxfordshire County Council to the Pension Fund Committee. As such, the Committee are responsible for the Fund's long-term strategy.

The Pension Fund Committee are responsible for setting the Fund's Investment Strategy Statement which includes the approach to responsible investment. The

Fund has an Independent Financial Adviser who provides investment advice to the Fund including on investment strategy.

Climate change is considered in the budget setting process in terms of training requirements, any climate related consultancy deemed beneficial, and climate related reporting requirements.

In June 2020 the Pension Fund Committee agreed a Climate Change Policy and Climate Change Policy Implementation Plan. Progress against the Policy and Implementation Plan is to be reported to Committee quarterly with a more detailed annual review. Climate Change is included as one of the four key items on the Pension Fund's Annual Business Plan.

Following agreement of the Policy a Climate Change Working Group was formed which currently comprises of Committee members, a Local Pension Board member, Fund officers, the Fund's Independent Financial Adviser, a scheme member representative, and member of the Fossil Free Oxfordshire campaign group. The Working Group aims to meet quarterly and report back to the Committee at its quarterly meetings.

As required by LGPS regulations The Pension Fund operates a Local Pension Board which meets on a quarterly basis. The Board's role is to ensure the efficient and effective governance and administration of the Fund, including compliance with relevant regulations and legislation that apply to the Fund.

The Fund, along with nine other LGPS funds, is a part of the Brunel Pension Partnership which develops investment portfolios that are made available to client funds to invest in. Under pooling requirements set by the government the Pension Fund is required to make all investments through Brunel while maintaining responsibility for asset allocation decisions. The key bodies where the Fund interacts with Brunel are the Client Group and Brunel Oversight Board where fund representatives and Brunel meet. Climate related risks and opportunities form a key part of the reporting received from Brunel on their portfolios and activities and Brunel has a dedicated responsible investment team.

TCFD Recommended Disclosure – b. Describe management's role in assessing and managing climate-related risks and opportunities.

Day-to-day management of the Fund's Climate Change Policy implementation is delegated to management through the Director of Finance and is required to report progress to the Pension Fund Committee quarterly. Management receive an annual carbon metrics report which informs its reporting to Committee.

Management meets regularly with its Fund managers and has established a cycle for fund manager attendance at Committee meetings. Management engage with Brunel and other Fund Managers on climate issues and receive and consider responsible investment, including climate related, reporting that is included in Fund Managers' quarterly reports. The Fund has an officer representative on the Brunel Responsible Investment Sub-Group and Cross-Pool Responsible Investment Group where developments around climate issues are regularly discussed (e.g. metrics developments, engagement activities and results).

Management are responsible for developing and operating a training plan for Committee members and Officers to ensure appropriate skills and knowledge.

Strategy

TCFD Recommended Disclosure – a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

The Pension Fund has liabilities that stretch decades into the future and so primarily takes a long-term view to investment decisions. Given the diversity and global nature of the Fund's investments almost all climate related risks and opportunities are relevant to the Fund. While some of the climate-related risks/opportunities apply to the Fund across its investments as a whole, others are specific to certain sectors or geographies and Fund Managers are required to consider the materiality of these.

The most significant long-term risk is the systemic risk across financial markets, including social and other factors, associated with climate change that could arise if actions are not taken to adhere to the Paris Agreement.

In terms of more specific and short/medium-term risks - stranded assets, physical risks (e.g. property), sovereign debt where countries are dependent on fossil fuel linked revenue, policy risk (e.g. carbon pricing), technology risk (obsolescence), changes in consumer behavior are all factors that can affect the Fund's investments. There is also a risk that the Fund develops its investment strategy around achievement of the Paris goals but the goals are not achieved meaning the Fund's investment strategy is misaligned with the reality of the actual climate path.

The Fund has identified climate related opportunities including the ability to reduce portfolio risk by identifying and taking action on assets at risk under Paris aligned scenarios and the potential to identify outperformance opportunities by investing in those companies whose business models/strategies are best aligned with Paris aligned scenarios. Additionally, investment opportunities exist in assets linked to the implementation of the Paris Agreement (e.g. clean energy infrastructure).

TCFD Recommended Disclosure – b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

Climate Change is considered as part of the development of the Fund's Investment Strategy Statement which includes the Fund's strategic asset allocation. After each funding valuation undertaken by the actuary the Fund completes a fundamental review of its asset allocation which will consider climate related risk and opportunities. The Fund aims to incorporate climate change scenario analysis into the next fundamental review due in 2023. The fund uses diversification to manage investment risks but given the systemic nature of climate risks this limits its effectiveness under more extreme scenarios.

The Fund's Climate Change Policy states that where there are two investment options that broadly aim to deliver the same investment objective the Pension Fund will prioritise the option that delivers the best fit to its climate change commitment. For example, consistent with this principle the Fund moved ~5% of the Fund from regular market-cap index trackers to a low-carbon alternative in 2020.

Climate related risks and opportunities are considered when setting the Pension Fund's Business Plan and also informs discussions with Brunel around portfolio offerings and construction.

The Pension Fund has made a commitment to achieve net-zero emissions on its own operations by 2030.

TCFD Recommended Disclosure – c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

The Fund is committed through its Climate Change Policy to keeping abreast of the latest scientific developments in respect of Climate Change to ensure that the Policy remains appropriate in its aim to align with the Paris Agreement.

Under a scenario where additional cuts in emissions are required to meet the Paris Agreement, and there was a global commitment to achieve this, the Fund would anticipate amending its target for emissions reductions across its investments accordingly and making any necessary changes to its asset allocation targets and/or investment portfolios.

Under a scenario where the Paris Agreement goals were to be overshot the Fund would consider making changes to its investments that align with this reality, this would likely include mitigating physical risks that would be associated with such a scenario. The Fund would also review whether there are changes the Fund could make, for example in engagement activity or policy advocacy, that could help correct the scenario back towards a Paris aligned one.

The Fund has not yet undertaken a scenario analysis exercise and acknowledges that this is a developing area. The Fund recognises the value of scenario analysis based on different climate scenarios and has committed to undertaking an exercise in its Implementation Plan, the results of which are to be incorporated into the Fund's fundamental asset allocation review due in 2023. Any scenario analysis would be intended to consider both the asset and liability implications for the Fund.

Risk Management

TCFD Recommended Disclosure – a. Describe the organization's processes for identifying and assessing climate-related risks.

Climate Change is included on the Fund's risk register which considers impact and likelihood in assigning a score. The risk register is reviewed on a quarterly basis and reported to Committee at each meeting. Officers consider regulatory, scientific and political developments on climate change in particular those from recognised international bodies such as IIGCC, International Energy Agency, and UN Environmental Programme.

The Fund meets regularly with Brunel and discusses climate issues including any identified from the narrative reporting or climate metrics provided by Brunel.

Brunel in turn meet with their appointed fund managers who also have a responsibility to consider climate related risks and opportunities. For example, Brunel have a target for all companies held in their portfolios to achieve a Transition Pathway Initiative score of 4 or higher by 2022. The responsible Investment Sub-Group at Brunel provides an additional forum to discuss climate related risks with Brunel.

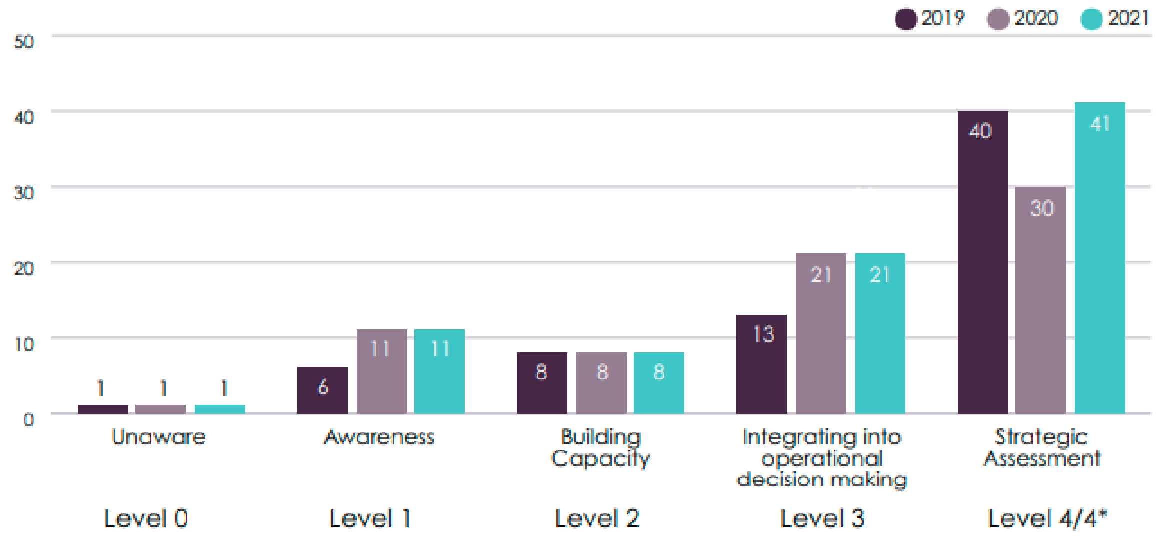
TCFD Recommended Disclosure – b. Describe the organization's processes for managing climate-related risks.

The Fund is responsible for asset allocation decisions and sets its asset allocation targets to be consistent with the Fund's Climate Change Policy. Where the Fund identifies investment needs that are not currently deliverable from Brunel portfolios there is a process for the creation of new portfolios.

Voting and engagement form an important part of the Fund's management of climate-related risks. Engagement on behalf of the Pension Fund primarily takes place through Brunel, their appointed fund managers, and their engagement provider, in accordance with the approach set out in Brunel's Climate Change Policy to which the Fund is able to input. Voting is undertaken on behalf of the Fund by Brunel utilising the expertise of their voting and engagement provider and appointed managers.

Brunel's approach to voting escalation sees an initial vote against the reappointment of a company Chair escalate to other board members where they have not met their climate disclosure expectations. These expectations will increase over time with the aspiration of all their material holdings being on TPI Level 4 by 2022 and having made meaningful progress to alignment with a 2 degree or below pathway. In some sectors, e.g. oil and gas, they will aim to stimulate more rapid change. Figure 3 below shows the available TPI scores for 2019 - 2021 across Brunel's listed equity portfolios.

Figure 3



The Fund, through Brunel and the Fund's membership of IIGCC, is involved in the Development of Paris Aligned Portfolios under the IIGCC's Net Zero Framework. It is intended that this work will lead to all portfolios offered by Brunel being Paris aligned.

The Fund believes that in some areas, particularly around public policy engagement, it is beneficial for the Fund to act with like-minded investors. As such, the Fund is a member of investor groups whose aims are aligned with those of the Fund in respect of Climate Change (Climate Action 100+, Institutional Investors Group on Climate Change, Local Authority Pension Fund Forum).

TCFD Recommended Disclosure – c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

Climate Change is included on the Fund's risk register which is a standing item at the quarterly Committee meetings. Climate change is a key topic included as part of the training plan to ensure appropriate skills and knowledge for those making decisions.

In appointing third parties, such as the Fund's Independent Financial Adviser, the Fund will set out requirements around responsible investment as appropriate.

Climate Change is also considered by the Fund's actuaries when undertaking their funding valuation.

Metrics and Targets

TCFD Recommended Disclosure – a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Metrics reported in this section are from the Fund's 2020 Carbon Metrics Report. The report includes equity and fixed income assets covering ~55% of the Fund's overall investment portfolio. The Fund is working to improve reporting across other asset classes, including private markets, so that the level of coverage can be increased.

The Fund currently uses the following metrics to assess climate related risks and opportunities at both an aggregate and listed portfolio level:

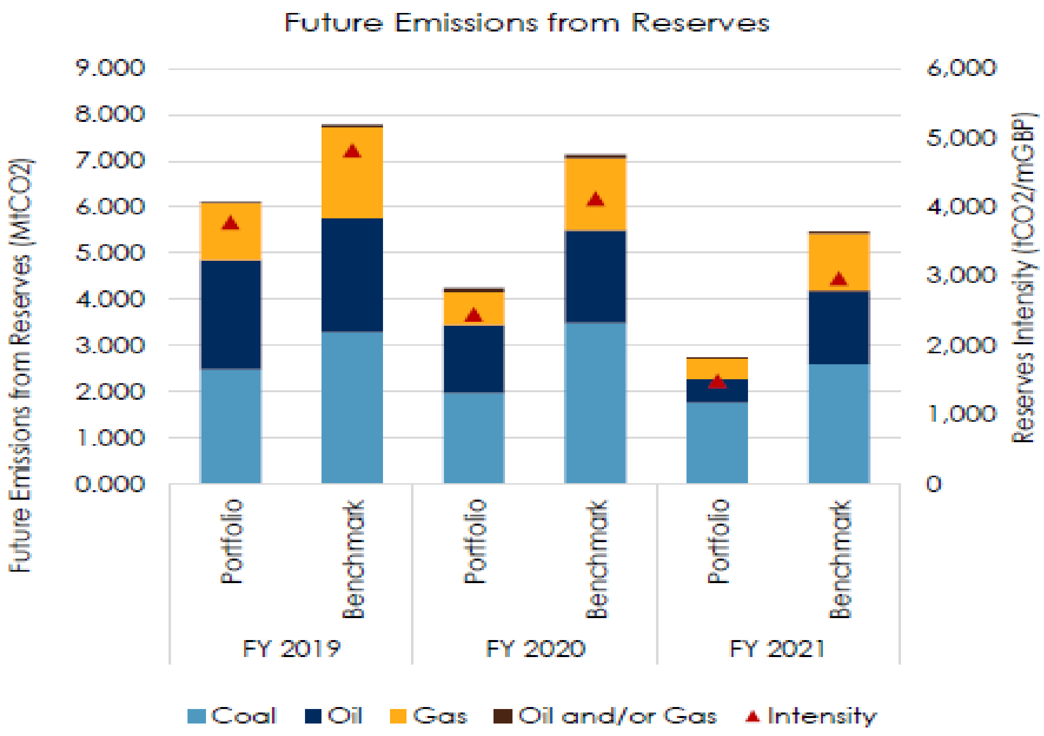
- Weighted Average Carbon Intensity
- Fossil Fuel Revenue Exposure
- Fossil Fuel Reserves Exposure
- Future Emissions from Reserves
- Disclosure Levels (Scope 1 Emissions)

Whilst the Fund does not have a specific fossil fuel reserves exposure reduction target, it does support seeking to reduce exposure over time.

Fossil fuel reserves exposure and future emissions from reserves are useful insights into potential downstream scope 3 emissions and can be used as an indicator of potential stranded asset risks.

Figure 4 below shows fossil fuel reserves exposure for the Fund as at 31 December 2019, 31 December 2020 and 31 December 2021.

Figure 4



TCFD Recommended Disclosure – b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.

The Pension Fund's Carbon Metrics report discloses scope 1, 2 and upstream first tier scope 3 emissions for all listed equity portfolios and the Fund's Sterling Corporate Bond Portfolio.

TCFD Recommended Disclosure – c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

The Fund has an annual reduction target for GHG emissions across its investment portfolios of 7.6%. 2021 saw an increase in WACI of 1% compared to the 2020 level but the annualized rate of reduction from 2019 was 8.9%, above the annual target of 7.6%.

The main driver behind the increase in the WACI figure in 2021 was an increase from the Fund's investment in the Brunel Sustainable Equities Portfolio which had a 61.8% increase in carbon intensity compared to 2021. In 2021 Brunel added managers to the sustainable equity portfolio that are actively targeting investments in companies who are at the forefront of the energy and industrial transition to Net Zero. These are leaders in challenging and difficult-to-abate sectors and so inevitably have a higher carbon intensity today than companies in most other sectors, whose own transition journey is dependent on such companies. These investments are essential to the transition, but our existing tools and ways of measuring risk do not do them justice.

This highlights the drawbacks of only looking at a single metric and links into the Fund's target to develop additional metrics including forward looking ones. In 2021 Brunel piloted the use of green revenues data with the support of FTSE Russell which showed that the Brunel Global Sustainable Portfolio had 10.9% exposure to green revenues compared to 8.5% in its benchmark, the FTSE All World, as of 31 December 2021.

Climate Change Policy Implementation Plan Progress

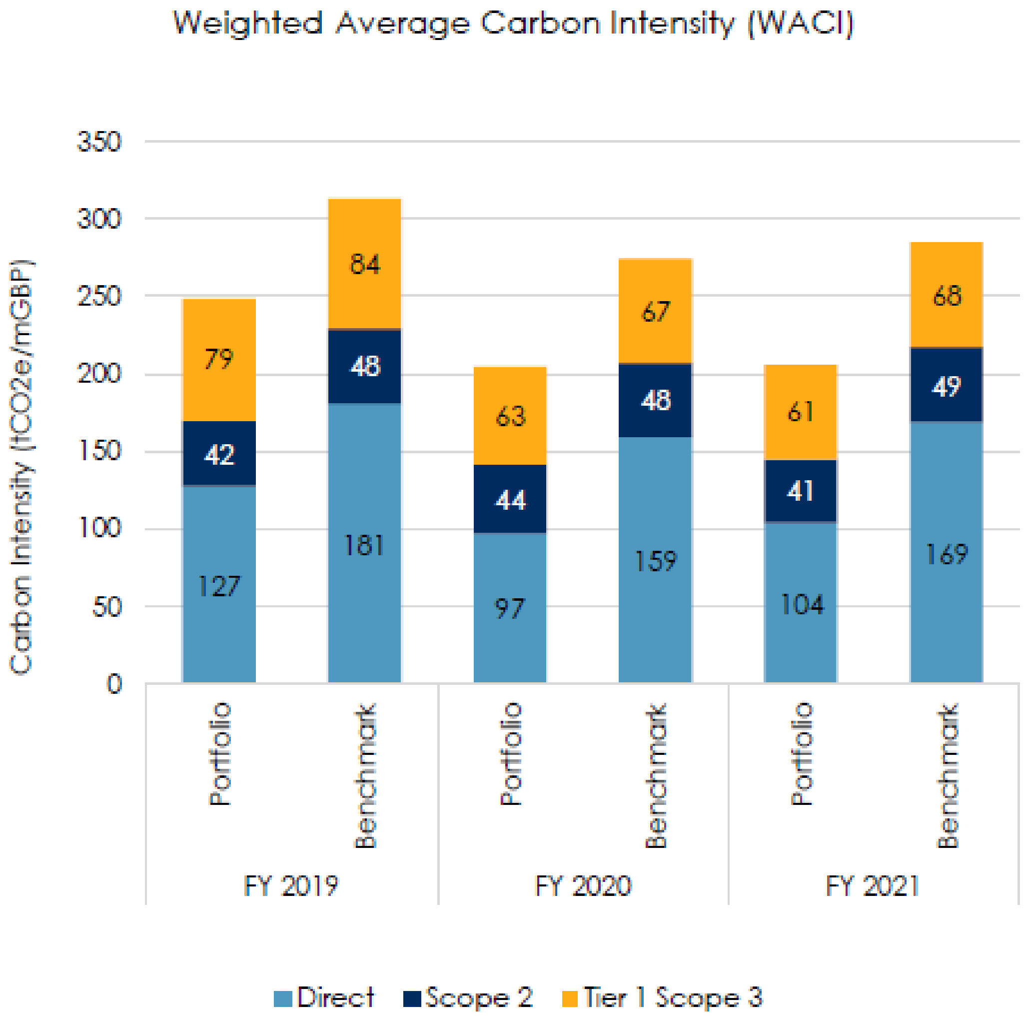
Emissions Reduction Target

The Fund's Climate Change Policy Implementation Plan set a target to reduce Greenhouse Gas Emissions by 7.6% per annum based on the 2019 UN Environment Programme annual Emissions Gap Report. This was set to be consistent with the Fund's Policy commitment to be aligned to the 1.5°C temperature goal of the Paris Agreement with limited or no overshoot.

Figure 5 below shows the Fund's Weighted Average Carbon Intensity as at 31 December 2019, 31 December 2020 and 31 December 2021. These were 248, 204 and 206 million tonnes of CO_2 equivalent per million pounds revenue respectively representing **a reduction over the two-year period of 16.9% and an annualized rate of reduction of 8.9%.**

While the Fund does not have a target for reductions in exposure to fossil fuel reserves this reduced by 35.3% from the 2020 level and has reduced by 55% since 2019.

Figure 5



The Fund recognises that there are a range of different metrics to assess emissions related to investment portfolios all of which have their own merits and drawbacks. At present the Fund is reporting on WACI (as recommended by TCFD) as this can be used across all listed portfolios, irrespective of allocations and therefore can be decision useful in assessing the relative carbon emission efficiency (per million pounds) of portfolios when attributing the impacts of strategic asset allocation decisions.

However, WACI has limitations in being used to assess progress against the Fund's emissions reduction target, principally because it is an efficiency measure and so while efficiency may improve this does not mean actual emissions are necessarily reducing.

An additional issue across all metrics is the use of scope 3 emissions where data quality and double counting, when using full scope 3 emissions, both make its use challenging. At present the Fund's WACI data includes Scope 1, Scope 2, and first tier Scope 3 emissions (upstream emissions).

August 2021 saw the Intergovernmental Panel on Climate Change (IPCC) publish the first report in its Sixth Assessment Cycle covering the physical science basis. This was followed by two further reports in 2022 on impacts, adaptations and vulnerability, and mitigation of climate change. The reports are unequivocal that current action to reduce GHG emissions are inadequate to limit warming to 1.5°C, and that the consequences of failing to limit warming to this level will be dire.

The United Nations Environment Programme released their 2021 Emissions Gap Report 2021 in October 2021. The report shows that new national climate pledges combined with other mitigation measures put the world on track for a global temperature rise of 2.7°C by the end of the century, well above the goals of the Paris agreement and would lead to catastrophic changes in the Earth's climate.

Both reports still give some cause for optimism in that they state that there is time for a technically feasible, cost-effective, and socially acceptable pathway to achieve net zero by 2050. However, the pathways are narrow and extremely challenging and require a rapid step up in the commitments and actions of all stakeholders across the globe. This was also the position in the prior year and although there has been some progress in terms of commitments, there is an urgent need for these to go further and to translate into action.

In November 2021 the UK hosted COP26 in Glasgow. Although some hoped more would be achieved there were a number of important agreements made including transitioning away from coal power generation, a strengthening of the 1.5°C target in the Paris agreement, and pledges to reduce methane emissions.

Other Implementation Plan Items

The Fund's Implementation Plan sets out several actions over the near-term that the Fund has determined will enable it to deliver on its Climate Change Policy. Progress against each of these is summarised below.

Work with Brunel to establish whether alternative passive, or similar, equity funds are available that better deliver on the Policy than current options available to the Fund.

Brunel worked closely with a leading index provider FTSE Russell to develop two indexes that met the EU criteria to be classified as a Climate Transition Benchmark and Paris Aligned Benchmark. These indexes were made available for investment in November 2021. The Pension Fund Committee made a decision to move the Fund's full passive holdings of c.£530m to the Paris Aligned Benchmark fund putting in among the first group of investors to invest in the index. Of the two funds developed the Paris Aligned Benchmark has stricter climate criteria and effectively excludes fossil fuel companies from the index.

Consider the renewable infrastructure weighting when making future allocations to the Brunel Infrastructure portfolio.

Brunel has removed the renewable infrastructure sleeve from its cycle 3 infrastructure portfolio and as such the Pension Fund is not able to separately allocate to renewables within its infrastructure allocations. The infrastructure portfolio specification states that a majority of the portfolio will seek to address Climate Solutions and a just Energy Transition to a lower carbon global economy.

To enable the Pension Fund to set targets for investments in Climate Solutions and have control over this the Pension Fund is seeking the development of a Climate Solutions Portfolio to enable it to make specific allocations to climate solutions. Initial meetings between Brunel and the client funds have taken place on the development of this portfolio.

Investigate an appropriate metric for measuring the proportion of assets invested in climate mitigation and adaptation.

The Fund continues to work with Brunel in developing an appropriate metric or set of metrics and determining the criteria used to identify investments in climate mitigation and adaptation. This links to wider work being undertaken by various governments including the EU who have developed an EU Taxonomy and the UK which has established a Green Technical Advisory Group to advise the government on the establishment of a UK taxonomy that sets the criteria for an investment to be defined as environmentally sustainable. In order for the Fund to set targets it first needs to be able to establish the current level of investments in Climate Solutions.

Once an appropriate metric(s) has been determined and the baseline established the Fund intends to set a target in terms of the % of the Fund invested in climate solutions. The IIGCC has a workstream looking at target setting for Climate Solutions that the Fund intends to use as the basis for setting targets.

The Pension Fund will work with Brunel to set appropriate targets and measures of success in relation to engagement activity undertaken on the Fund's behalf.

Brunel also have a target for all their material holdings to achieve a Transition Pathway Initiative score of at least 4 by 2022 and are targeting engagement and voting action against those companies whose scores are not improving or are falling.

Brunel's voting and engagement provider Hermes EOS have a target outcome that companies' strategies and actions are aligned to the goals of the Paris Agreement. Hermes use four milestones to measure and monitor progress:

Milestone 1 Concern raised with company
Milestone 2 Acknowledgement of the issue
Milestone 3 Development of a credible strategy to address the concern
Milestone 4 Implementation of a strategy or measures to address the concern

Hermes EOS undertakes engagement over three-year cycles. During 2021, EOS engaged with 839 Brunel-held companies on 1,337 milestones. Progress against one or more milestones was achieved for 50% of the engagement objectives set during the year.

The effectiveness of the engagement approach operated by Brunel will be formally reviewed as part of the 2022 stocktake of their Climate Change Policy and the Pension Fund will contribute to this review.

A key component of the engagement approach is to encourage companies to set plans and objectives to align with net-zero.

Brunel provides updates on the engagements with companies every quarter and more detailed analysis on an annual basis in the Responsible Investment and Stewardship Outcomes Report.

Concluding in Autumn 2022, Brunel and its clients will undertake a climate stocktake against the policy, objectives, and targets and the initial meetings in this process have now taken place.

As part of the Pension Fund's input into the stocktake it has agreed an Engagement Policy. The policy focuses on companies with the highest emissions; those covered by CA100+. A series of measures are set out in the policy with target dates for achievement, failure to meet the criteria will lead to potential exclusion of a company.

Work with Brunel to identify, or develop if not available, appropriate metrics, across all investment portfolios, to monitor the successful implementation of the Policy.

Work on metrics is ongoing and is expected to be an evolving process that incorporates developments in available data with the aim of increasing the accuracy and relevance of metrics as well as increasing the level of portfolio coverage.

While metrics are available for listed equities and bonds there is currently a lack of data available for the majority of other assets particularly in a format that allows aggregation at portfolio level. There are some industry developments in this area that could be useful to the Fund, for example the Carbon Risk Real Estate Monitor that has been developed for real estate assets.

Brunel are working with their private market managers to produce climate data that can be used to measure alignment with climate goals.

This is also an area being looked at by the IIGCC as part of their Net Zero Investment Framework and the Fund will monitor the outputs from this work and its applicability to the Pension Fund's investments.

Consider the merits of joining investor groups whose aims align with those of the Pension Fund as set out in the Policy.

The Fund continues to be a member of The Institutional Investors Group on Climate Change (IIGCC), Climate Action 100+ and the Local Authority Pension Fund Forum. In February 2021 the Fund signed the IIGCC's Paris Aligned Investments Initiative: Net Zero Asset Owner Commitment, joining other global investors in committing to investing in support of the goal of global net zero emissions by 2050.

In 2022 the Pension Fund was a signatory to The Investor Agenda's 2022 Global Investor Statement to Governments on the Climate Crisis calling on governments to set targets and take policy action aligned with the goal of limiting global temperature rises to 1.5°C.

Investigate options for portfolio scenario analysis based on different climate change scenarios so that this can be incorporated in the next fundamental asset allocation review in 2023.

The Fund continues to target production of a report to feed into the 2023 fundamental asset allocation review exercise. This would enable the Fund to include scenario analysis in its 2023 TCFD report at which point it is anticipated to be a mandatory requirement from MHCLG.

As well as addressing the Pension Fund's investments the Policy also sets a target for the Pension Fund to be carbon neutral on its own operations by 2030.

The Fund continues to work within Oxfordshire County Council's wider goal to achieve net zero emissions by 2030 across the whole organisation of which the Pension Fund is part. The Fund intends to report data on this and actions taken in future updates.

Case studies

Below are two examples of investments with a climate focus within the Brunel portfolios the Pension Fund is invested in.

Case Study: Decarbonising hard-to-abate sectors in private markets

Investing in real world decarbonisation is central to Brunel's approach in both public and private markets. That includes investing in hard-to-abate sectors, and specifically not simply removing challenging companies from portfolios, which may look better but in reality just avoids the issue.

We hold the Infracapital Infrastructure fund in our Cycle 2 Infrastructure portfolio. The fund is focused on providing innovative energy-saving technologies required to connect smart cities and tackle 'hard-to-decarbonise' sectors. This includes technologies such as rural fibre, water connections, sustainable heat pumps, electric vehicles and charging, battery technology and industrial energy solutions.

One such investment is into Energy Nest – a market leader in thermal battery solutions. This cost-effective technology enables both the transfer of industrial waste heat into electricity and the use of renewable power in industrial heat processes. The technology is up to 99% thermal-efficient; is modular, scalable and recyclable; and has very low capex and opex. It is well-positioned to solve key challenges related to the energy transition, such as variable and intermittent renewables.

Positive Impact case study: M&G UK Residential Property Fund

Sustainable living in action – Bristol Castle Park

On the site of a former medieval castle near Bristol's historic docks, the city's tallest building has been developed in synergy with its environment, with sustainability at the core. Across multiple buildings fronting Castle Park, Castle Park View adds 300 new Build to Rent homes and 75 affordable homes to Bristol's housing at the heart of the city centre, in close proximity to the central employment district, Bristol Temple Meads station, and the city's vibrant cultural scene.

The construction process created local jobs and supported skills development with c.1,290 apprenticeship weeks and over 300 career support sessions, providing guidance and advice to many young people. The ongoing management and maintenance of the building is supported by people and businesses from the local area, wherever possible.

The scheme has been designed around the principle of using and sharing sustainable energy sources and benefits from a new district heating network, powered by a large-scale water source heat pump that draws water from the nearby harbour – the country's largest project of its kind and a key component of Bristol's 2030 Net Zero carbon plan. Heat is produced by a central plant and supplied to buildings throughout the city, allowing for improved efficiency over a series of localised boilers. This provides low carbon, cost-efficient heat and hot water for residents.

Renewable energy is generated on-site at Castle Park View through almost 200 photovoltaic roof-mounted solar panels which convert sunlight to electricity, powering the building's communal areas. The ability to tap into this resource equates to carbon savings of around 20% versus regular electricity sources. Other energy-saving measures include the installation of energy-efficient lighting and high-performing fitted kitchen appliances in each apartment, contributing to an Energy Performance Certificate rating of B.

Efficient waste management is incorporated in the building's design with refuse chutes on each floor divided into three vessels, reducing the amount of refuse going to landfill by up to 66%. Additionally, each apartment is equipped with waste sorting facilities.

A brown roof across 80% of the structure – which recreates the brownfield site that existed before the building was constructed – promotes biodiversity by allowing plants and wildlife to self-colonise. Green rooves also top the scheme's cycle pavilion and bike storage hangar.

The scheme has been built to a voluntary certification standard known as the Code for Sustainable Homes, and BREEAM In-Use Residential certification will be sought once the minimum required occupancy level is reached.