

Task Force on Climate-Related Financial Disclosures Climate Change – Related Disclosures

ARUP UK PENSION SCHEME

Report for the 12 months to 31 March 2022

August 2022

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Introduction

TCFD Framework

The TCFD released its final recommended framework for climate-related financial disclosure in June 2017 with recommendations structured around four thematic areas that represent core elements of how organisations operate:.

Figure 1: TCFD Framework

The recommendations are in the following four key areas:



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risk and opportunities

TCFD Statement

This report outlines how the Trustees of the Arup UK Pension Scheme (the "Scheme") have established and maintained oversight and processes to satisfy themselves that the climate-related risks and opportunities, which are relevant to the Scheme, are appropriately considered by all stakeholders involved in the day-to-day management of the Scheme.

The Trustees support the recommendations of the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD) as a best-practice framework to manage and report on the actions being taken to identify climate change related risks and incorporate climate change risk management into investment processes. For the avoidance of doubt, the Scheme does not fall under the statutory requirements prescribed by the Department of Work and Pensions1 until at least 2023, subject to further guidance coming into force, but the Trustees have decided to adopt the framework.

The Trustees are, on behalf the Scheme's members, a long-term investor. It is therefore in the interests of members that the market is able to effectively price climate-related risks and that policy makers, and other market participants, are able to address these risks and avoid market failure. The Trustees believe that TCFD-aligned disclosure from asset owners, asset managers, and companies is in the best interest of the Scheme's members.

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¹ The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 and the Occupational Pension Schemes (Climate Change Governance and Reporting) (Miscellaneous Provisions and Amendments) Regulations 2021

Governance

The Trustees' governance oversight with respect to climate changerelated risks and opportunities

Policy Approach

The Trustees maintain a Statement of Investment Principles (SIP), which details the key beliefs, risks and approach to Responsible Investment (RI) and climate change. This is reviewed on an annual basis or more frequently as required. Further, the Trustees have developed a standalone Responsible Investment beliefs policy which details the Trustees' position in matters such as ESG integration, stewardship and climate change; this policy is periodically reviewed and is appended to the SIP and replicated below:

Belief	Position
Summary	The Trustees believe that environmental, social, and corporate governance (ESG) factors may have a material impact on investment risk and return outcomes over the time horizon of the Scheme, and that good stewardship can create and preserve value for companies and markets as a whole. The Trustees also recognise that long-term sustainability issues, particularly climate change, present risks and opportunities that increasingly may require explicit consideration.
ESG integration and broad risk management	Effective management of ESG issues is a key determinant of long-term shareholder value and good risk management. Their consideration is part of the Scheme's fiduciary duty to beneficiaries. The Trustees therefore recognise the importance of its investment managers integrating all material financial and non-financial factors, including ESG considerations, into the decision-making process for Scheme's investments and the ongoing monitoring of these same issues.
Stewardship	Good stewardship can protect and enhance value for companies and markets as a whole. The Trustees have given appointed investment managers full discretion in evaluating ESG factors, including climate change considerations, and exercising voting rights and stewardship obligations attached to the investments, in accordance with their own corporate governance policies and current best practice, including the UK Corporate Governance Code and UK Stewardship Code.
Climate change risk	The Trustees believe that climate change presents risks over the short, medium and long-term that the Scheme should understand and mitigate where possible. Investment action is an important area for the Scheme to further develop its approach, including collaborative engagement opportunities. The Trustees support the objectives of the Paris Agreement, and believes that keeping a global temperature rise this century to well below 2°C relative to pre-industrial levels is entirely consistent with securing strong financial returns.
Thematic sustainable investments opportunities	Long-term sustainability trends, including climate change, present opportunities that increasingly require explicit consideration. The Scheme will actively consider investing in strategies that target long-term ESG themes on the basis that such opportunities will generate good risk-adjusted investment returns.
Ongoing commitment	Responsible Investment is a rapidly developing area and the Trustees are committed to staying informed, developing their approach and increasing the ambition with regard to these issues.

Oversight of climate change risks

The Trustees have ultimate oversight in respect of climate change exposures and their potential impact on the Scheme. Decision making in respect of investment aspects is delegated to the Investment Sub-Committee ("ISC") with oversight from the Trustees. The roles and responsibilities of those undertaking governance activities is described in the appendix, as part of the Scheme's Governance statement. The Trustees, their ISC and inhouse pensions team, meet at least quarterly and receive quarterly performance reports from their investment consultant, which include ESG ratings for relevant investment mandates. The ESG ratings reflect the investment consultant's view on the extent to which environmental, social and corporate governance and active ownership practices (voting and engagement) are integrated into the manager's investment process and decision making across asset classes, including an assessment of how managers are taking climate change into consideration. This reporting includes a comparison of manager ESG ratings against their peer group. In the majority of cases to date, the Scheme's investment managers have had better results than the average for their respective peer groups.

In the first half of 2021, the Trustees engaged with the investment managers in respect of exposures within the Scheme's investments to controversial holdings (tobacco, defence firms, weapons) and to companies that derived revenue from coal-based power generation and coal extraction. As part of this, the Trustees challenged investment managers in relation to specific strategy holdings where the percentage of revenue derived from coal was considered material, and in respect of the investment managers' policies on such holdings.

In 2021 and 2022, the Trustees produced carbon foot-printing analyses covering an assessment of the Scheme's carbon impact by including metrics of carbon emissions and data coverage. With the help of these analyses, the Trustees have been able to implement portfolio changes. More detail on the results is provided under the 'Metrics and Targets' section. In 2022, the Trustees re-assessed their approach to climate change scenario analysis and agreed in principle to expand the current 2020 analysis in 2023, to cover climate change impact not only on investment returns, but also on funding strategy and covenant. More detail on the results of the 2020 analysis is provided under the 'Strategy' section.

Training and climate competency

The Trustees, ISC and in-house pensions team receive relevant training on Responsible Investment, including climate change, as required. Responsible Investment topics may also form stand-alone agenda items at meetings. The Trustees' investment managers are also asked to explicitly cover ESG and climate issues when presenting to the Trustees or the ISC. In the year under review, the Trustees undertook investment training provided by their investment consultant on responsible investment which covered ESG factors, stewardship, climate change and ethical investing. Recent training provided included sessions covering:

- The integration of ESG factors in different asset classes (besides equities) in March 2021.
- How integrated with the Trustees' Responsible Investment Beliefs are the Scheme's Investment managers, in September 2021; as part of this, the Trustees concluded that all of the Scheme's investment managers consider the mandates that they run to be aligned with the Trustees' Beliefs.

Responsible Investment Total Evaluation in November 2021, which included an
assessment undertaken by the investment consultant of the Scheme's ESG and
Climate Change progress versus a representative peer group. This presentation
additionally included further training on TCFD matters along with an action plan to
drive further progress.

The investment consultant's approach to climate change and how this is integrated into its advice and services is assessed as part of the Trustees' selection and monitoring process for investment advisory services.

Role description and assessment of those advising the Trustees

The Trustees take independent investment advice to help assess climate risks and opportunities, and look to ensure that any decisions continue to be integrated into a coherent investment strategy that supports the Scheme's ability to provide pensions. The Trustees have appointed Mercer Limited to alert them on any matters of material significance that might affect the ability of each investment manager to achieve its objectives. In addition, Mercer will continuously assist when significant climate-related investment decisions are to be taken.

The Trustees monitor Mercer on a regular and ongoing basis, but at least annually. Mercer were appointed on their credentials as an advisory investment consultant.

The Trustees keep a standalone Governance Policy as a support document to the TCFD report and should be read alongside the Scheme's wider Responsible Investment policy and SIP. The main goal of the policy is to define and describe the roles and responsibilities of the Trustee, ISC, in-house pensions team and its advisors (Mercer, Actuary, Covenant) in respect of climate issues. This document describes climate change policies and procedures in place, including how the various parties are assessed.

The Trustees manage the Scheme's approach to climate risk by clearly defining roles and responsibilities of stakeholders and document the process and assessment of the Scheme's decisions in relation to the broader climate change subject.

Day-to-day implementation

The Trustees have given appointed investment managers full discretion in evaluating ESG factors, including climate change considerations, and exercising voting rights and stewardship obligations attached to the investments, in accordance with their own corporate governance policies and current best practice, including the UK Corporate Governance Code and UK Stewardship Code. This includes monitoring and engaging with relevant persons (including issuers of debt or equity, investment managers or other relevant stakeholders) about relevant matters concerning the issuer of debt or equity (including their performance, strategy, capital structure, management of actual or potential conflicts of interest, risks, social and environmental impact and corporate governance).

The Trustees publish their Engagement Policy Implementation Statement detailing how they have implemented their approach to Responsible Investment and climate change considerations, as laid out in the SIP.

Strategy

The Trustees' approach to managing strategic climate change risks and opportunities

Climate change related-investment risks and opportunities over the short, medium and long term

The Trustees believe that climate change presents risks over the short, medium and long-term that the Scheme should understand and mitigate where possible. Investment action is an important area for the Scheme to further develop its approach, including collaborative engagement opportunities. The Trustees support the objectives of the Paris Agreement, and believe that keeping a global temperature rise this century to well below 2°C relative to pre-industrial levels is entirely consistent with securing strong financial returns.

As a long-term investor the Trustees recognise the risks and opportunities arising from climate change are diverse and continuously evolving.

The Trustees have considered the following short (next 3-5 years), medium (5-20 years) and long-term (20+ years) drivers of investment risk:

- Short term risks may present themselves through rapid market re-pricing as:
 - Scenario pathways become clearer. For example a change in the likelihood of a 2°C scenario occurring.
 - Market awareness grows. For example, the implications of the physical impacts of climate change become clearer to markets.
 - If policy changes catch markets by surprise. For example, if a carbon price is introduced across key markets to which the portfolio is exposed, at a sufficiently high price to impact behaviour.
- Over the medium term, risks associated with the transition to a low carbon economy are likely to dominate. These include the development of technology and low carbon solutions. Policy, legislation and regulation are likely to also play a key role at the international, national and subnational level. Technology and policy changes are likely to produce winners and losers both between and within sectors and lead to stranded asset risks.
- Over the long term, physical risks are expected to come to the fore. This includes the
 impact of natural catastrophes leading to physical damages through extreme weather
 events. Availability of resources is expected to become more important if changes in
 weather patterns (e.g. temperature or precipitation) affect the availability of natural
 resources such as water.

The impact of climate-related risks and opportunities on the Scheme's investment strategy

The Trustees consider exposure to carbon risk in the context of its role in the asset allocation and investment strategy setting. One of the Trustees' objectives for setting up the Scheme's investment portfolio was to focus on sustainability and to support the low carbon transition. Examples can be found in the section "Strategic actions undertaken to manage climate risk".

Long-term sustainability trends, including climate change, present opportunities that require explicit consideration. Looking forward, the Trustees have discussed setting explicit decarbonisation targets and these will be considered further in due course and included in the next iteration of the TCFD report.

Strategic actions undertaken to manage climate risk

The Trustees continuously consider approaches to further manage climate change risks and opportunities in their investment strategy. Since 2020, the following actions were taken:

- In Q3 2020, the Scheme fully transitioned from the Newton Real Return Fund into its sustainable version Newton Sustainable Real Return Fund.
- During the second and third quarter of 2020, the Trustees discussed and implemented a switch of the Scheme's equity exposure in order to improve the ESG and carbon footprint characteristics of the portfolio. This involved disinvesting the Legal and General Investment Management (LGIM) Synthetic Equity holdings and investing in an ESG focused equity mandate (LGIM Future World Global Equity 50% GBP Hedged portfolio).
- The Trustees conduct topic focused assessments from time to time. In the Q4 2020, the Trustees assessed the potential impact of climate change on investment returns, through a climate change scenario analysis undertaken by the investment consultant. More detail on the results is provided below.
- In H2 2021, the Trustees received a presentation following the completion of a
 Mercer survey called Responsible Investment Total Evaluation, achieving a score of
 A+, which is three levels above the scheme size average of B. This presentation
 additionally included further training on TCFD matters along with an action plan
 consistent with meeting the statutory requirements prescribed by the Department of
 Work and Pensions for certain UK pension schemes.
- Following previous trainings on TCFD and climate related matters, in Q2 2022, the Trustees conducted an analysis of the carbon emissions of the Scheme's investments (as at 31 March 2020, 31 March 2021 and 31 March 2022).

- The Trustees agreed to changes to the management of their corporate bond mandate at LGIM in order to better align with their ESG and climate change beliefs (the changes were implemented between July 2021 and February 2022). In July 2022, and following the Trustees' appetite to target more ambitious climate objectives, further changes were conducted to the portfolio. The following summary shows the current guidelines (and previous guidelines):
 - a) LGIM shall target Climate Alignment Objectives that are consistent with the successful realisation of the Paris Agreement goal. In particular, the portfolio targets:
 - a. a weighted average portfolio temperature of 2.0°C or below by 2025 (initially a score of 2.6°C or below in the short term);
 - b. a 1.5°C or lower score by 31 December 2030 (initially a 2°C or lower score by 31 December 2029);
 - c. a lower Green House Gas emissions intensity score year-on-year.
 - b) A range of restrictions preventing investment in, inter alia, securities listed under LGIM's Controversial Weapons Policy, tobacco securities, securities from issuers with revenue greater than 10% generated from thermal coal, securities listed under the LGIM Climate Change Policy and securities listed under the LGIM Future World Protection List.

Investment strategy climate change scenario analysis

In the fourth quarter of 2020, the Trustees commissioned a strategic climate change scenario analysis on the Scheme's strategic asset allocation to assess the potential implications of climate change. The investment consultant produced this scenario modelling for the Scheme's portfolio, which estimated a 'climate impact on return' and focused on three scenarios for increases in global temperatures.

- 2°C scenario, a low-carbon economy transformation aligned with successful implementation of the Paris Agreement's ambitions and the greatest mitigation of physical damages.
- 3°C scenario, a coordinated policy response, as per the current Paris Agreement commitments, but a failure to meet the 2°C objectives and meaningfully mitigate anticipated physical damages.
- 4°C scenario, a fragmented policy pathway where current commitments are not implemented and there is a serious mitigation failure of anticipated physical damages

This modelling helped the Trustees understand the exposures within the investment portfolio to climate risks, and informed consideration of further mitigating actions.

The Trustees believe that investing for a 2°C scenario is both an imperative and an opportunity: an imperative, since, for nearly all asset classes and timeframes, a 2°C scenario leads to enhanced projected returns versus 3°C or 4°C and therefore a better investment outcome; an opportunity, since, although incumbents can suffer losses in a 2°C scenario, there are many notable investment opportunities enabled in a low carbon transition such as sustainability themed investments in listed and private equities, infrastructure and fixed income.

Key findings from the analysis were as follows:

- The Scheme had taken steps to position itself to capture a "low carbon transition premium" under a 2°C scenario to 2030 and demonstrated robustness with respect to the potential impact of climate change under the more damaging 3°C and 4°C scenarios.
- The decision to move to ESG-tilted equities and a sustainable diversified growth fund was expected to improve outcomes under a 2°C scenario, with no additional downside under 3°C and 4°C scenarios.
- The impact at the sector level was expected to be more significant, and while the
 equity portfolio at the time was underweight utility and energy stocks, the buy and
 maintain credit mandate had a material allocation to utilities (19%) some of which
 could be significantly impacted by climate-related policies and low carbon
 technologies.

In 2022, the Trustees re-assessed their approach to climate change scenario analysis and agreed in principle to expand the current 2020 analysis in 2023, to cover climate change impact not only on investment returns, but also on funding strategy and covenant. The Trustees have also committed to update this analysis every three years as they intend to build a picture of the evolving risks and opportunities over time, which will help inform decision making.

Funding Level Scenario Modelling and Integrated Risk Management

Over the next 12 months the Trustees expect to consider in more detail the potential impact of climate change scenarios on their funding strategy. This will explore the potential impact of climate change on the funding level as a result of potential changes in government interest rates and inflation expectations. In addition, it will consider the potential impact of climate change on the covenant to allow the Trustees to integrate funding, investment and covenant risk considerations.

Risk Management

The processes used by the Trustees to identify, assess and manage climate change-related risks and integrate them within the overall risk management approach

Processes for identifying and assessing climate change related risks

The Trustees seek to identify and assess climate change related risks from both a top down and bottom up perspective. The climate change scenario modelling (described in the previous section) provides a top down strategic assessment of climate change risks at the total Scheme, asset class and sector level.

From a bottom up perspective the Scheme's investment managers have been asked to provide carbon foot-printing metrics consistent with TCFD recommendations. This analysis helps identify key sources of company and sector-level carbon risks.

As the Trustees rely on third party investment managers to manage their assets, the day-today assessment of climate change related risks has been delegated to them. They in turn are regularly assessed using the investment consultant's ESG ratings.

Where relevant, investment managers are invited to present to the Trustees to explain their approach to climate change risk management, amongst other topics.

The Trustees will engage with investment managers where they are perceived to be lagging their peers in terms of ESG integration or active ownership, including where this relates to climate change risks.

Processes for managing climate-related risks

The Trustees manage risk by prioritising those risks that they believe may be most financially material over the Scheme's anticipated lifetime. These risks are identified in the Statement of Investment Principles and include climate change.

The Trustees' approach to climate change risk management is guided by climate change scenario modelling, carbon foot-printing, an assessment of managers' ability to integrate ESG issues, including climate change considerations, into their investment processes and using the investment consultant's ESG ratings. Carbon footprint metrics have been derived, where available, for all the sub-investment manager portfolios in order to take a "total portfolio" approach and be consistent with the TCFD recommendations. This analysis helps identify key sources of carbon risk in manager portfolios and helps the Trustees to engage with managers on such risks. The Trustees also consider forward looking climate related metrics, such as the "Implied Temperature Rise", in order to understand the "transition potential" of the Scheme's investments. This allows for the commitments made by the underlying investee companies to reduce their greenhouse gas emissions over the next few decades.

The Trustees recognise that active ownership by the investment managers will continue to be a very important part of the Scheme's approach to managing these risks. The Trustees have agreed to assess investment managers' approaches to stewardship and engagement on an annual basis and summarises their findings in the Engagement Policy Implementation Statement. The Trustees expect companies in their portfolio to manage climate change risks. Stewardship activities can help hold companies to account and ensure they are taking a meaningful approach in this area.

The Trustees delegate stewardship engagement activity to the underlying investment managers.

The Trustees recognise the challenges with various metrics, tools and modelling techniques used to assess climate change risks. The Trustees aim to work with their investment consultant and investment managers to improve their approach to assessing and managing risks over time.

Integration of climate change related risks into the overall risk management approach

Both climate change-related risks and wider investment risks are considered by the Trustees. Where possible, climate change and wider investment risks are treated in a holistic manner by recognising they are often interrelated..

The climate change scenario analysis is strategic in nature and has therefore been incorporated into wider investment strategy discussions and considerations.

The carbon footprint assessment also allows the Trustees to monitor investment managers specifically in relation to climate change related risks. More details about the metrics covered can be found in the next section.

Metrics and Targets

The metrics and targets used to assess and manage relevant climate change-related risks and opportunities, in line with strategy and risk management

Key metrics for climate change related risks

The Trustees initially focused on carbon foot-printing analysis as a key metric for assessing risk; this analysis was performed in Q3 2021, covering the 12 months period to 31 March 2021. This was a way of assessing historical carbon emissions volume/intensity, which is an indicator for the relative risk of carbon pricing increases as part of the transition to a low-carbon economy.

Over the year to 31 March 2022, the Trustees considered how to report on additional metrics and requested information from the managers to assess their ability to do so.

For the listed equity, diversified growth portfolio, corporate bonds and alternative credit, together representing 52.5% of the Scheme's total strategic allocation (the remaining assets being government bonds (42.5%) and property (5%)), the Trustees have agreed to report on the following five metrics, although the regulation only requires four: total emissions, carbon footprint, Weighted Average Carbon Intensity ("WACI"), implied temperature rise and data quality. This decision complies with the requirement to select a minimum of one absolute emissions metric, one emissions intensity metric, one portfolio alignment metric and an additional climate change metric. The Trustees will review their decision from time to time and may report on different metrics as industry standards and data coverage evolve.

Different methodologies can be used to calculate a portfolio's carbon impact and the following summary explains each metric chosen by the Trustees:

- Weighted Average Carbon Intensity (WACI) measures the number of tonnes of carbon dioxide equivalent per USD million in revenues. The contribution of each issue is weighted according to portfolio weights. This means that for the Scheme, for example, a company with very high carbon intensity but low Scheme allocation might contribute to the WACI measure to a lesser extent than a company with lower carbon intensity but higher weighting in the Scheme.
- Absolute emissions provides an absolute figure in tonnes of carbon dioxide equivalents. Absolute emissions represents the company's reported or estimated greenhouse gas emissions, where available. It includes:
 - Scope 1 "direct emissions": those from sources owned or controlled by the company (e.g. direct combustion of fuel from vehicles); and
 - Scope 2 "indirect emissions": those caused by generation of energy (e.g. electricity) purchased by the company.

Scope 3 emissions are currently not included in the carbon assessment for two reasons:

- The rate of scope 3 disclosure remains insufficient to use reliably in carbon foot-printing analysis;
- The inclusion of scope 3 emissions can lead to double counting at portfolio level.
- Carbon footprint measures the number of tonnes of carbon dioxide equivalent per USD million invested;
- **Implied temperature rise** represents the implied temperature trajectory of a company's operations expressed as °C weighted by the company weight across the portfolio. It allows for tilting of the portfolio towards companies with a <2°C implied temperature rise, to show alignment with the Paris Agreement ambition.
- Data quality helps contextualise the proportion of the data that is reported, estimated or not analysed.

Carbon foot-printing metrics aid the Trustees in assessing the potential climate change related risks to which the Scheme is exposed, and identifying areas for further risk management, including company engagement and investment manager monitoring.

The ability to determine appropriate and reliable climate change risk metrics is limited by the availability of consistent and comparable data.

Carbon foot-printing summary

The initial carbon foot-printing analysis was undertaken as at 31 March 2022, although encompassed results from previous years. In summary:

- The report focused on LGIM equity, Newton and Nordea diversified growth mandates, Barings and Wellington alternative credit mandates and LGIM buy and maintain mandate. LGIM LDI mandate was covered in a separate section focused on sovereign data given the nature of the asset class. Property was excluded given the limitations in obtaining metrics data in the asset class, but the Trustees will continue to engage with its Property manager and monitor industry progress.

WACI

Over the 12 months period to 31 March 2021 and to 31 March 2022, the Scheme's carbon intensity (excluding LDI and property) decreased by c.28% and c.22%, respectively (versus a decrease of c.8% and an increase of c.3%, respectively, for the MSCI World). With the exception of Barings, all of the Scheme's investments improved its WACI over the 12 months period to 31 March 2021. With the exception of Newton, Nordea and Barings, the Scheme's investments improved its WACI over the 12 months period to 31 March 2022.

Absolute emissions

- The absolute emissions of the Scheme (excluding LDI and property) were equivalent to 17,451tCO2e in March 2022. Despite only representing c.11% of the total Scheme assets, Newton was responsible for c.29% of the emissions and Barings, representing only 3% of total assets, was responsible for 21% of total emissions.

Carbon footprint

- Barings had c.35% higher carbon footprint when compared with its benchmark, ICE BofA Non-Financial Developed Markets High Yield Constrained. LGIM Buy and Maintain – Climate Aligned fund had c.48% lower carbon footprint when compared with its benchmark, iBoxx Non-gilt. LGIM listed equities had c.65% lower carbon footprint when compared with its benchmark MSCI ACWI. Over the 12 months to 31 March 2021 and to 31 March 2022, the Scheme's carbon footprint decreased by c.23% and c.50%, respectively.

Implied Temperature Rise

- As at 31 March 2022, the weighted average of Implied Temperature Rise (excluding LDI and property) was 2.1°C, which is below the MSCI ACWI (2.4°C). However, this is still greater than the Paris Agreement ambition of "well below 2°C" but in line with global policies and pledges expected to result in a 2.6°C-2.9°C outcome this century.

Data quality

 Overall good quality data can be defined as reported and estimated emissions above 85% for listed equities and above 55% for public corporate bonds. The threshold for multi asset funds may be difficult to assess. LGIM equity stood above 85% as at 31 March 2022, whereas LGIM buy and maintain remained slightly below the 55% threshold.

Summary of decisions

- The Scheme's transition to LGIM Future World Global Equity and Newton Sustainable Real Return (from synthetic equity and real return, respectively), were the main drivers for the significant improvement over the year to 31 March 2021. The Scheme's transition to a climate aligned version of the LGIM Buy and Maintain Credit fund was one of the main drivers for the significant improvement over the year to 31 March 2022. The climate alignment main objectives comprised:
 - Targeting a weighted average carbon intensity, as defined and sourced by LGIM, that is at least 60% lower than that of the reference portfolio (as at 31 December 2020). LGIM shall seek (with no assurances) to maintain or lower the carbon intensity score year-on-year.
 - Targeting a temperature alignment score of 2.6°C or below. LGIM shall subsequently seek to manage the portfolio along a pathway to achieve a temperature score of 2.0°C or lower by 31 December 2029.

- After year-end, the Trustees decided to improve the LGIM Buy and Maintain Credit fund targets in order to seek to manage the portfolio along a pathway to achieve a temperature of 2°C by 2025 and 1.5°C by 31 December 2030. This change was not reflected as at 31 March 2022, and the former targets were in place for the purposes of the remaining analyses.

Figure 2: Summary of Results by Asset Class – 31 March 2022

Asset Class	lass Manager/ Mandate	WACI coverage (%)	Fund WACI / Sovereign Carbon Intensity	Benchmark WACI	CF coverage	Carbon Footprint	Benchmark Carbon Footprint	EVIC coverage (%)		Absolute Emissions	ITR coverage	ITR	Percentage of Portfolio SAA for Asset Class
Asset Class			(tons CO2e / \$M revenue), (tCO2e / \$M GDP)	(tons CO2e / \$M revenue)		(tons CO2e / \$M invested)	(tons CO2e / \$M invested)		(tons CO2e)	(%)	(°C)	(%)	
	Newton DGF	80.3%	181.6	162.5	79.6%	61.9		80.9%	4,949	80.3%	2.2	6.4%	
Listed Equity	Nordea DGF	99.4%	52.3		99.1%	15.2	55.1	99.1%	1,436	99.4%	1.9	7.4%	
	LGIM Global Equity	92.3%	69.5		92.2%	19.1		92.2%	4,244	92.2%	2.1	17.5%	
Totall	isted Equity	91.5%	88.3		91.2%	26.9		91.5%	10,629	91.5%	2.0	31.3%	
	Barings DGF	60.9%	441.5	317.6	57.2%	202.1	150.3	57.2%	3,618	56.3%	3.4	1.4%	
Corporate Bonds	LGIM B&M	51.0%	152.6	94.1	37.6%	23.6	45.4	37.6%	2,997	45.2%	2.1	10.0%	
bollus	Newton DGF	53.5%	13.5	_	14.7%	9.1	_	14.7%	141	49.7%	1.9	1.2%	
	Nordea DGF	86.7%	1.2		31.8%	0.2		31.8%	2	40.3%	2.2	0.8%	
	Wellington	90.5%		94.1	87.7%	18.9	45.4	87.7%	64	90.2%	2.4	0.3%	
Total Co	rporate Bonds	55.2%	159.6		38.2%	39.2		38.2%	6,822	47.3%	2.3	13.7%	
Total Equity and Corporate Bonds		80.4%	110.0		75.1%	30.7		75.3%	17,451	78.0%	2.1	45.1%	
Sovereigns	Wellington	57.1%	266.4	_		_		57.1%	3,903	_	_	1.2%	
	LGIM LDI	100%	146.6					100%	126,322			42.5%	

Source: Arup UK Pension Scheme investment managers.

Notes: All data as at 31 March 2022.

Percentage of fund directly analysed reflects coverage under the MSCI tool used in this analysis. Sovereign analysis was conducted in line with the recommended methodology set out in the ongoing PCAF consultation (tCO2e/£m PPP Adjusted GDP). Intensity formula: Production Emissions/£m PPP Adjusted GDP.

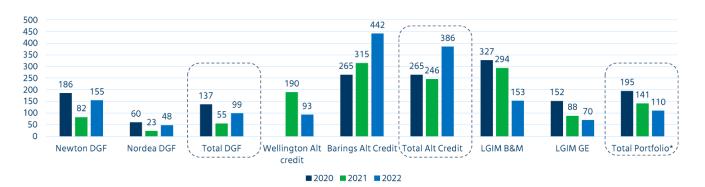
For LDI, absolute emissions in respect of funded gilt exposure (£377m) are 72,770 tCO2e and emissions from additional exposure achieved through repo to UK gilts (£277m) are 53,552 tCO2e. Emissions from total exposure to UK gilts (£654m) is shown in the table above.

Green (significantly below index)

Amber (in line with index, or within 10% below index)

Red (has contributed negatively with above index performance)

Figure 3: Weighted Average Carbon Intensity Progression Over Time



Source: Arup UK Pension Scheme investment managers.

*Total Portfolio excludes Schroders Property and LGIM LDI mandates.

This chart is based off two different data sources. Manager data was used in previous years' emission reporting dated 2020 and 2021; and in 2022, the emission reporting uses MSCI data.

LGIM GE: as at 31 March 2020, figure shown for LGIM Synthetic Equities, since the transition from

Synthetic Equities to Future World Global Equity happened over the year to 31 March 2021.

Newton DGF: as at 31 March 2020, figure shown for Newton Real Return, since the transition to the sustainable vehicle happened over the year to 31 March 2021.

Wellington was not able to provide 2020 WACI.
LGIM B&M: as at 31 March 2020 and 31 March 2021, figures shown for the standard LGIM Buy and Maintain Credit fund. As at 31 March 2022, figure shown for the Climate Aligned version.

100% 10.2% 0.8% 1.7% 10.4% 29.4% 12.5% 80% 41.3% 57.5% 16.9% 60% 84.2% 14.1% 13.5% 81.8% 40% 75.7% 16.6% 20% 39.5% 12.5% 37.5% 13.4% 11.6% 0% LGIM B&M Newton DGF Nordea DGF LGIM GE **Barings** Wellington ■ Not Reported Cash + Others Reported ■ Estimated

Figure 4: Data quality – Scope 1 and 2 Emissions Data – 31 March 2022

Source: Arup UK Pension Scheme investment managers.

Targets used to manage climate change-related risks and opportunities

The Trustees have not officially set specific climate change targets for the Scheme as this remains an area for ongoing review. Nevertheless, the following targets were established on a provisional basis:

- Overall Scheme target: Target net zero by 2050 or earlier if possible.
- Interim Scheme (excluding LDI, Alternative Credit and Property) targets:
 - Reduce greenhouse gas emissions (Scope 1 and 2) by 45% or more by 2025, measured by Weighted Average Carbon Intensity with a 2020 baseline.
 - Reduce greenhouse gas emissions (Scope 1 and 2) by 50% or more by 2030, measured by Weighted Average Carbon Intensity with a 2020 baseline.
- Specific manager targets with a 2020 baseline:
 - LGIM B&M Credit: Temperature alignment of 2.0°C from 2025 and 1.5°C from 2030 onwards;
 - DGFs (Nordea and Newton) WACI reduction of 50% or more by 2030.

At the time of writing, the Trustees are working with the investment managers to assess the feasibility of achieving more ambitious targets. The Trustees acknowledged that the sponsor Company long term target was more ambitious (targeting net zero by 2030), although there are important differences between the challenges faced by the Company and the Scheme in respect of achieving 'net zero', including the prevalence of UK government bonds within the Scheme's portfolio (which is expected to achieve its net zero objective by 2050, in line with UK government policy), and the stated intention of the Company to use offsetting actions to reduce its carbon footprint.

At the time of writing, and given the implementation changes in LGIM and Newton portfolios over the recent years, the Scheme is in on track to achieve the aforementioned targets, acknowledging that a final assessment will be required at each target deadline.

Suitability of additional metrics

The Trustees will continue to assess the suitability of the proposed climate change metrics in light of current and incoming regulations and incorporate them into next year's report, to the extent they are not already. The Trustees and the investment consultant will work on improving disclosure with its investment managers in future assessments.

Appendix A

Scheme's Governance Statement

The below is an extract of the Scheme's Governance Statement.

What	How	Roles/responsibilities
The Trustees identify climate-related risks and opportunities, which may have an effect over the short term, medium term and long term on the Scheme's investment and funding strategy.	Annual review of an Engagement Policy Implementation report and Task Force on Climate-related Financial Disclosures ("TCFD") report, which review various climate metrics and the extent to which investment managers are integrating ESG and climate change considerations into their decisions and reviews the stewardship activities of the investment managers. These reports are publicly available on the Arup Group website. Presentations from managers on climate-related risks from time to time. Quarterly review of investment managers ESG rating (from investment advisor) shown in Quarterly Investment Monitoring Reports. Professional advisors may highlight any additional risks of opportunities that are relevant on an ongoing basis.	Trustees, Investment Sub-Committee and in-house pensions team: Consider, discuss and challenge Engagement Policy Implementation and Scenario Analysis reports. Investment advisor: Produce Engagement Policy Implementation, TCFD report, Scenario Aanalysis report and Quarterly Reports. Scheme actuary: Input into scenario analysis and advise on funding implications. Principal Employer/ Covenant advisor: Input into scenario analysis and advise on covenant implications. All professional advisors: Highlight any additional risks or opportunities that are relevant on an ongoing basis. Investment managers: Provide information required for Scenario Analysis and Quarterly Reports, present to the Trustees as required.

What	How	Roles/responsibilities			
The Trustees allocate appropriate time and resources to climate change governance and reporting. It uses outputs from other climate-related activities to help determine how much time and resource is allocated to overseeing climate-related risk.	Time is allocated at least annually to climate change governance and reporting at both the ISC and Trustee level, as a substantive agenda item, and more often as required. Next steps are identified as part of other activities and Trustee time allocated by the Investment Sub-Committee and in-house pensions team as needed.	Trustees: Ensure sufficient agenda time is allocated. Investment Sub-Committee and in-house pensions team: Allocate sufficient agenda time. Professional advisors: Identify next steps when providing input on climate-related activities.			
When using external advisers, the Trustees consider and document the extent to which climate-related responsibilities are included in any agreements.	The Trustees intend to agree specific climate-related objectives for its professional advisors and in-house pensions team by 31 December 2022 and review these in each calendar year thereafter.	Trustees: Agree objectives with professional advisors and review these annual. Professional advisors and in-house pensions team: Propose objectives and work over the year to meet these.			
The Trustees provide opportunities for those carrying out governance activities to undertake training on climate risks and opportunities.	The investment advisor provides training to the Trustees, ISC and in-house pensions team on climate issues at regular intervals, at least annually. Timing of these training sessions is generally agreed as part of meeting agendas and annual business plans, developed by the advisor and agreed by the Trustees.	Trustees, Investment Sub-Committee and in-house pensions team: receive training Professional advisors: provide training and plan timing for these moments over the year and as required.			



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