Leicestershire County Council Pension Fund

Climate Strategy – Net Zero Goals and Targets May 2022

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1 Executive summary

Addressee and purpose

This paper is addressed to the Local Pension Committee ("LPC") of Leicestershire County Council Pension Fund ("the Fund"). The purpose of this paper is to provide recommendations on the goals, metrics and targets the Fund should adopt in its Climate Strategy, taking into account its beliefs, priorities, and the impact on its investment strategy amongst other factors.

This paper should not be used for any other purpose. It should not be released or otherwise disclosed to any third party except as required by law or with our prior written consent, in which case it should be released in its entirety. We accept no liability to any other party unless we have accepted such liability in writing. We provide comment from an investment but not a legal or tax perspective.

Background and scope

Climate change poses significant risks to long-term investors but also an important source of investment opportunities. The Fund is developing a strategy for dealing with the impact of climate change on the Fund's primary purpose which remains to fund the pension benefits of its members. Contributing to the wider response to climate change is not considered to be an objective in its own right. The Fund is keen to ensure that its climate strategy is suitably ambitious, deliverable and aligned with current best practice, and has requested input on several topics relating to the development of the strategy. This paper covers:

- Definition of Net Zero
- Key considerations in setting a Net Zero goal
- Selection of decarbonisation metrics
- Rationale for, and determination of interim targets

The Fund has adopted the IIGCC's Net Zero Investment Framework ("NZIF") to guide the development and implementation of its Climate Strategy. We believe this is a robust framework and our recommendations are aligned with it.

Summary of recommendations

We believe the proposed Net Zero target date of 2050 or sooner is an appropriate goal for the Fund. A target date of 2050 is ambitious given most major economies are not on track to achieve Net Zero by then based on current pledges/policies. Targeting a date marginally ahead of most major economies (eg 2045) is also realistic and may enable the Fund to mitigate climate risk and capture climate-related investment opportunities more effectively. But it would require a more proactive climate strategy and additional changes to the investment portfolio, potentially increasing execution costs and risk.

Other target dates, such as 2030 or 2060, could be considered. But we believe these would expose the Fund to an increased risk of adverse investment outcomes. A Net Zero target set materially earlier than the main economies in which the Fund invests would be very challenging to deliver. A target date of 2030 in particular would likely require major changes to investment strategy to focus on a restricted universe of low emissions asset classes and stocks, thereby increasing portfolio concentration and the volatility of investment returns. 2060 would entail fewer changes in the short-term, but increased exposure to climate transition risk in the longer term.

The future pathway of climate change is uncertain, as are policy, economic and societal responses to it. We therefore recommend the Fund reviews its Net Zero target date every three years with a view to bringing it forward if appropriate.

We recommend the Fund adopts a balanced set of medium-term objectives which could realistically be delivered over the next 5-10 years given the investment solutions expected to become available from LGPS Central ("LGPSC") and third-party managers over the period. The focus should be on bringing about actual emissions reductions in portfolio companies over time, rather than simply divesting from high emissions holdings. The Fund should also follow best practice and avoid material reliance on offsetting strategies. A balance should be struck between reducing emissions so as to reduce climate risk and capturing climate-related investment opportunities.

The Fund should reflect these objectives in the formulation of its investment strategy (strategic asset allocation) and in structuring its investment management arrangements. The objectives, underpinned by robust climate metrics, should guide investment decision making and engagement activity much of which is undertaken on behalf of the Fund by its investment managers.

We have reviewed the 9 metrics/targets the Fund has proposed using to monitor progress and we believe they are generally appropriate:

Metric/Target	Metric Robust	Target Realistic	Comment
Net Zero by [2050, with an ambition for sooner]	✓	✓	We believe this is an appropriate, ambitious goal
Absolute net carbon emissions to be reduced by [40%] from 2019 reported levels by 2030	✓	?	Further analysis recommended to provide reassurance that the target is realistic
Reduce the Carbon intensity (WACI) of the Fund by [50%] from the 31st December 2019 levels for the Equity portfolio by 2030. This target will extend to other asset classes as common methodology is agreed	✓	1	Emissions intensity provides a complementary perspective on the progress the Fund is making in reducing climate risk
Reduce the proportion of the Fund with Fossil Fuel exposure within the equity portfolio (was 8.5% at 31st Dec 2019) by 31st March 2030	✓	No target	Fossil fuel companies create stranded asset risk, so exposure should be measured. LGPSC are refining the metric they use, so no target recommended at this stage.
Increase the asset coverage to [90%] by 2030 (currently at 45% 2022 est) to be analysed for WACI	✓	✓	Comprehensive climate risk reporting is required to guide investment decisions and engagement activity
Increase allocation to climate solutions (use EU taxonomy) as defined by weight in clean technology from the base 2019 weight of 34.1% by 2030	√	No target	Climate solution providers offer potentially attractive investment opportunities. LGPSC are refining the metric they use, so no target recommended at this stage.
Increase our percentage of portfolio underlying companies in material sectors with net zero targets to over [90%] by	✓	?	Setting a Net Zero target is the first step in implementing the changes required to decarbonise operations.

[2030]. Includes listed equities, corporate bonds and sovereign bonds at present			Further analysis recommended to provide reassurance that the target is realistic.
By [2030], [90%] of the Fund's financed emisions to be either net zero, aligned to a net zero pathway or subject to engagment programme to bring that about. Includes equities, corporate bonds and soverign bonds at present	√	?	Achieving alignment with Net Zero pathway is critical to delivering the emissions reductions required in the future. Further analysis recommended to provide reassurance that the target is realistic
The Fund's, LGPS Central's and Investment manager's net zero attainment relating to their direct emissions	✓	No target	Decarbonising own operations should be relatively straightforward for LGPS Central and other investment managers, but should not be used as a criteria for manager selection.

We recommend the Fund consider the following amendments/additions:

- Work with LGPSC to refine the definition of the exposure to Fossil Fuels and climate solutions metrics (note: changes to these two metrics are already planned);
- Undertake further analysis on the current portfolio to assess whether the proposed objectives on reducing absolute emissions by 40% by 2030 are realistic;
- Consider adopting transition pathway alignment as an additional metric and engage with LGPSC and the Fund's other investment managers on the necessary changes to climate reporting.

We recommend that the metrics monitored and the targets set for reductions should be combined with increasing the coverage of the portfolio that these apply to (as relevant standards and further data become available).

At this stage, we recommend that targets are set at whole portfolio level. Sector-based targets and other asset class targets can be considered at a later date.

We recommend that the Fund develop a road-map of actions that could be taken over the coming years to deliver the proposed targets alongside the primary objective to deliver financial returns. This will provide further reassurance that the targets are realistic. Consideration should be given to the range of climate-related investment solutions available from LGPSC and third-party investment managers.

We look forward to discussing this report with the LPC.

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For and on behalf of Hymans Robertson LLP, May 2022.

Leicestershire County Council Pension Fund | Hymans Robertson LLP

Risk warning

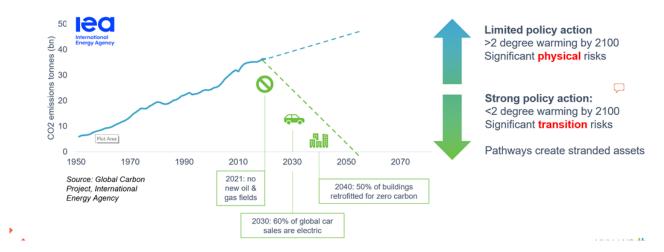
Please note the value of investments, and income from them, may fall as well as rise. This includes equities, government or corporate bonds, and property, whether held directly or in a pooled or collective investment vehicle. Further, investments in developing or emerging markets may be more volatile and less marketable than in mature markets. Exchange rates may also affect the value of an investment. As a result, an investor may not get back the amount originally invested. Past performance is not necessarily a guide to future performance.



What is Net Zero?

"Net zero" means reaching a state of the world where there is a balance between the Greenhouse Gases ("GHG") human activity discharges into the atmosphere and the emissions that can be safely absorbed by natural processes or which are otherwise removed. Greenhouse gases include not just carbon dioxide, but methane and nitrogen dioxide which are also significant contributors to climate change in certain sectors such as agriculture.

Policy pathways towards net zero will determine the nature of the climate risks faced by asset owners.



Achieving <2 degree warming does not mean removing all carbon emissions but does require a combination of reduction and increased use of nature-based and technological solutions to remove residual emissions ("offsetting"), such as forestry and carbon capture and sequestration respectively.. Offsetting capacity is likely to be limited; nature-based solutions will compete for land with other needs, such as food production, and none of the potential technological solutions have yet been proven at commercial scale. It is for this reason that policymakers recommend that offsetting capacity is reserved for hard-to-decarbonise sectors rather than being applied across the wider economy.

Clearly this will have a profound impact on some companies and a lesser impact on others, although all will be affected to some degree whether it is in the power purchased, employee movement or supply chains. The pace of change is also likely to vary considerably with some activities being easier to change than others. Various pathways have been proposed by organisations such as the Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA).

For example, the IEA's recent published net zero pathway envisages changes such as:



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There are two key areas in which climate change impacts financial markets - the physical impacts that arise directly from a changing climate, and the transitory impacts that arise from the response of policy makers. This can lead to uncertain economic outcomes, such as on GDP growth, inflation and, crucially, asset returns. The diagram below summarises the key impacts and consequences of climate change faced by the financial system, including pension schemes:

Climate change: Cumulative GHG emissions create warming of the planet

1 degree (vs pre industrial): Where we are just now Some impacts

2 degrees (by 2100): Significant physical impacts "Safe range for humanity" 3+ degrees (by 2100) Extreme impacts, highly disruptive "4 degrees is uninsurable"

Physical impacts

- Chronic changes, e.g. sea level rise, agricultural systems impact economic and social systems
- Acute changes, e.g. storms, wildfires create damage and give rise to costs of adaptation and reconstruction

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Transition to a low carbon economy

- Policy changes, e.g. carbon pricing, seek to create the changes needed in society
- Technology development, e.g. renewable energy, and adoption enable the changes to be adopted

Consequences for pension schemes

Investments factors

- · Lower asset values/returns
- Increased credit spreads
- Higher insurance costs

Funding

- Changed mortality
- Improvement rates
- Morbidity

Covenant

- Lower profitability
- Supply chains
- Different impact by sectorNeed for strategic plans

Alongside the economic impact of climate change lie the demographic impacts of water scarcity and quality, increases in vector-borne diseases, crop failures and many others.

The actions of policy makers, companies and broader society will also influence the nature and extent of the risks faced. In supporting the 2015 Paris Agreement, the UK Government has created a legislative requirement to bring greenhouse gas emissions to "Net Zero" by 2050. Such changes are likely to continue and accelerate. Net Zero can be achieved both by reducing emissions and implementing offsetting measures. This will test the resilience and versatility of companies, while creating opportunities for investment by pension schemes.

An increasing awareness and understanding of climate change, together with ever-increasing regulatory change, is forcing companies to adapt and address the impact they have on the environment. Greater adoption of renewable energy and a strive to rely less on fossil fuels is giving rise to "stranded assets" as energy companies find themselves unable to economically exploit reserves of oil and coal. This results in companies writing off the value of these assets, with negative impacts on shareholders. Shell and BP wrote off up to \$22bn and \$17.5bn respectively in mid-2020 from weakened long-term demand for oil and an acceleration towards a lower-carbon economy. If progress relative to global commitments is not made, companies overly reliant on fossil fuels are significantly at risk from the prospect of a carbon tax. Some countries, such as Sweden, have successfully implemented a carbon tax, and we can expect this trend to expand globally.

3 Setting a Net Zero goal

A 'good' Net Zero strategy requires both a target date for achieving Net Zero and a pathway or cumulative emissions target for the journey. It is likely to be helpful to think of this combined plan in terms of consistency with a target temperature rise and probability of success e.g. having a Net Zero strategy which is consistent with a 67% likelihood of temperatures rising by no more than 1.5°C.

Real world reduction in emissions, increased investment in climate solutions and positive impact (including climate adaptation) along with the right balance of risk and return are key to a credible Net Zero strategy. Enhanced engagement with managers and underlying investments will also be necessary to ensure these outcomes are achieved.

Sector and regional allocations are typically the main driver of absolute emissions and pathways. We do not believe that simply tilting away from higher emitting sectors and/or regions in order to reduce the absolute level of emissions necessarily results in a 'good' Net Zero strategy. While this may well be a legitimate investment decision, for example, if there is a belief that these sectors and regions will underperform in the future, we consider that its how the Fund's investments compare to their direct peers e.g. within sectors and regions, which is important when designing a 'good' Net Zero strategy. This is because it is not possible for the world to change overnight and, for example, to cease burning fossil fuels or using concrete. It is in their own best interests, as well as society's as a whole, that asset owners encourage portfolio companies to make the changes needed to decarbonise their operations. A 'good' Net Zero strategy will therefore support relatively good companies in each sector and region and encourage positive change by others.

This section outlines the factors that the Fund should take into consideration when setting a Net Zero goal. These include:

- Best practice, as encapsulated in recognised frameworks such as NZIF and NZAOA
- Sovereign pledges, government policy and institutional targets
- Dealing with uncertainty
- Other ESG issues
- The Fund's investment beliefs
- Impacts on the Fund's investment strategy
- Availability of suitable investment solutions
- Acceptability to stakeholders and the Fund's wider reputation as a responsible investor

Best practice – NZIF and NZAOA frameworks

The IIGCC's Net Zero Investment Framework (NZIF) provides a common set of recommended actions, metrics and methodologies through which investors can maximise their contribution to achieving global net zero emissions by 2050 or sooner.

The primary objective of NZIF is to ensure investors can decarbonise investment portfolios and increase investment in climate solutions, in a way that is consistent with a 1.5°C net zero emissions future.

It is designed to be an 'investment strategy' led approach, supported by concrete targets set at portfolio and asset level – combined with smart capital allocation, engagement and advocacy activity – to ensure investors can maximise their impact in driving real-world decarbonisation.

The Framework has two primary aims in order to align with the Paris Agreement to limit the global average temperature rise to 1.5°C above pre-industrial levels.

- Decarbonise investment portfolios in a way that is consistent with achieving global net-zero GHG emissions by 2050 or sooner;
- Increase investment in the range of climate solutions needed to meet that goal.

The IIGCC's NZIF "Supplementary Guidance on Target Setting" was released in December 2021 to provide step-by-step guidance for investors implementing the recommendations of the Net Zero Investment Framework. The guidance supports asset owners (and asset managers) to establish their targets in line with the Paris Aligned Investment Initiative asset owner commitment (and the Net Zero Asset Managers initiative commitment). The guide covers target setting at the asset level and aggregating that to the portfolio level and includes interim targets.

With regard to asset level target setting, the focus is on two key areas to drive the transition:

- the extent to which assets are delivering against indicators and metrics that reflect current and forward-looking alignment to net zero pathways
- the effort by investors towards improving the performance of their investments against these indicators.

The guidance sets out suggested asset level alignment targets and engagement thresholds:

- A 5-year portfolio coverage target for increasing the percentage of AUM in material sectors that are
 i) achieving net zero, or ii) meeting the criteria to be considered 'aligned' to net zero, or iii) 'aligning'
 to net zero.
- They propose that this target should increase towards the goal of 100% of assets to be i) net zero or ii) aligned to net zero by 2040.
- An engagement threshold which ensures that at least 70% of financed emissions in material sectors are either assessed as net zero, aligned with a net zero pathway, or the subject of direct or collective engagement and stewardship actions.
- They propose that this threshold should increase to at least 90% by 2030 at the latest.
- Investors should disclose the proportion that is considered net zero or aligned, disaggregated from the total.

Alignment targets and engagement thresholds can be set as an aggregate across asset classes or separately for each asset class covered by the NZIF. Aggregated 5-year targets are proposed to cover at least listed equity, corporate fixed income, and real estate. Sovereign bonds may be considered separately.

Version 1 of the NZIF and supplementary guidance provide a robust approach to setting and implementing a Net Zero strategy. However, there are certain limitations in scope, notably:

- Asset classes are limited to listed equity, corporate fixed income, sovereign bonds, and real estate;
- Focus on scope 1 and 2 emissions, and not scope 3 due to the greater complexity of measuring this category;
- Focus on the transition goals of the Paris Agreement, not the adaptation and resilience goals; and
- Focus on emissions reduction and capture, not offsetting.

Version 2 is expected to address some of these limitations.

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The other main framework to consider is the Net Zero Asset Owners Alliance Target Setting Protocol, issued in December 2021. This has a more granular approach to setting interim targets (for emissions, in particular with 2025 and 2030 reductions targets) and considers sector-based targets and pathways, but its provisions are otherwise very similar to NZIF..

The use of offsets in a net zero strategy varies to some degree across initiatives. For example, the Science Based Targets Initiative (to which much of the NZIF target setting approach is comparable) proposes that the use of offsets is not counted in company decarbonisation plans or progress.

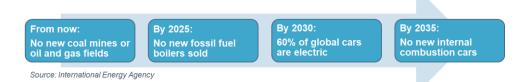
Given the lack of regulation, potential for controversy and cost of offsets, we recommend that the Fund does not consider explicit purchase of offsets as part of its Climate Strategy. This is likely to preclude adoption of a Net Zero target date materially earlier than 2050. However, there are investment opportunities in natural capital solutions (for example) that result in the potential to provide measurable 'avoided' emissions through the benefit they bring. We recommend that these opportunities are explored further.

We believe NZIF is a robust framework and support the Fund's use of it to guide the development and implementation of its climate strategy.

Sovereign pledges and public policy

Governments in most developed countries, including the UK, have adopted a 2050 target date for net-zero, while India and China have set a 2060 target date. Many others have still to set their own commitments, although our expectation is that target dates and the deadlines for implementing policies will move forward, not back.

In some respects, a timeframe for net-zero is somewhat arbitrary because society needs to reach this goal as soon as possible. Governments have adopted 2050 as a date which seeks to balance the practicalities of transitioning to an economy which is powered largely by renewable energy sources with the huge shift in both infrastructure and behaviours that are necessary on a global basis. The pace and nature of action that will be taken to achieve net zero remains uncertain and is dependent on the implementation of government policy and regulation. As an illustration, the International Energy Agency recently published a net-zero pathway, set out in the timeline below.



It would be challenging to deliver a Net Zero target date set significantly earlier than the main economies in which the Fund invests, because we would expect most companies particularly those in high emissions sectors to follow the agreed sovereign pathways. It would likely involve the Fund restricting the range of investment opportunities it considers and accepting the likelihood of lower investment returns and higher risk.

Dealing with uncertainty

The future pathway of climate change, and the policy, economic and societal responses to it remain highly uncertain. Furthermore, the availability of data to measure climate risk, technological solutions to mitigate or adapt to it, and the solutions available to investors to manage their exposure are continually evolving. In our view this should not prevent the Fund planning and starting its journey, but it should be recognised by all involved that there will be a need to evolve the strategy and how it is implemented in future. A later Net Zero target date which allows well informed investment decisions to be taken and appropriate strategies to be implemented gradually over time therefore seems sensible.

Given high levels of uncertainty, and the need for flexibility, we recommend the Fund review its Net Zero target date and climate strategy periodically, e.g. every 3 years.

Other ESG issues

The Fund believes that a wide range of ESG factors have an impact on its primary purpose. In relation to the climate transition, we believe the social impacts are of particular importance. A rushed and ill considered approach to decarbonisation would likely cause grave damage to economies worldwide and have adverse impacts on the prosperity of individuals displaced by the transition. Competition for natural resources between food and biofuel producers, for example, could lead to wide-spread starvation. A realistic Net Zero target date which allows for a measured approach to decarbonisation would therefore seem appropriate both for countries and major asset owners. Such an approach would also allow related environmental issues, such as water scarcity and biodiversity loss, to be managed more effectively.

Investment beliefs

The decisions the Fund takes on climate change should be guided by its investment beliefs; three are particularly relevant to this issue:

- 5. Diversification across investments with low correlation reduces volatility, but over diversification is both costly and adds little value.
- 6. The Fund should be flexible enough in its asset allocation policy to take advantage of opportunities that arise from market inefficiencies, and to protect against identifiable short-term risks when this is both practical and cost-effective.
- 7. Responsible investment can enhance long term investment performance and investment managers will only be appointed if they integrate responsible investment into their decision-making processes.

Belief 5 highlights the benefits of diversification and in our view would preclude adopting highly concentrated investment strategies which we believe are necessary to achieve Net Zero by 2030. Such strategies would provide exposure to a narrower range of asset classes and, within each asset class, a narrower range of stocks, than at present.

The decarbonisation process is expected to disrupt many sectors of the economy, creating market inefficiencies and a wide range of potentially attractive investment opportunities. Belief 6 guides the Fund to adopt investment strategies which strike a balance between capturing those opportunities, whilst mitigating the risks associated with climate change.

Responsible investment (Belief 7) involves two key elements: (i) sustainable investment, integrating consideration of ESG factors and (ii) effective stewardship, including active engagement with portfolio companies. It therefore suggests that the Fund should adopt strategies which address climate change as one of a range of ESG factors, albeit a critical one. This will have important implications for the way in which the Fund implements its Climate Strategy. Belief 7 also indicates a preference for engagement over divestment/exclusion. This means the Fund, through its investment managers, should be willing to invest in companies with high current emissions and significant decarbonisation challenges, providing the long-term investment rationale is strong. The Fund will expect its managers to engage with such companies to ensure that credible plans and resources are in place to decarbonise and to monitor their implementation. Divestment of existing investments, or exclusion, on the basis of a company's response to climate change will be a last resort. We believe this position is incompatible with the more aggressive divestment and exclusion policies that are likely to be required to achieve Net Zero by 2030.

Also relevant here is the Fund's level of ambition with regard to climate change. Some funds, notably the Environment Agency Pension Fund ("EAPF"), have taken a leadership position in this area. The EAPF has set a challenging NZ goal (2045), advocated changes in investment practice and sponsored the development of new

standards and investment solutions. It has been willing to bear the costs and risks involved. We do not believe it is the Fund's intention to be a leader on this issue.

The Fund's investment beliefs, particularly Beliefs 5, 6 and 7, have significant implications for its Climate Strategy. We recommend the LPC considers the implications highlighted above and reconfirms its agreement with them.

Impacts on investment strategy

The table below sets out the Fund's current investment strategy and provides an indication of how well positioned the Fund's current portfolio is to mitigate the risks of climate change. The analysis draws on the results of the Fund's latest climate risk report, supplemented by our own estimates where appropriate. It also assesses the scope for making further progress in this area:

Asset Class	Target	Emissions Intensity	Comments
	%	vs overall portfolio	
Regional equity – passive	15.0	Lower	Scope to reduce emissions by tracking ESG-tilted indices
Global equity – active/multi-factor	23.0	Higher	Listed equities are expected to have higher emissions than the Fund's overall portfolio, but theLGPSC active/multi-factor equities funds are reported to have much lower emissions than the wider market. Potential to reduce emissions and/or increase exposure to climate solutions further by adopting climate-thematic strategies such as the Sustainable Equity funds being developed by LGPSC. Climate adaptation opportunities could be explored here too.
EM equity - active	4.0	Much higher	Emissions in EM are well above those of other asset classes, but the LGPSC fund reports emissions well below market. Potential to reduce emissions and/or increase exposure to climate solutions further by adopting climate-thematic strategies.
Private equity	5.75	Lower	Current deal pipelines focus on tech, healthcare and business services which are lower emissions businesses A high proportion of climate solutions providers are expected to raise capital in private markets, so this allocation should increase exposure to green revenues.

Targeted return	7.5	?	Climate risk reporting requires enhancement in this area, but we note that the Ruffer fund is reported to have low emissions.
Infrastructure	9.75	Higher	The existing portfolio focuses on conventional energy, transport, waste, projects in the construction phase and commercial forestry which currently have high emissions. The Fund has limited exposure to renewable energy. Scope to reduce emissions and/or increase exposure to climate solutions by increasing exposure to decarbonisation infrastructure – renewable energy, grid modernisation, EV charging networks etc – and sustainable timberland.
Property	10.0	Lower	Emissions relating to commercial property are lower than equities generally because emissions relating to building heating and power systems are a fraction of total corporate emissions, particularly for businesses in high emissions sectors.
EM debt	2.5	?	Agreed standard for measuring emissions intensity of sovereign debt is under development
Multi-Asset credit	4.0	Higher	High yield credit remains a high emissions asset class, primarily because of the sector mix of high yield issuers Scope to reduce emissions by adopting climate-thematic strategies
Private debt	10.5	Lower	Similar considerations to private equity.
Inflation-linked gilts	4.5	?	Agreed standard for measuring emissions intensity of sovereign debt is under development
IG credit	3.0	Lower	Scope to reduce emissions by adopting climate-thematic strategies
Cash/collateral	0.5	n/a	
			<u> </u>

We believe there is limited scope to make material improvements in decarbonisation metrics through realistic changes in the strategic asset allocation. Material improvements would require the Fund to focus on a small subset of current asset classes with either low current emissions (e.g. US equities) or high green revenues (e.g. renewable energy). There are no significant asset classes with materially lower current emissions or higher green revenues to which the Fund does not have access. A significantly more concentrated portfolio would reduce the level of diversification, increase the volatility of investment outcomes, and potentially reduce investment returns (especially if other investors were to adopt a similar strategy).

Availability of suitable investment solutions

By contrast, we believe there is ample scope to make further progress by changes in investment structure, i.e. "how" investments in each asset class are implemented. There is already a wide range of potentially suitable investment solutions available in listed equities and credit, and equivalent products are starting to become available in sovereign debt and private markets. The chart below illustrates the spectrum of possible solutions:



Increasing impact and complexity

Key points to note include:

- Available solutions can be further categorised based on intended impact. Climate-driven strategies
 focus on reducing emissions today or increasing green revenues. Sustainable strategies aim to
 deliver impact across a wider range of ESG factors. The choice should reflect investors beliefs and
 priorities.
- The level of impact achieved generally increases from left to right, although we have seen managers making trade-offs between different types of impact. So, for example, strategies that aim to maximise green revenues generally do not deliver the largest reductions in current emissions.
- Relatively simple changes in investment structure, e.g. adopting climate-tilted indices in passive strategies or fully integrating climate factors into active strategies, can produce material reductions in current emissions compared with the wider market.
- The solutions available today in listed equities and credit can deliver a reduction in current emissions intensity in the range 40-70% and an increase in exposure to green revenues in the range 1-4x compared with the wider market.

The reduction in current emissions intensity achieved by climate-driven strategies is likely to fall as the wider market decarbonises. But even a sustained reduction of 30-50% vs the wider market is equivalent to 5-10 years of "natural" decarbonisation assuming the wider market decarbonises at the rate required by the Paris

Agreement. It is for this reason we believe that bringing forward the Net Zero date by up to 5-10 years compared with the targets set by the economies in which the Fund invests is feasible but is the limit to what could be achieved with current investment solutions whilst maintaining reasonable levels of diversification.

There is still too little empirical evidence to assess the impact of adopting climate-driven strategies on long-term investment returns. However, climate risk is not expected to be rewarded over the long-term, so strategies which aim to reduce climate risk should outperform those which do not. It is likely though that they will suffer periods of underperformance. Furthermore, it is becoming clear that the decarbonisation process will disrupt many sectors of the economy and is likely to create a wide range of potentially attractive investment opportunities. We therefore recommend that the Fund strikes a balance between actions taken to mitigate climate risk and to increase its exposure to green revenues.

Acceptability to stakeholders

Key stakeholders in this area include the UK government and LGPS members, and we are aware that activist groups have shown interest in the climate strategies of other LGPS funds.

The Fund will be aware that DLUHC intends to bring forward legislation to apply the provisions of TCFD to the LGPS. This will require funds to publish their strategies for addressing climate change, but it is our understanding that it will not impose specific objectives, e.g. Net Zero target dates. We expect any target date which is compatible with the UK's target to achieve Net Zero by 2050 should be acceptable.

Members of LGPS funds and activist groups have generally advocated earlier target dates and more aggressive investment policies, e.g. immediate divestment of all oil and gas stocks. We believe the Fund should take a more measured approach, and justify it in terms of maximising the likelihood of delivering its primary objective to pay benefits and managing the wider ESG impacts of its investment decisions more effectively. We recognise that setting a target date marginally earlier than 2050 (eg 2045) would signal to stakeholders the strength of the Fund's commitment to addressing climate change.

Summary

We summarise below the implications for the Fund of adopting different NZ target dates:

Timeframe	2030s	2040-2045	2050 (or sooner)	2060
Sovereign Pledges ¹	3 - Barbados, Maldives, Mauritania	3 - Sweden, Germany, Nepal	50 – incl. US, EU, Japan, UK	7 – incl. China, Kazakhstan
LGPS examples ²	3 - South Yorkshire, LBH&F, Swansea	5 – Clwyd, Lambeth, Ealing, Clwyd, Environment Agency	18 – including Cheshire, Derbyshire, West Midlans, Staffordshire	None
Potential Strategies	Limited universe of asset classes/stocks Intensive use of offsetting	Wide investment universe, more exclusions Promote climate- strategy innovation Stronger engagement and advocacy	Wide investment universe, limited exclusions Adoption of climate- driven investment strategies Proactive engagement	Unlimited investment universe Climate-passive investment strategies "Free riding"
Implications	Lower financial returns	Potentially enhanced medium term	Market aligned financial returns	Potential for higher short-term and

¹ ClimateWatch

² Local Government Chronicle, 10 March 2022

Reduced diversification, increased risk Limits ability to promote decarbonisation through engagement with high emissions companies Use of scarce offsetting capacity	financial returns from evolving markets May capture higher proportion of climate opportunities Short-term volatility and execution costs likely higher	Balance progressive reduction in carbon emissions with support for climate solutions providers Facilitates measured approach which responds to evolving policy/technological responses to climate change	future financial returns from unwanted holdings Potentially greater exposure to transition risk
		· ·	

We believe a Net Zero target date of 2050 or sooner would be an appropriate goal for the Fund. It would be an ambitious goal given most major economies are not on track to achieve Net Zero by then based on current pledges/policies. Targeting a date marginally ahead of most major economies (eg 2045) may enable the Fund to mitigate climate risk and capture climate-related investment opportunities more effectively. But it would require a more proactive climate strategy and additional changes to the investment portfolio, potentially increasing execution costs and risk. Most LGPS funds which have declared a target date have chosen one in this range.

Other target dates, such as 2030 or 2060, could be considered. But we believe these would expose the Fund to an increased risk of adverse investment outcomes. A target date of 2030 would likely require major changes to investment strategy to focus on a restricted universe of low emissions asset classes and stocks, thereby increasing portfolio concentration and the volatility of investment returns. 2060 would entail fewer changes in the short-term, but increased exposure to climate transition risk in the longer term.

4 Metrics and interim targets

Why set them?

Robust climate metrics can help the Fund to understand its current climate footprint, identify any gaps that exist in the data, understand which companies are most at risk from climate change and evaluate how the portfolio will evolve under different scenarios. As such, climate metrics are useful in guiding future decision making, identifying targets for stewardship action and measuring the Fund's progress towards its Net Zero goal.

Which metrics and targets?

To effectively measure and monitor a Net Zero strategy, a range of metrics are needed. Backward-looking metrics enable the Fund to assess its current exposure to climate risk and to measure the progress it has made in reducing it. Forward-looking metrics provide an indication of how climate risk may evolve over time and can be used to inform engagement activity and to assist in portfolio construction.

Any metric the Fund adopts should be robust, i.e. it should be:

- Clear and understandable;
- · Reliable, verifiable, and objective; and
- Consistent over time.

Incorporating Scope 3 emissions into climate metrics is typically considered challenging. However, the picture can be quite different if we allow for Scope 3 emissions. Scope 3 emissions in the MSCI ACWI for example account for 80% of total emissions and for any one company can be two orders of magnitude (ie 100+ times) larger than the Scope 1 and 2 emissions combined.

Lack of data coverage, poor quality data and the potential for double counting are cited as reasons not to include Scope 3. This is a risk; not including Scope 3 significantly underestimates exposure to carbon risk, hides supply chain risk and can paint a very different picture for individual company comparisons.

The NZIF recognises that Scope 3 emissions can make up a large proportion of an asset's carbon footprint, and material Scope 3 emissions should therefore be part of company targets and performance assessed as part of setting and achieving the portfolio coverage target. Recognising that the measurement of material Scope 3 emissions across several sectors is highly inconsistent, IIGCC is undertaking further work to develop expectations and guidance on measurement of Scope 3 emissions within the work of the Paris Aligned Investment Initiative

We recommend that Scope 3 emissions are included for listed equity at this stage, as a separate metric to begin with. Overall, we think that provides, on balance, a better picture than excluding it.

We recommend the Fund adopts a balanced set of medium-term objectives which could realistically be delivered over the next 5-10 years given the investment solutions expected to become available from LGPSC and third-party managers over the period. These should be aligned with the Fund's priorities and may reflect ESG issues other than climate change given the Fund's investment beliefs. Progress against any objectives should be measurable with currently available metrics.

We set out our comments on the Fund's proposed metrics and targets in the following table.

osed metrics and targets

The Fund has proposed nine metrics and targets covering its response to climate change. We comment on each of these in the table below:

Metric/Target	Metric Robust	Target Realistic	Comment
Net Zero by [2050, with an ambition for sooner]	✓	✓	A target date in the range 2045-2050 should enable the Fund to mitigate climate risk effectively and to capture climate-related investment opportunities, whilst promoting decarbonisation through engagement.
Absolute net carbon emissions to be reduced by [40] from 2019 reported levels by 2030. *	✓	?	Tracking absolute emissions is likely to be a regulatory requirement (TCFD). Current metrics cover all major GHGs not just carbon dioxide and the proposed targets should reflect this. Absolute emissions will rise due to growth in the Fund's assets and in the businesses in which it invests. For this reason, we recommend the use of an emissions intensity metric too. The proposed target is ambitious, given the Fund's starting point, the fact it is still growing and the assumption that emissions intensity in the economies in which it invests fall at the 7% p.a. called for by the Paris Agreement. We recommend the Fund develops a road-map of potential changes (and their associated impacts on emissions) to provide further reassurance that the targets are realistic. Climate change is driven by cumulative GHG emissions, so the path of emissions reduction matters. We recommend the Fund considers setting a carbon budget, based on its "fair share" of cumulative emissions, against which progress in reducing absolute emissions can be tracked. In its reporting, the Fund could consider differentiating between real world emissions reduction achieved through its stewardship of portfolio companies vs emissions achieved by divestment.
Reduce the Carbon intensity (WACI) of the Fund by [50%] from the 31st December 2019 levels for the Equity portfolio by	✓	√	Tracking emissions intensity is likely to be a regulatory requirement (TCFD).

2030. This target will extend to other asset classes as common methodology is agreed. *			There is a general move away from WACI as a basis for comparison to using Carbon Footprint (emissions/£m enterprise value of invested capital or EVIC). But WACI remains a widely reported and commonly used metric. WACI is a measure of the carbon intensity of a company's operations, so can be distorted by fluctuations in business volumes and pricing policy. Carbon Footprint is a measure of the carbon intensity of a company's capital base, so can be distorted by changes in market capitalisation. For these reasons, we recommend using an absolute emissions metric too. The proposed target seems reasonable assuming emissions intensity in the economies in which the Fund invests falls at the 7% p.a. called for by the Paris Agreement.
Reduce the proportion of the Fund with Fossil Fuel exposure within the equity portfolio (was 8.5% at 31st Dec 2019) by 31st March 2030	*	No target	Exposure to Fossil Fuels creates stranded asset risk, so measuring it is sensible. The metric needs to be defined very carefully. Does exposure cover only ownership of reserves, or production, transportation and consumption of Fossil Fuels as well? Is a materiality threshold applied? Furthermore, the metric ignores the effectiveness or otherwise of Fossil Fuel companies' climate transition plans. We understand that LGPSC is planning to refine this metric to measure the proportion of revenues derived from Fossil Fuels which we believe is a more robust metric. However, we would be cautious about setting a firm target at this stage. As with absolute emissions, the Fund should ideally differentiate between actual reductions achieved by changes in company policies vs reductions achieved by divestment.
Increase the asset coverage to [90%] by 2030 (currently at 45% 2022 est) to be analysed for WACI	✓	✓	IIGCC are currently working on how to include more asset classes. Climate reporting is now a priority for most private markets managers especially in Europe. We typically recommend a higher target for 2030 of 90%. It will be challenging to identify the correct priorities for engagement or divestment in the absence of robust climate reporting covering most of the Fund's portfolio.

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Increase allocation to climate solutions (use EU taxonomy) as	√	No target	Climate solutions are expected to represent a material investment opportunity, so measuring exposure to them is sensible.
defined by weight in clean technology from the base 2019 weight of 34.1% by 2030.			Providers of climate solutions are included within this metric at their full capital weight in the portfolio, irrespective of how important these activities are to their overall business. This may lead to misleading results. It is for this reason that we prefer the weighted average proportion of revenue derived from providing green solutions ("green revenues"). We understand that LGPSC is planning to adopt this definition.
			Defining what constitutes a climate solution is challenging. The EU taxonomy has made an important contribution in this area, but there is relatively little experience of applying it in practice.
			The EU taxonomy is necessarily rather restrictive and excludes activities that are critical to the response to climate change. These include:
			 Investments that tackle climate adaptation, a key element of the Paris Agreement and Net Zero commitments.
			Investment in companies undergoing material carbon transitions that arguably represent better opportunities to deliver real world change and enhanced returns.
			For these reasons, we would be cautious about setting a firm target at this stage.
Increase our percentage of portfolio underlying companies	✓	?	IIGCC's Supplementary Guidance on Target Setting recommends 100% alignment by 2040, so 90% by 2030 is considered a reasonable target.
in material sectors with net zero targets to over [90%] by [2030], listed equities, corporate bonds and sovereign's.	2030],		The metric does not assess the effectiveness of portfolio companies' emissions reduction programmes, so needs to be evaluated alongside actual emissions metrics to avoid the risk of greenwashing.
			Analysis of the current percentage and engagement with relevant portfolio companies to better understand their intentions on climate change is recommended to determine whether the proposed interim target is realistic.
			The proposed restriction on the scope of assets included is realistic at this stage, but early engagement with companies in private markets on this issue is also recommended.

By [2030], [90%] of the Fund's financed emmisions to be either net zero, aligned to a net zero pathway or subject to engagment programme to bring that about. Includes equities, corporate bonds and soverign bonds at present.	✓	?	NZIF Supplementary Guidance on Target Setting increases this threshold to 90% by 2030. Analysis of the current percentage and engagement with relevant portfolio companies to better understand their intentions on climate change is recommended to determine whether the proposed interim target is realistic. The proposed restriction on the scope of assets included is realistic at this stage, but early engagement with companies in private markets on this issue is also recommended.
The Fund's, LGPS Central's and Investment manager's net zero attainment relating to their direct emissions	✓	No target	Leicestershire Council and LGPS Central have both set target dates of 2030 for own operations. Decarbonising carbon-light professional service firms operating in developed countries is relatively straightforward, so it would be reasonable to expect the Fund's investment managers to accept similar targets. We would not however recommend making Net Zero target date a key criterion for manager selection. Far more important is the manager's ability to manage climate risk/opportunity in the portfolios they manage.

We would recommend the Fund considers the following additional metrics:

- Implied temperature rise this metric compares current and projected greenhouse gas emissions with companies' share of the remaining global carbon budget for keeping warming this century well below 2 degrees Celsius (2°C) and converts the overshoot or undershoot into an implied rise in average global temperatures this century. This makes it easier to identify companies not aligned with the Fund's climate goals, though the calculation depends on complex modelling and a range of assumptions. We understand this metric is being considered as a potential additional requirement under TCFD.
- Transition pathway alignment this metric measures the proportion of companies aligned with transition pathways relevant to the sectors in which they operate. Assessing companies against this metric is complex though suitable frameworks have been developed. It forms part of Metric 8 above, but could be reported separately as a key forward-looking climate metric.
- Data quality this metric can be defined in various ways but we believe it should focus on three elements: (1) timely availability, (2) results based on measurement by the portfolio company, rather than model-based estimates by a third party and (3) results subject to independent validation. We understand that DLUHC intends to introduction a data quality metric as part of the implementation of TCFD in the LGPS. Further work will be required to define the metric properly.

We acknowledge that monitoring these metrics would require additional reporting by LGPS Central and the Fund's other investment managers and we recommend that the Fund engages with them on this topic.