



LPP

Local Pensions Partnership
Investments

Real Estate Fund TCFD Product Report

For the period 01 January to 31 December 2023

Contents

Fund details

LEI 2138003C2OXS7C1PNE65

Fund size £1.72 billion

Date 31 December 2023

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Introduction

Overview of the Fund

The LPPI Real Estate Fund (“the Fund”) invests in a diversified portfolio of UK and international real estate assets with a focus on income generation. The Fund seeks to invest across uncorrelated sectors to provide stable returns. The mandate is flexible in terms of sector and geography. No more than 25% of the Fund may be invested in value-add and opportunistic assets.

The Fund is a sub-fund of the LPPI Real Estate Asset Pooling Authorised Contractual Scheme (ACS), authorised by the UK Financial Conduct Authority (FCA). Local Pensions Partnership Investments Ltd (LPPI) is the ACS manager who is incorporated in England and Wales and is authorised and regulated by the FCA. More information on the LPPI Real Estate ACS can be found on our [website](#).

Background to TCFD product reports

The recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) set out how organisations across sectors and geographies should disclose climate-related financial information. The recommendations are structured around four thematic pillars that represent core elements of how organisations operate: Governance, Strategy, Risk Management, and Metrics and Targets. We make detailed disclosures under each pillar within our LPPI TCFD Entity Report, consistent with the TCFD Recommendations and Recommended Disclosures, and as required by our regulator, the Financial Conduct Authority.

Separately, we are also required to provide a product report for each of our authorised funds consistent with the TCFD Recommendations and Recommended Disclosures (“TCFD product report”). This is the product report for our Real Estate Fund and contains information specific to the Fund.

Our approach with respect to Governance, Strategy, and Risk Management for the Fund does not deviate materially from LPPI’s overarching approach. Information on this is available in our LPPI TCFD Entity Report, available at www.lppi.co.uk.



Strategy

Our approach to assessing and managing the risks and opportunities posed by climate change reflects the following framing.

Climate-related risks include the adverse impact on the value of assets or income streams arising from transition risk and physical risk.

Transition risk is the risk of adverse changes in the value of assets or income streams arising from the nature and speed of mitigation and adaptation to climate change resulting from policies and requirements by governments, influential global bodies, and regulators.

Physical risk is the risk of adverse changes in the value of assets or income streams because of severe weather events, such as flooding, directly on physical assets or indirectly through business disruption, resource availability, and disruption to supply chains or service providers. Physical risks can be acute, which are event driven, and chronic, which are longer-term shifts in climate patterns.

We have set out the broader climate-related risks and opportunities in our TCFD entity report. Our approach for the identification of these risks and opportunities was based on the categories defined by the TCFD Recommendations and Recommended Disclosures.

Our short-term horizon looks at a three-year period, which aligns with LPPI's business plan horizon and the triennial valuations of our pension scheme clients. Our medium-term horizon looks forward up to 10 years, which covers the period to our interim investment net zero commitments. Our long-term horizon looks at the time horizon up to 2050, the target net zero-time horizon for the Fund.

This framing informs how climate change is incorporated into our stewardship of assets and considered as part of asset allocation decisions and portfolio monitoring activities.

LPPI delegates the management of its direct UK real estate ("UK Directs") to Knight Frank Investment Management ("KFIM"), which represents approximately 55% of the assets of the Fund by value. In addition, in the reporting year, the Fund has single asset UK joint ventures approximating a further 10% of the assets of the Fund. The remaining 35% relates to investments in externally managed funds ("indirect portion").



The Fund’s Investment Team reviews, assesses, and monitors climate-related risks and opportunities across the portfolio. In relation to UK Directs, KFIM adopts a whole portfolio approach to determine the climate-related risks posed to UK Directs and is in the process of evolving our broader ESG strategy to tackle wider market issues including engaging with our tenants to assist them where possible in transitioning to a low carbon economy.

We understand that climate-related risks can vary materially between assets or companies even within the same sector. Thus, evaluating relevant risks and opportunities is a fundamental part of the investment process and ongoing portfolio management. Engagement with the operators and management teams of our properties is ongoing with focus placed on enhanced data collection, risk monitoring, and discussions around retrofitting premises and the appropriate targets and disclosures for their business.

Policy and legal risk is generally considered to be the predominant transition risk to an asset or portfolio. For example, the minimum energy efficiency standards (MEES) legislation, applicable to private rented property in England and Wales, makes it unlawful for a landlord to grant a new tenancy or to extend or renew an existing tenancy of commercial property that has an energy performance certificate (EPC) rating of F or G. The Government is expected to increase the minimum EPC rating to B by 2030, where cost effective. The EPC profile of our "UK Directs" is reported to us by KFIM in quarterly reporting.

The table opposite outlines the climate-related risks and opportunities that are specific to the Fund. We have provided illustrative examples of how the climate-related risks and opportunities could impact the Fund should they materialise, and note whether the potential impacts include increased costs, write-offs, or early retirement of existing assets.

Risk category	Risk description	Illustrative risk impacts	Primary timeframe
Transition: Policy and legal	Changes in laws, regulations, or policy guidance	Increased capital expenditure to comply with regulation requiring more energy efficient properties	Short term
Transition: Market & Reputation	Changing demand for and supply of property	Reduced demand from tenants in favour of more energy efficient property, leading to reduced property values and income streams	Short term
		Reduced demand from tenants due to reputation of the asset owner leading to reduced property values and income streams	Medium term
Physical: Operational	Acute and chronic climate impact on physical operations	Property affected by physical effects of climate change require increased recovery costs, insurance costs and capital expenditure	Long term
		Physical damage to property resulting in investment write-offs	Long term
Opportunity category	Opportunity description	Illustrative opportunity impacts	Primary timeframe
Resource Efficiency, Energy Source	Changes in technology, new technology	Investment in property to improve energy efficiency could lead to increased income streams and enhanced property values	Medium term
Markets, Products and Services	Access to new markets and enhanced portfolio diversification	Investment in more energy efficient property leading to increased tenant demand, income streams and enhanced property values	Medium term
Resilience	Investment in resilience to acute and chronic climate impacts	Investing in property in climate resilient locations could lead to increased income streams and tenant demand	Long term

In relation to UK Directs, at pre-acquisition stage we have procedures throughout the due diligence process which help to identify and manage climate-related risks. Additionally, several checks are carried out which could provide opportunities, these include assessing each new asset's potential for on-site renewable energy generation and reviewing alignment to legislative compliance and frameworks. At the post-acquisition stage, asset managers are responsible for developing asset plans that incorporate sustainability key performance indicators, which property managers are annually assessed against. This ensures there is responsibility for managing climate-related risks and opportunities at the asset level.

We have been implementing climate-related risk mitigation measures for the most significant climate change risks facing UK Directs, such as flooding. Initially an in-depth portfolio review was conducted, identifying potential flood risks to UK Directs and, if required, a more detailed survey of each high-risk asset will be conducted to ensure there is an appropriate flood management plan in place. A flood risk assessment will be undertaken on an annual basis.



Metrics and targets

We use a range of metrics to quantify and monitor climate-related considerations for the Fund. The majority of metrics focus on carbon emissions which provide an indication of the relative positioning of the Fund.

The metrics presented in this section reflect the emissions intensity and portfolio alignment metrics for the UK Directs. Work is underway to verify the data obtained for the JVs, and to source information on the indirect portion of the Fund where measurement and disclosure are weaker.

Fig.1 shows the proportion of carbon emissions data for the Fund's assets that is reported, estimated or where there is currently no data available. The 55% of AUM covered in this section relates to the UK Directs.

Fig.1: Data Availability by AUM Covered (%) as at 31 December 2022

Asset class	Real Estate
AUM Covered (%)	55%
AUM Not Covered (%)	45%
Reported Emissions Data (% of AUM covered)	83%
Estimated Emissions Data (% of AUM covered)	17%

A tenant engagement process and green lease clauses are in place to capture energy consumption, efficiency measures and fuel mix across the direct assets within the Fund. This data is used to calculate the total greenhouse gas (GHG) carbon footprint.

The timeliness with which data is available for underlying assets is challenging. There is a significant time lag between emissions being released, reported at the corporate level and being quality assured ready for disclosure. As such, in this report we apply tenant emissions data to relevant holdings as of 31 December 2022.

Property managers and external ESG consultants also engage with tenants to capture broader metrics such as health and well-being and to assess building safety as part of property managers inspections and record any risk.

In turn, we review the below metrics to monitor transition risks and opportunities.

- Breakdown of EPCs by property type
- Number of properties with renewable electricity generation on site
- Operational carbon emissions (tCO₂e)
- Operational carbon intensity (tCO₂e/m² floorspace)
- Energy mix of tenanted properties
- Number of EV charging points

Source: KFIM

Carbon footprint of our investments

Fig.2 provides the key measures for the Fund as of 31 December 2022. Across these assets there are no landlord procured water or waste contracts and, as such, this emission stream is not included within the data presented below.

Fig.2: Climate Metrics

Climate Metrics	Unit of Measurement	31 December 2022
Scope 1 GHG Emissions	tnCO ₂ e/yr	231.0
Scope 2 GHG Emissions – Market Based	tnCO ₂ e/yr	127.4
Scope 3 GHG Emissions - Tenant	tnCO ₂ e/yr	7,630.1
Total GHG Emissions (Scope 1, 2 & 3)	tnCO ₂ e/yr	7,988.4
GHG Intensity by Capital Employed	kgCO ₂ e/yr/£M	0.0
GHG Intensity by Owned Area (Scope 1 and 2)	kgCO ₂ e/m ² /yr	19.4
Average Portfolio Energy intensity	kWh/m ² /yr	174.4
1.5 Degree Energy Intensity Target	kWh/m ² /yr	106.7
Total Data Coverage for the Fund	AUM (%)	55%

Please refer to the appendix for key definitions and formulas used for calculating emissions metrics.

Carbon intensity and engagement metrics are used to assess climate-related risks and opportunities within our investment portfolios. Our backward-looking metrics include financed emissions, which are absolute, as well as intensity-based metrics. Our forward-looking metrics consider portfolio alignment with regards to implied temperature rise and portfolio coverage.

Source: LPPI, KFIM

The carbon footprint analysis considers capital employed, owned area, and average portfolio intensity. This method measures the carbon efficiency of a given portfolio, defined as the Absolute GHG emissions of the portfolio per £m of Average Capital Employed (sum of capital employed divided by the months in the period and includes capital employed of sold assets).

The GHG intensity metric is calculated using the net lettable area of UK Directs. We use this metric instead of Weighted Average Carbon Intensity (WACI), to understand emissions after adjusting for the size of a property as it is the most appropriate approach for a real estate fund and is recommended by the Partnership for Carbon Accounting Financials (PCAF), which is an industry-led partnership to facilitate transparency and accountability of the financial industry to the Paris Agreement.

Total Carbon Emissions

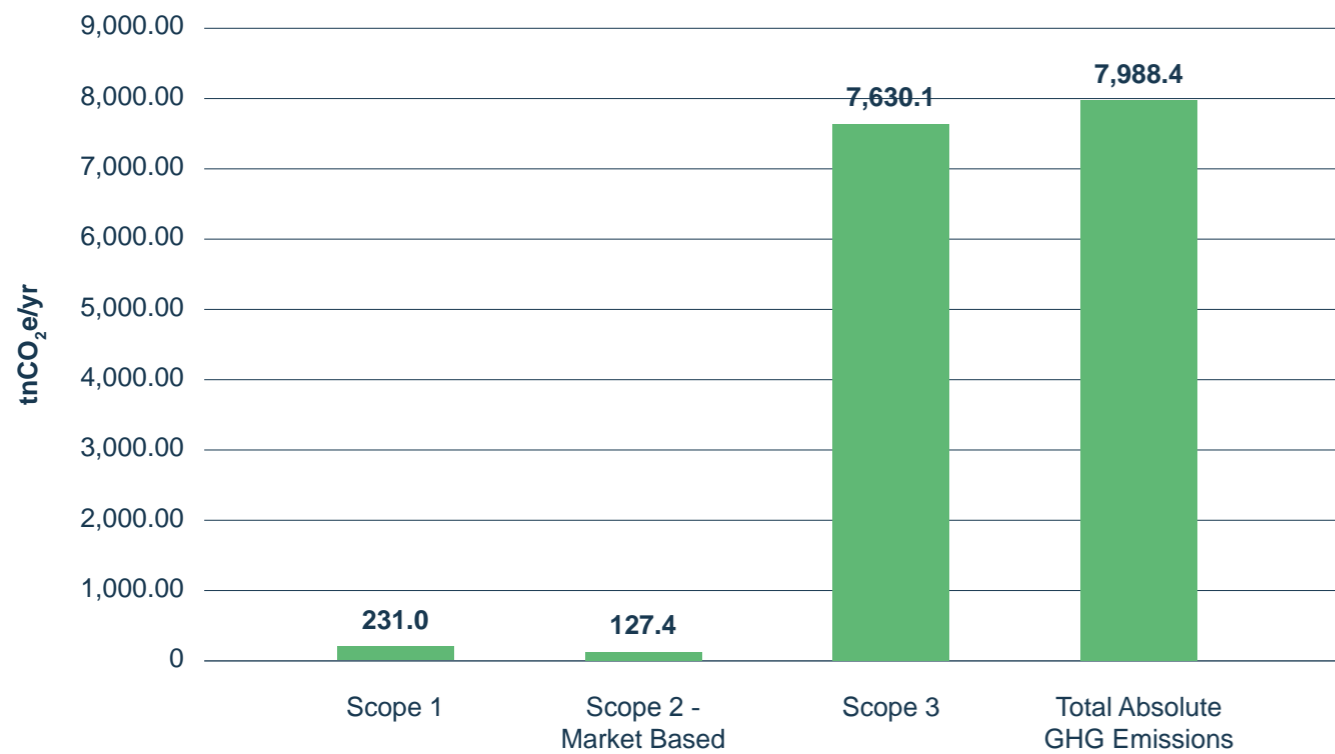
The Total Carbon Emissions (a financed emissions metric expressed in in tCO₂e) for both Scope 1 and 2, and Scope 3 (as of 31/12/2022) are presented below.

The total Scope 1 and 2 emissions reflect the energy associated with landlord-purchased gas and electricity.

The energy purchased by the occupiers represent Scope 3 emissions. An occupier engagement programme is in place to support data collection efforts.

UK Directs have a small proportion of Scope 1 and 2 emissions through vacant units and common areas. The majority of GHG emissions is classified as Scope 3 representing the energy purchased by the occupants of the assets.

Fig. 3: Total Carbon Emissions



EPC metrics

The EPC metrics below are for the UK Directs and are dated 31/12/2022.

Fig 4: EPC Ratings (UK Directs)

EPC Band	% Number of Units	% Area	% Rental Revenue (Passing)	% ERV
A	7.0%	2.0%	2.9%	2.7%
B	37.8%	39.8%	51.4%	47.6%
C	23.9%	19.7%	24.1%	23.4%
D	11.7%	13.5%	15.1%	14.1%
E	14.4%	4.3%	3.8%	7.4%
F	0.0%	0.0%	0.0%	0.0%
G	1.3%	0.1%	0.3%	0.2%
EPC missing or not yet applicable (developments)	3.9%	20.6%	2.4%	4.6%



Scenario analysis

Climate scenario analysis is a valuable tool in ensuring the Fund achieves net zero and positively contributes to a 2°C or lower Paris Agreement target. We use the CRREM tool to apply the 1.5°C target to compliment the retrofit budget needed to upgrade properties and relate this to internal budgets and available cashflows. According to the Net Zero Investment Framework (NZIF) supplementary guidance on target setting, net zero is where an asset is already achieving the energy and emissions intensity required by the CRREM 1.5°C pathway at 2050. CRREM publicly released decarbonisation pathways translate the ambitions of limiting global warming to 1.5°C and 2°C by the end of the century into regionally- and property-type-specific trajectories against which real estate assets and portfolios can benchmark themselves.

The scenarios are used to assess the impact of the risks, incorporating valuable factors ranging from frequency, duration, velocity, and its financial impact towards the business.

Climate Scenario Analysis	Portfolio (%)	Benchmark (%)
Aggregated Climate VaR	-5.8	-9.8
Transition Climate VaR (Orderly)	-4.2	-5.9
Transition Climate VaR (Disorderly)	-6.7	Not available
Transition Climate VaR (Hot House)	-0.6	Not available
Physical Climate VaR	-1.7	-3.8
Coverage (Physical VaR), % Capital Value	100.0	100.0
Warming Potential (°C)	2.9	3.8

We also compare the physical risks in contrast with transition risks which would occur from moving into a lower-carbon economy.

In 2022, we subscribed to the MSCI climate platform to provide a holistic view of the risks posed by climate change. We have begun to prepare for the upcoming transitional risks such as more stringent environmental policy including calculating Climate Value at Risk (CvaR). CvaR looks at the impact on the net present value of the asset from future costs attached to transition risk (lowering the carbon emission of the asset in the future), physical risk (cost of damage due to extreme weather), or the sum of both, expressed as a % of the asset's capital value. It is calculated for a given carbon emissions reduction scenario or climate change scenario, with a given scenario outcome (aggressive or average) in case of physical risk.

The results of scenario analysis conducted in 2022 on UK Directs are presented below:

In a "Hot House" scenario, we expect to see greater physical risk than transition risk. Under this business-as-usual scenario, there is less pressure for industries to transition away from fossil fuels and global efforts to address climate change are considered insufficient to meet the Paris Temperature Goal. While transition risk may be lower, the severity of physical risks poses a greater risk to the portfolio as global warming is expected to continue unchecked, resulting in likely irreversible changes in climate.

In running the physical and transitional risk reports, we can identify what our most material issues are and their potential impacts.

These risks include a prospective of costly damages upon assets, fines and voids, a loss of footfall to our assets, increased operating costs and a possible overall loss of rental and capital value. With this information, we can target a holistic understanding of how climate-related risks can affect our business and how the implementation of ongoing risk management is monitored throughout the year.

The table below outlines the capital value impact across several identified physical risks that may impact the Fund under two outcomes: aggressive and average.

Physical Risk	Aggressive Outcome				Average Outcome	
	REMIND 3°C (Current Policies)		Financial Risk Category	REMIND 3°C (Current Policies)		Financial Risk Category
	% of CV	USDm		% of CV	USDm	
Extreme Cold	0.0	0.1	Negligible Risk Reduction	0.0	0.1	Negligible Risk Reduction
Extreme Heat	0.0	-0.2	Negligible Risk	0.0	-0.1	Negligible Risk
Fluvial Flooding	-1.3	-15.8	Moderate Risk	-1.0	-11.3	Moderate Risk
Coastal Flooding	0.0	0.0	No Identifiable Risk	0.0	0.0	No Identifiable Risk
Tropical Cyclones	-0.3	-3.0	Negligible Risk	0.0	-0.3	Negligible Risk
Wildfire	0.0	0.0	No Identifiable Risk	0.0	0.0	No Identifiable Risk
Aggregate Physical Climate VaR	-1.5	-18.3	Moderate Risk	-1.0	-11.6	Moderate Risk

Our net zero targets

The UK Environment Agency provides flood risk ratings to help assess vulnerability to flooding. It categorises flood risk into different levels based on the likelihood of flooding in a specific area. The ratings include ‘Low Risk’ (areas where flooding is unlikely or rare); ‘Medium Risk’ (areas with moderate flood risk, which may experience occasional flooding); and ‘High Risk’ (areas prone to frequent or severe flooding where properties in these areas are at significant risk).

Unless specifically approved by LPPI, LPPI has set the requirement for acquisitions to be permitted only in areas with less than 0.1% (1 in 1000, zone 1) chance of flooding from rivers or the sea occurring each year as assessed by the Environment Agency Flood Map for Planning.

In all cases, properties will not be acquired unless the risk of surface water flooding has been assessed and considered in the purchase price where necessary. In addition, anything over a ‘medium’ risk will need to be approved by LPPI. As of 31/12/2022, we have assessed the rental value (% of UK Directs portfolio annual rental amount) subject to high, medium, and low risk. In some cases, assets within the portfolio were under construction at the time of analysis and excluded from this report.

Probability of Flooding	Number of Assets	Rental Value Flood Risk
High	4	6.0%
Medium	6	13.2%
Low	39	80.8%

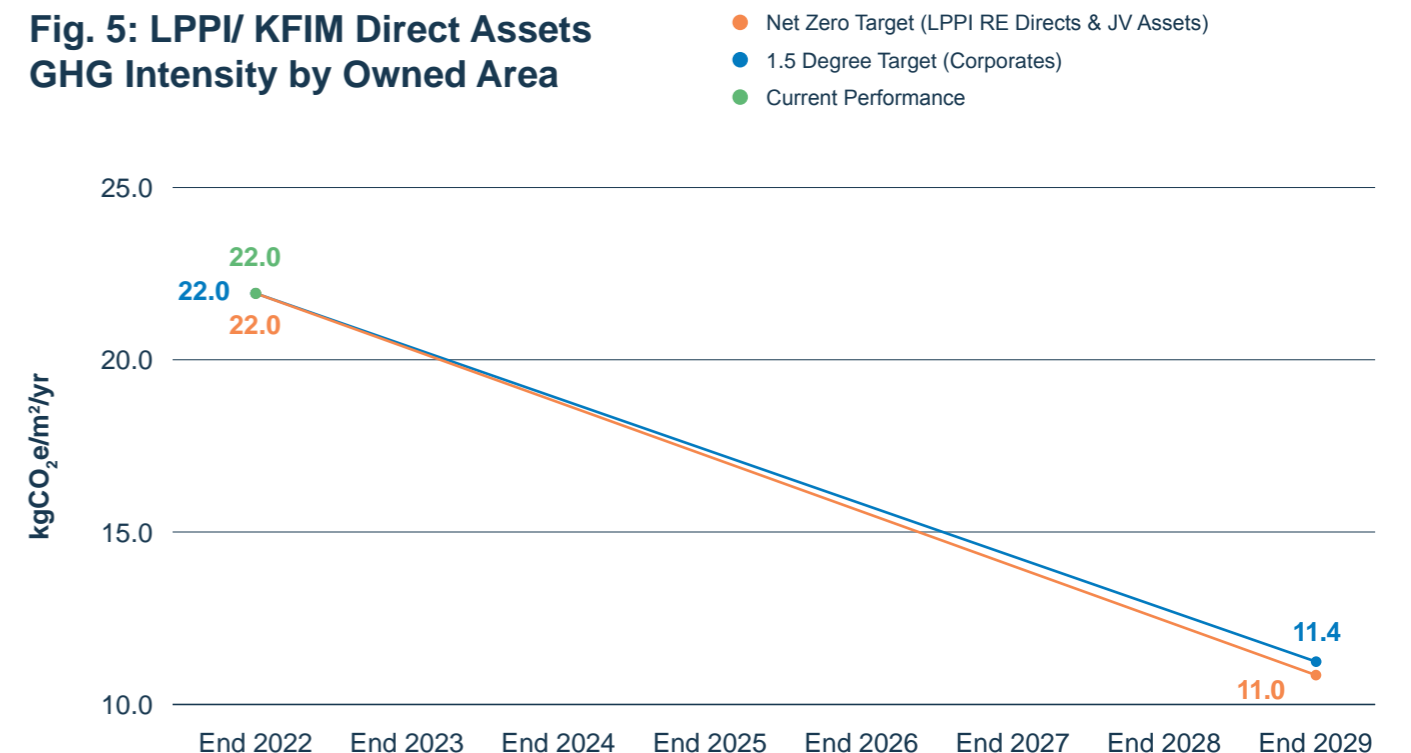


LPPI has voluntarily made a public commitment to the goal of aligning our portfolio with net zero emissions by 2050 in line with the IIGCC Net Zero Asset Managers Commitment (NZAM) and the IIGCC Net Zero Investment Framework (NZIF). The targets encompass UK Directs, and 2 additional single asset joint ventures. Collectively they cover c.65% of the Fund’s assets. Work continues to source information on the indirect portion of the Fund and a plan will be established which reflects the feasibility of target setting next year based on the data availability.

Decarbonisation target

The Net Zero Target (green line in the chart below) is a decarbonisation pathway of 50% reduction in (average) emissions intensity from December 2022 to December 2029. The graph below presents the GHG intensity (blue line), covering 65% of the Fund’s assets, benchmarking it against the floor-area-weighted decarbonisation pathway. The decarbonisation pathways developed by the CRREM initiative serve as a science-based, widely recognized, easily understandable basis for actionable targets. The GHG intensity is currently well within the 1.5°C target.

Fig. 5: LPPI/ KFIM Direct Assets GHG Intensity by Owned Area



Appendix

Coverage target

At least 90% of the UK Directs plus any joint ventures to be assessed as net zero, aligned or aligning with a net zero pathway by 2025, with the overall ambition for 100% of assets to be assessed as net zero or aligned by 2040. The alignment coverage metric, calculated as the aggregated % AUM of the Fund in material sectors that is Net Zero, Aligned, or Aligning, was 95.94% in Dec-2022.

Please refer to the appendix for the definition of Net Zero, Aligned and Aligning.

Material sectors have been defined by IIGCC for consistency in the IIGCC Net Zero Implementation Guide. They are the sectors whose activities make the largest contribution to total emissions globally and which will need to produce the materials, develop the critical technologies, and evolve the lower emitting, more energy efficient processes that achieving a sustainable global economy depends on. Real Estate is considered a material sector for the Fund.

Engagement Target

90% of UK Directs plus any joint ventures will be assessed as Net Zero, Aligned with a net zero pathway or the subject of direct or collective engagement and stewardship actions by 2024. (Baseline: Dec-2022)

The following table illustrates progress against the engagement target. The % of financed emissions (the Total Carbon Emissions metric) in material sectors that are Net Zero/Aligned/under direct or collaborative engagement as of December 2022 are:

Alignment/ engagement	% of Financed Emissions	Total Cumulative
Net Zero	0.0%	0.0%
Aligned	30.5%	30.5%
Under collaborative engagement (if not already aligned)	69.2%	69.2%
% of financed emissions that are under direct engagement (if not already Aligned)	0.3%	69.5%

Carbon emissions metrics explained

We use the following metrics to measure the collective carbon impact of the Fund's holdings, calculated according to TCFD standards, which in turn are based on the internationally accepted GHG Protocol:

Metric	TCFD definition, based on GHG Protocol
Scope 1 Greenhouse Gas Emissions (Metric Tonnes)	Direct GHG emissions that occur from sources that are owned or controlled by the company.
Scope 2 Greenhouse Gas Emissions (Metric Tonnes)	GHG emissions from the generation of purchased electricity consumed by the company.
Scope 3 Greenhouse Gas Emissions (Metric Tonnes)	GHG emissions that are a consequence of the activities of the company but occur from sources not owned or controlled by the company.
Total Greenhouse Gas Emissions (Metric Tonnes)	Total of Scopes 1 and 2 until June 2024, and total of Scope 1, 2, and 3 from June 2024 onwards.
Total Carbon Footprint (Metric Tonnes per \$1m AUM invested)	Total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in tonnes tCO ₂ e/\$m invested.
GHG Intensity by Capital Employed	Greenhouse Gas (GHG) Intensity by Capital Employed refers to the measurement of greenhouse gas emissions in relation to the capital invested or capital employed in an economic activity. It quantifies the environmental impact of a business or industry based on the amount of GHGs emitted per unit of capital invested.
GHG Intensity by Owned Area	Greenhouse Gas (GHG) Intensity by Owned Area is a metric that assesses the environmental impact of greenhouse gas emissions in relation to the total area owned or controlled by an entity.

LPPI calculates the emissions performance of its investments through two metrics:

Metric	Formula	Description
Carbon Intensity	$\sum_i \left(\frac{\text{Current value of investment}_i}{\text{Issuer's market capitalization}_i} \times \text{Issuer's Scope 1 and Scope 2 GHG emissions}_i \right)$ $\sum_i \left(\frac{\text{Current value of investment}_i}{\text{Issuer's market capitalization}_i} \times \text{Issuer's \$M revenue}_i \right)$	Carbon emissions intensity- measures the volume of carbon emissions per million dollars of revenue, also known as the carbon efficiency of a portfolio, expressed as tCO ₂ e/\$m revenue
Carbon Footprint	$\frac{\sum_i \left(\frac{\text{Current value of investment}_i}{\text{Issuer's market capitalization}_i} \times \text{Issuer's Scope 1 and Scope 2 GHG emissions}_i \right)}{\text{Current portfolio value (\$M)}}$	Portfolio carbon footprint- total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in tCO ₂ e/\$m invested.

PAI Net Zero Alignment

Net Zero	An asset which is already achieving the energy and emissions intensity required by the CRREM 1.5°C pathway at 2050
Aligned	An asset which is on track with the current energy use and emissions intensity levels that are consistent with achieving net zero and is expected to remain consistent the CRREM pathway based on projected performance including planned retrofits
Aligning	An asset with a target to achieve consistency with CRREM pathway, and evidence of a strategy to achieve this
Not aligned	All other assets

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Incorporated in England and Wales and trading as LPPI (Company registration number: 09835244)

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