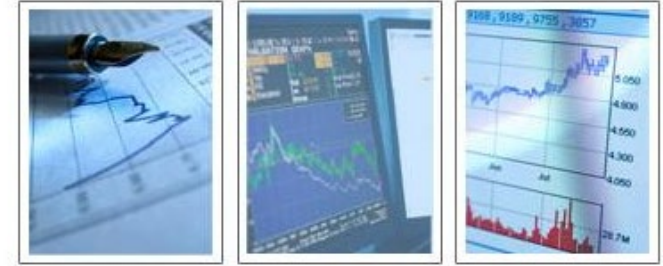


P O R T F O L I O  
E V A L U A T I O N  
L I M I T E D



Specialists in Investment Risk and Return Evaluation

Quarterly Risk and Return Analysis  
Total Fund

Worcestershire County Council Pension Fund

Period ending 31<sup>st</sup> March 2023



Specialists in Investment Risk and Return Evaluation



## Contents

### **Worcestershire County Council Pension Fund Total Fund**

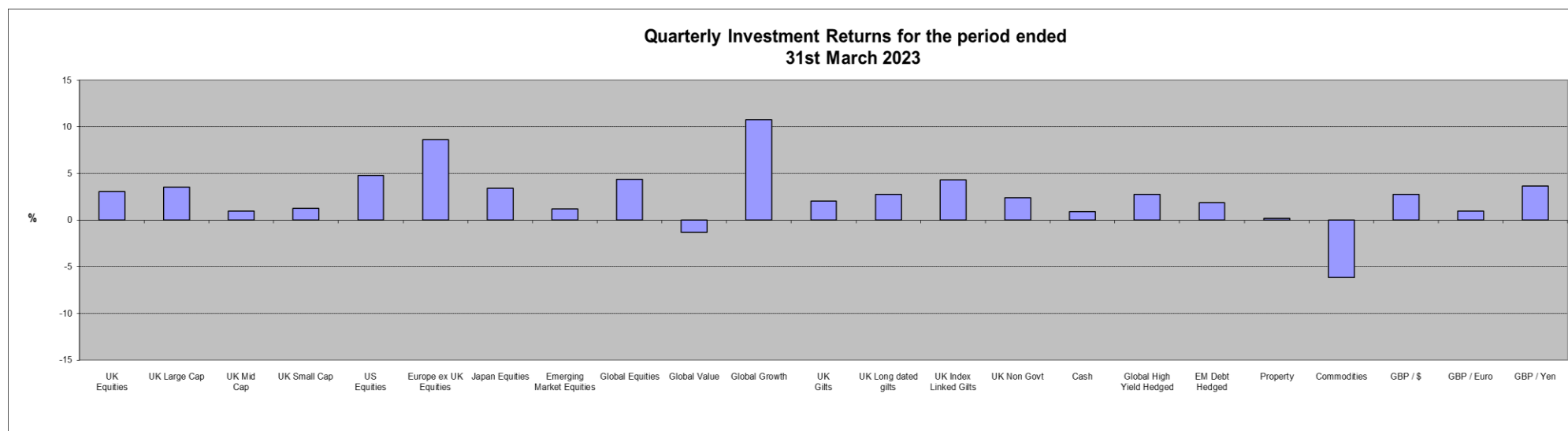
- Portfolio Evaluation Market Commentary 01
- Worcestershire County Council Pension Fund Commentary 03
- Total Fund Overview 05
  - Attribution To Total Fund Excess Return Analysis - Quarter End 06
  - Attribution to Total Fund Excess Return Analysis - Year End 07
  - Attribution to Total Fund Excess Return Analysis - 3 Year End 08
  - Manger Performance Summary 09
  - Reconciliation Analysis 11

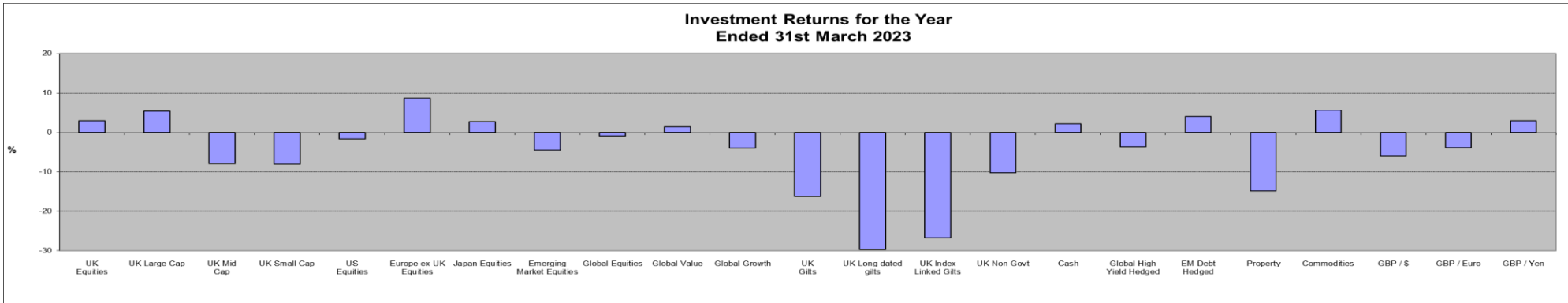
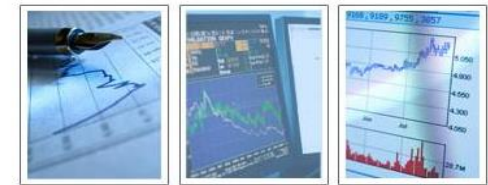


## Portfolio Evaluation Ltd Market Commentary Q1 2023 (Sterling)

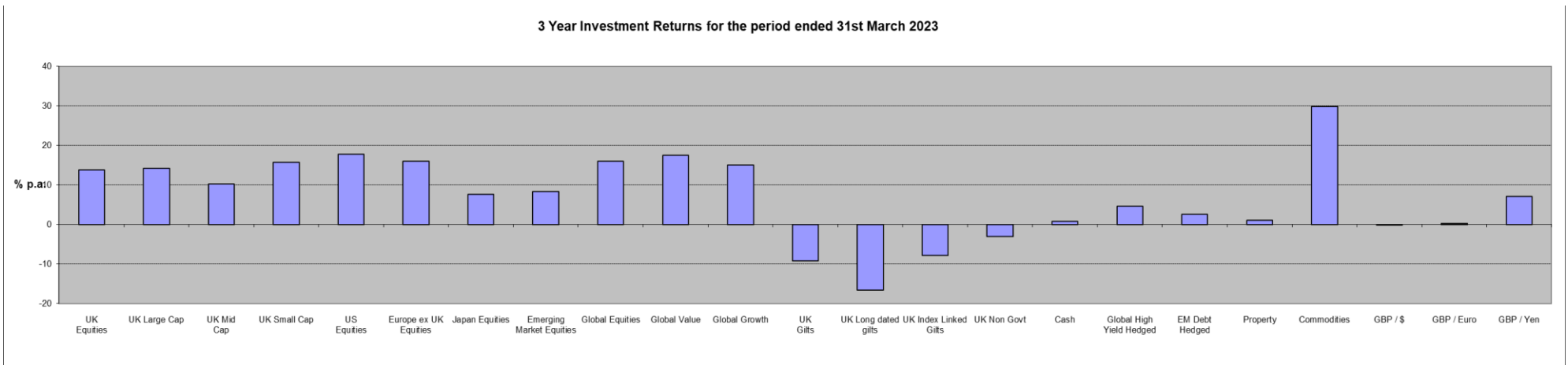
Q1 2023 witnessed key equity markets, corporate bonds, many gilt markets, and property rising. Commodities was the key loser. Sterling also continued to strengthen; however, over the year the strong dollar / weak sterling and the weight of USD assets in the global indices has impacted GBP returns. For the quarter within global equity sectors the majority have had positive returns except for Energy, Healthcare, Utilities, and Information Technology which had significant negative returns. The year ended March 2023 has seen mixed results with some asset classes generating positive returns (led by UK equities, European equities and Commodities) and some negative returns (led by bond asset classes and property). This reflects the struggles investors have had digesting high inflation, central bank tightening, the war between Ukraine and Russia, energy supply problems, tightening labour markets, COVID and output falling in China (this now appears to have changed). Over the three-year period (since the first lockdown) equity markets and commodities have had strong positive return whilst most bond asset classes have had negative returns. Over the one and three-year periods we have seen value stocks outperform growth stocks, but over Q1 Growth has outperformed value equities.

It should also be noted that many of our clients are continuing to fund 'alternative' asset portfolios. We saw some clients being impacted by increasing yields requiring LDI portfolio margin accounts to require significant funding; this in some instances is requiring selling other portfolio assets and it should be noted that the BoE had to assist this part of the market in early October.





It appears that going into 2023 many investors are apprehensive. Many investors feel that the era of low interest rates fuelling markets has ended. Although inflation rates have reduced, they remain stubbornly high, and growth will reduce. Many market commentators expect the U.S. and Europe to escape recession. However, they do expect interest rate rises albeit at a slower pace than in 2022 and to peak this year. Risk within asset classes and correlations has increased over the year. The outlook for market risk is uncertain.



**For further information** If you would like further information about the topics contained in this newsletter or would like to discuss your investment performance requirements please contact Nick Kent or Deborah Barlow (e-mail: [nick.kent@portfolioevaluation.net](mailto:nick.kent@portfolioevaluation.net)) or visit our website at [www.portfolioevaluation.net](http://www.portfolioevaluation.net). Please note that all numbers, comments, and ideas contained in this document are for information purposes only and as such are not investment advice in any form. Please remember that past performance is not a guide to future performance.

## Worcestershire County Council Pension Fund - Commentary

### Period ending 31<sup>st</sup> March 2023

**QUARTERLY SUMMARY:**      **Worcestershire County Council Pension Fund Return: 2.7%**      **Benchmark Return: 3.2%**      **Excess Return: -0.5%**

- This quarter has been quiet as regards new fund investments. The final cash from the R&M EPO was transferred out. Significant investments were made into the Gresham House Forestry Growth & Sustainability Fund and the Gresham House BSIF II Infrastructure Fund (allowing for reporting lags).
- The Fund and its benchmark have both generated positive returns, but the Fund has underperformed its benchmark by -0.5% excess.
- Equity returns outperformed the benchmark due to the Active Pool as all four portfolios in the Pool outperformed their benchmarks (the LGPSC Global Sustainable Equity Active Targeted Fund, the LGPSC Sustainable Equity Active Thematic Fund, the Nomura Far East portfolio, and the LGPSC EMM). The passive equity pool performed broadly in line with the benchmark (as expected) as did the Total Alternatives Equity Pool. Additionally Total Fixed Income outperformed its benchmark. The primary areas of underperformance have been generated by Property and Infrastructure asset classes. It should be noted that the positive appreciation of sterling versus the US dollar has been a negative contributor to the Fund.
- Within the primary asset classes, equity assets were the highest returning generators over the quarter at 4.3%. Fixed Income Assets had a return of 2.4%. Infrastructure assets had a return of -1.8% whilst Property assets generated the lowest return of -2.3%. Within equities, the Alts Pool had the highest return of 5.7%, the Passive Pool had a return of 4.6% (approximately in line with the benchmark) and the Active Pool had a return of 3.2%.
- The Fund remains underweight Total Fixed Income and is overweight equities primarily due to the overweight exposure to UK equities. Property and Infrastructure are in line with their strategic weights. The Fund underperformed the benchmark primarily due to Property and Infrastructure. Total Fixed Income and Asset Allocation were neutral contributors to excess return. Equity assets were a positive influence on excess return.
- The benchmark structure continues to influence excess return as, although the weight to Fixed Income and some equity portfolios is fixed, it is necessary to neutralise the asset allocation weights of property and Infrastructure to be in line with their asset class weights within The Fund. Any residual is allocated to largely to the UK passive portfolio but the LGPSC Global Sustainable Equity Active Targeted Fund, the LGPSC Sustainable Equity Active Thematic Fund are also impacted by the rebalancing process.
- The latest valuation data supplied by Bridgepoint, Green Investment Bank, Gresham House, Hermes, Invesco – UK Property Fund, Stonepeak Partners III, VENN and Walton Street is lagged by three months and was for periods ending June 2022 whilst the Gresham House Forestry Funds and the Stonepeak Partners Fund IV have lags of 6 months.

**YEAR SUMMARY:      Worcestershire County Council Pension Fund      Return: 1.2%      Benchmark Return: 1.7%      Excess Return: -0.5%**

- The Fund and its benchmark have generated positive returns, but the Fund has underperformed its benchmark by -0.5% excess. The underperformance has been primarily generated by equity assets, and by the performance of the Fixed Income assets which underperformed. The Infrastructure Pool slightly underperformed whilst the Property Pool outperformed. It should be noted that many of the Alternative asset pools are investing in new portfolios; these types of portfolios often underperform initially due to the expenses of these funds 'investing' and that it takes time for many of these vehicles to generate positive significant returns from their investments.
- With the closure of the EPO strategy the Fund, due to the assets being invested in passive equities, has become overweight passive equities due to becoming overweight the UK Index Fund.
- The most significant drag on excess return was primarily generated by the Active Equity Fund. The highest positive contributors to excess return were the EPO and Property assets.
- Infrastructure assets generated the highest return of 12.8% followed by Property with a return of 9.9%. Equity assets were the next highest return generators over the year and excluding the overlay generated a return of -0.3% whilst Fixed Income generated the lowest return with a return of -6.5%. Within equities the Passive Pool was the highest return generator followed by the Alternatives Pool and finally the Active Pool (generating returns of 2.6%, 0.3% and -4.8% respectively), all of them underperformed their benchmarks. Fixed Income assets had a return of -6.5% underperforming by -3.5%.

**THREE YEAR SUMMARY:      Worcestershire County Council Pension Fund      Return: 9.6% p.a.      Benchmark Return: 11.0% p.a.      Excess Return: -1.4% p.a.**

- Over the three-year period, the Fund has generated a positive return of 9.6% p.a. and has underperformed the benchmark. It should be noted that there has been a considerable number of new mandates established in that timeline especially in the property, infrastructure, and bond asset classes. Additionally, the equities have been restructured.
- All primary asset classes, except for Total Fixed Income have generated positive returns.
- The equity protection overlay program has decreased the Fund return over the three-year period (by -0.3% p.a.). It should also be noted that the EPO strategy has lowered the volatility of the Fund as expected.
- The Total Risk and Active risk are consistent with a typical multi asset class fund that uses both passive and active strategies.

Client: Worcestershire County Council Pension Fund  
 Manager: Multi-manager  
 Mandate: Total Fund  
 Asset Class: Combined Assets  
 Benchmark: Worcestershire Total Fund Index  
 Inception: 31-Mar-1987  
 Mkt Val: £3.6bn

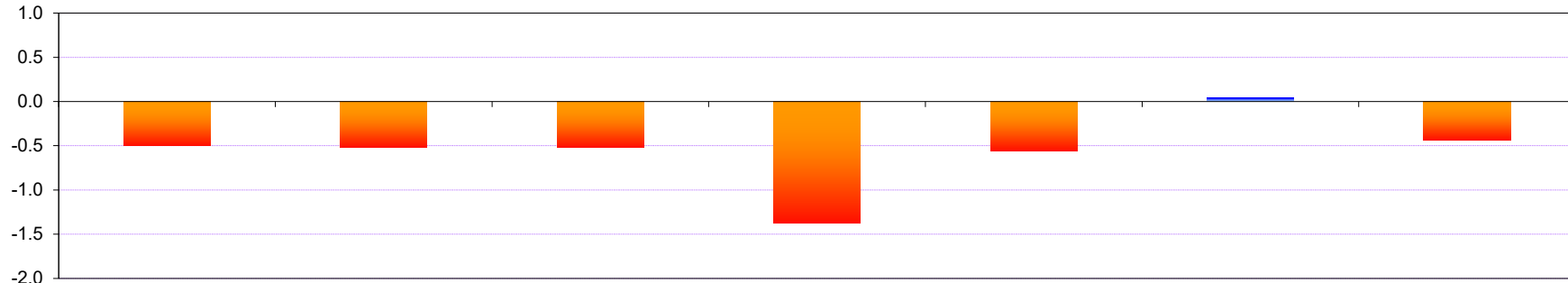
## Total Fund Overview

### Worcestershire CC Pension Fund

Report Period: Quarter Ending March 2023



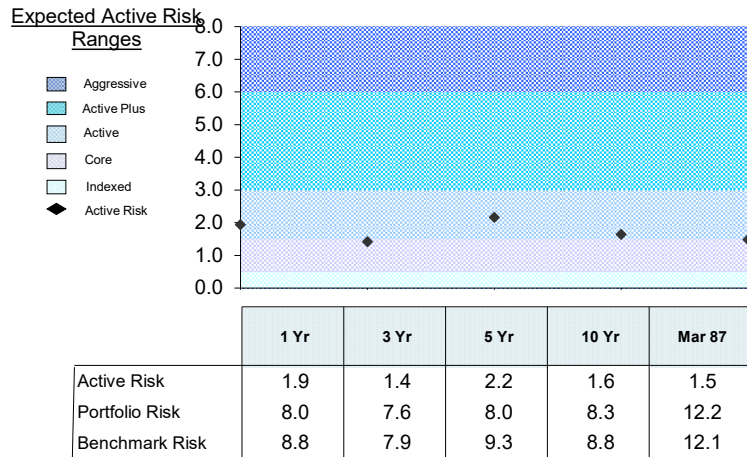
#### Excess Return Analysis (%)



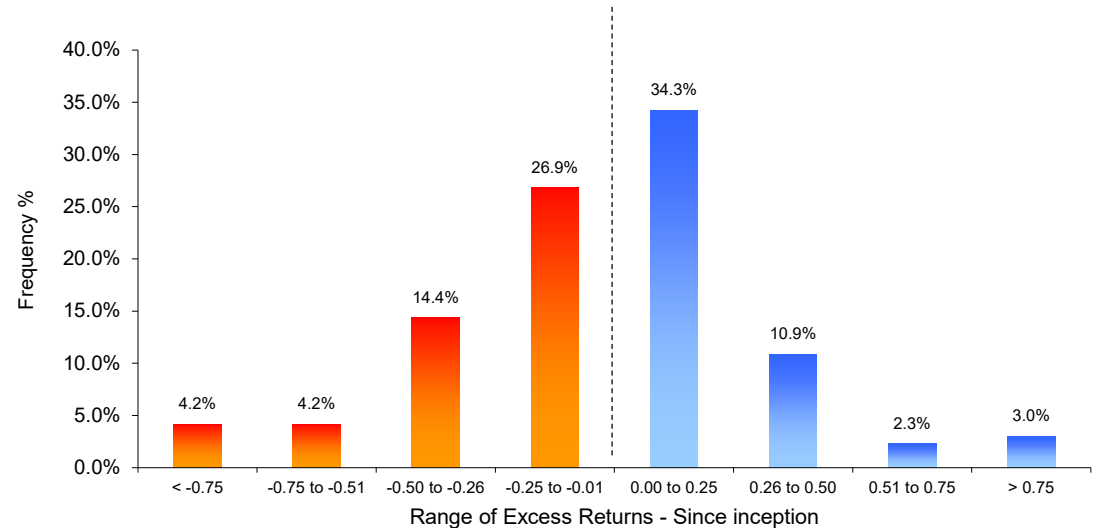
	QTR	Fin YTD	1 Yr	3 Yr	5 Yr	10Yr	Since Mar 87 (p.a.)
Excess Return	-0.5	-0.5	-0.5	-1.4	-0.6	0.0	-0.4
Portfolio Return	2.7	1.2	1.2	9.6	5.8	7.5	7.8
Benchmark Return	3.2	1.7	1.7	11.0	6.3	7.4	8.2

All returns for periods in excess of 1 year are annualised. The portfolio return is net.

#### Ex-Post Active Risk Analysis (%)



#### Excess Return Consistency Analysis



**Ex-Post Active Risk** measures the volatility of the actual excess returns achieved by the Portfolio/Fund.

**Excess Return Consistency Analysis** measures the frequency of the Portfolio/Fund's outperformance (Blue) and underperformance (Red) versus its benchmark, calculated using monthly (or quarterly if indicated) returns since inception.

**Attribution to Total Fund Excess Return Analysis  
Worcestershire County Council Pension Fund for  
Quarter Ended 31st March 2023**

Market Value: £3.6bn

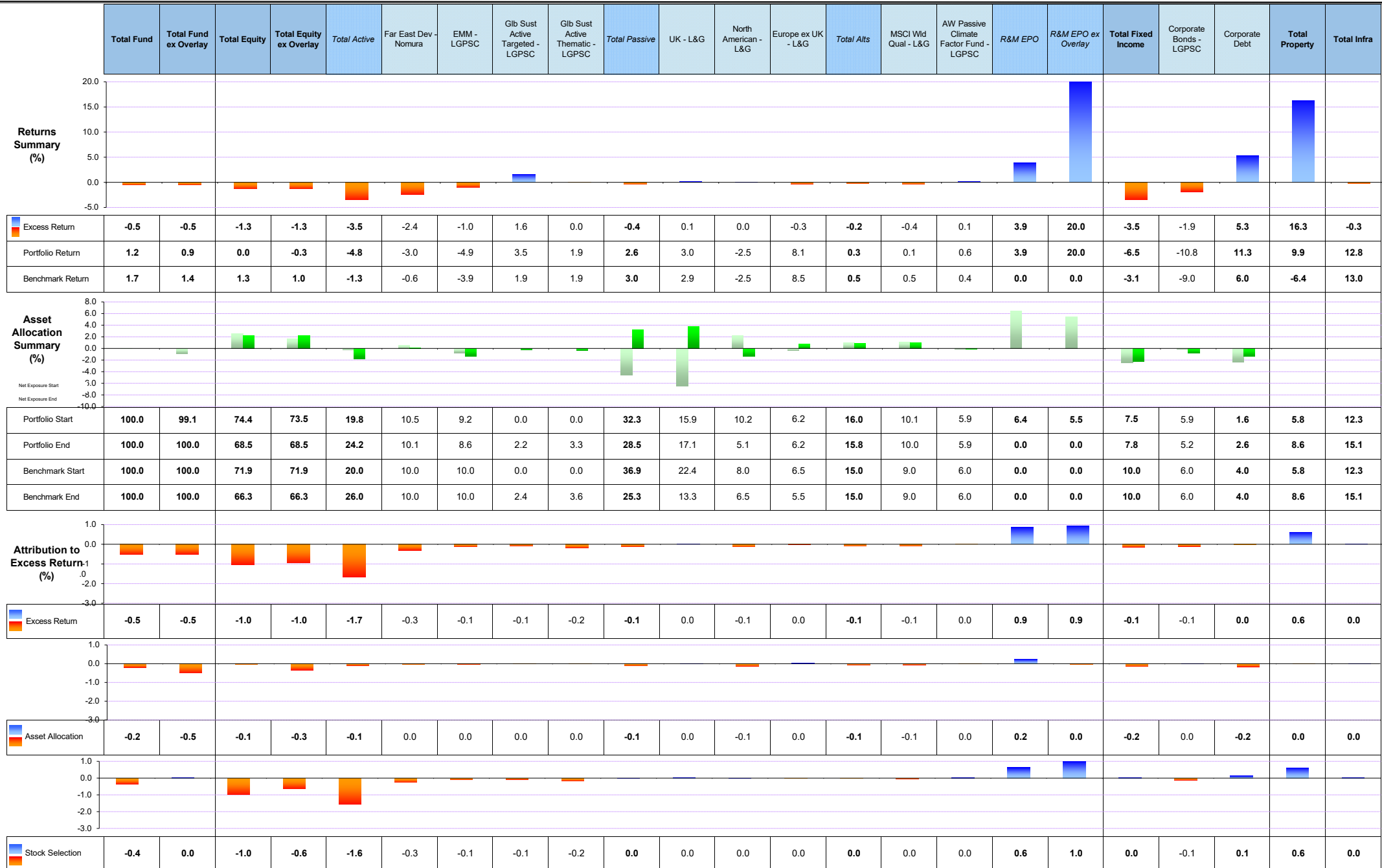


The Returns Summary details the Portfolio, Benchmark and Excess Returns. The Excess Returns are plotted, the Asset Allocation on Summary detail is the weights held by the portfolio and benchmark in each asset class/manager. The green plots are the over/underweight exposures of the Fund (v Fund benchmark) at the beginning and end of the period. The Attribution to Excess Return, identifies how each asset class/manager has contributed to the overall excess return of the Total Fund. It is broken down into Asset Allocation (how successful/ine decision to over/underweight in each asset class was) and then into Stock Selection (how well each manager's decisions have performed). The Asset Allocation plus the Stock Selection excess returns are all additive and equal the Total Excess Return of the Fund.



**Attribution to Total Fund Excess Return Analysis  
Worcestershire County Council Pension Fund for  
Year Ended 31st March 2023**

Market Value: £3.6bn



# Attribution to Total Fund Excess Return Analysis - Annualised Worcestershire County Council Pension Fund for 3 Year Period Ended 31st March 2023

Market Value: £3.6bn

	Total Fund	Total Fund ex Overlay	Total Equity	Total Equity ex Overlay	Total Active	Far East Dev - Nomura	EMM - LGPSC	Glb Sust Active Targeted - LGPSC	Glb Sust Active Thematic - LGPSC	Total Passive	UK - L&G	North American - L&G	Europe ex UK - L&G	Total Alts	RAFI Fdmntl Dev (inc Korea) Red Carbon Pathway Index - L&G	MSCI Wid Min Vol - L&G	MSCI Wid Qual - L&G	AW Passive Climate Factor Fund - LGPSC	R&M EPO	R&M EPO ex Overlay	Total Fixed Income	Corporate Bonds - LGPSC	Corporate Debt	Total Property	Total Infra
<b>Returns Summary (%)</b>																									
Excess Return	-1.4	-1.8	-1.9	-2.4	-2.4	0.0	-3.2	1.6	0.0	0.5	0.1	0.0	-0.3	-0.7	-0.1	0.1	-0.2	0.1	-5.4	4.2	-3.6	-0.2	0.5	-1.0	-0.3
Portfolio Return	9.6	9.9	10.9	11.3	7.7	9.9	6.1	3.5	1.9	16.5	13.9	18.6	15.7	12.7	32.0	15.8	16.3	-1.5	-5.4	4.2	-5.4	-0.7	7.0	4.4	10.6
Benchmark Return	11.0	11.8	12.8	13.8	10.1	9.9	9.4	1.9	1.9	16.0	13.8	18.5	16.0	13.3	32.1	15.8	16.5	-1.7	0.0	0.0	-1.8	-0.5	6.5	5.5	10.9
<b>Asset Allocation Summary (%)</b>																									
Portfolio Start	100.0	99.2	75.7	74.8	23.4	12.5	10.9	0.0	0.0	28.0	11.0	11.0	6.0	14.9	5.1	4.5	5.3	0.0	9.4	8.6	6.5	5.5	1.0	6.4	11.4
Portfolio End	100.0	100.0	68.5	68.5	24.2	10.1	8.6	2.2	3.3	28.5	17.1	5.1	6.2	15.8	0.0	0.0	10.0	5.9	0.0	0.0	7.8	5.2	2.6	8.6	15.1
Benchmark Start	100.0	100.0	72.2	72.2	24.0	12.0	12.0	0.0	0.0	38.2	17.7	11.0	9.5	10.0	3.3	3.3	3.3	0.0	0.0	0.0	10.0	8.4	1.6	6.4	11.4
Benchmark End	100.0	100.0	66.3	66.3	26.0	10.0	10.0	2.4	3.6	25.3	13.3	6.5	5.5	15.0	0.0	0.0	9.0	6.0	0.0	0.0	10.0	6.0	4.0	8.6	15.1
<b>Attribution to Excess Return (%)</b>																									
Excess Return	-1.4	-1.8	-1.6	-2.1	-1.1	0.0	-0.5	0.0	-0.1	-0.4	-0.3	0.1	-0.2	0.1	0.0	0.0	0.0	0.0	-0.2	-0.7	0.1	0.1	0.1	0.0	0.0
Asset Allocation	-1.1	-1.3	-1.2	-1.4	-0.2	-0.1	-0.1	0.0	0.0	-0.4	-0.3	0.1	-0.2	0.1	0.0	0.0	0.1	0.0	-0.7	-0.9	0.1	0.2	0.0	0.0	0.0
Stock Selection	-0.3	-0.7	-0.4	-0.7	-0.9	0.0	-0.4	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	-0.1	0.0	0.1	0.0	0.0

Manager Return Analysis  
Worcestershire County Council Pension  
Fund for Period Ended 31st March 2023

Market Value: £3.6bn

	Benchmark	Incep Date	Market Value (£m)	Weight	QTR			Year To Date			1 Year			3 Year			5 Year			10 Year			Since Inception		
					PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER
<b>Total Equity Fund</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>2,434.7</b>	<b>68.5</b>	<b>4.3</b>	<b>3.8</b>	<b>0.5</b>	<b>0.0</b>	<b>1.3</b>	<b>-1.3</b>	<b>0.0</b>	<b>1.3</b>	<b>-1.3</b>	<b>10.9</b>	<b>12.8</b>	<b>-1.9</b>	<b>6.0</b>	<b>6.5</b>	<b>-0.5</b>				<b>9.1</b>	<b>9.0</b>	<b>0.0</b>
<b>Total Equity Fund ex Overlay</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>2,434.7</b>	<b>68.5</b>	<b>4.3</b>	<b>3.8</b>	<b>0.5</b>	<b>-0.3</b>	<b>1.0</b>	<b>-1.3</b>	<b>-0.3</b>	<b>1.0</b>	<b>-1.3</b>	<b>11.3</b>	<b>13.8</b>	<b>-2.4</b>	<b>6.0</b>	<b>7.1</b>	<b>-1.1</b>				<b>8.9</b>	<b>9.4</b>	<b>-0.6</b>
<i>Total Active Equity Fund</i>	Client Specific Weighted Index	Mar-16	859.2	24.2	3.2	1.8	1.3	-4.8	-1.3	-3.5	-4.8	-1.3	-3.5	7.7	10.1	-2.4	2.1	3.9	-1.8				7.8	8.4	-0.6
Nomura Far East Developed Fund	Worcs Nomura FT AW A P & FT AW J	Feb-03	357.8	10.1	3.0	1.9	1.1	-3.0	-0.6	-2.4	-3.0	-0.6	-2.4	9.9	9.9	0.0	3.9	4.2	-0.3	7.1	6.6	0.5	9.3	9.2	0.1
Nomura Far East Developed Fund - 01.08.21	Worcs Nomura FT AW A P & FT AW J	Aug-21	357.8	N/A	3.0	1.9	1.1	-3.0	-0.6	-2.4	-3.0	-0.6	-2.4										-2.5	-0.8	-1.8
LGPSC Emerging Markets Fund	FTSE All World Emerging Market Index	Jul-19	306.9	8.6	1.4	0.2	1.2	-4.9	-3.9	-1.0	-4.9	-3.9	-1.0	6.1	9.4	-3.2							-0.6	1.8	-2.4
LGPSC Global Sustainable Equity Active Targeted Fund	FTSE All World Index	May-22	77.4	2.2	7.4	4.3	3.0																3.5	1.9	1.6
LGPSC Global Sustainable Equity Active Thematic Fund	FTSE All World Index	May-22	117.1	3.3	5.5	4.3	1.2																1.9	1.9	0.0
<i>Total Passive Equity Fund</i>	Client Specific Weighted Index	Mar-16	1,013.1	28.5	4.6	4.7	-0.2	2.6	3.0	-0.4	2.6	3.0	-0.4	16.5	16.0	0.5	9.1	8.2	0.9				10.3	9.7	0.6
L&G UK Equity Fund	FTSE All Share Index	Dec-15	608.4	17.1	3.1	3.1	0.0	3.0	2.9	0.1	3.0	2.9	0.1	13.9	13.8	0.1	5.1	5.0	0.1				7.1	6.9	0.2
L&G North American Equity Fund	FTSE All World North American Index	Dec-15	182.8	5.1	4.7	4.6	0.0	-2.5	-2.5	0.0	-2.5	-2.5	0.0	18.6	18.5	0.0	13.8	13.7	0.1				15.0	15.0	0.0
L&G Europe Ex UK Equity Fund	FTSE Developed Europe Ex. UK Index	Dec-15	221.9	6.2	8.8	8.9	-0.1	8.1	8.5	-0.3	8.1	8.5	-0.3	15.7	16.0	-0.3	7.9	8.2	-0.2				10.1	10.3	-0.2
<i>Total Alternatives Fund</i>	20% RAFI/40% MSCI WL Min/40% MSCI WL Qual	Mar-16	562.5	15.8	5.7	5.7	0.1	0.3	0.5	-0.2	0.3	0.5	-0.2	12.7	13.3	-0.7	8.8	9.4	-0.6				10.3	10.8	-0.5
L&G MSCI World Quality Fund	MSCI World Quality Total Return Net Index	Dec-15	354.3	10.0	7.6	7.7	-0.1	0.1	0.5	-0.4	0.1	0.5	-0.4	16.3	16.5	-0.2	14.1	14.2	-0.1				15.0	15.1	-0.1
LGPSC All World Passive Climate Factor Fund	FTSE AW Climate Bal Com Factor Net	Nov-21	208.2	5.9	2.7	2.7	0.0	0.6	0.4	0.1	0.6	0.4	0.1										-1.5	-1.7	0.1
<b>Total Fixed Income Fund</b>	<b>60% LGPSC Corp Index &amp; 40% Absolute Return +6%</b>	<b>Apr-21</b>	<b>277.2</b>	<b>7.8</b>	<b>2.4</b>	<b>2.2</b>	<b>0.3</b>	<b>-6.5</b>	<b>-3.1</b>	<b>-3.5</b>	<b>-6.5</b>	<b>-3.1</b>	<b>-3.5</b>										<b>-5.4</b>	<b>-1.8</b>	<b>-3.6</b>
<i>Total Corporate Bond Fund</i>	LGPS Corporate Bond Index	Mar-20	184.0	5.2	2.4	2.6	-0.2	-10.8	-9.0	-1.9	-10.8	-9.0	-1.9	-2.0	-1.9	-0.2							-0.7	-0.5	-0.2
LGPSC Corporate Bond Fund	LGPS Corporate Bond Index	Mar-20	184.0	5.2	2.4	2.6	-0.2	-10.8	-9.0	-1.9	-10.8	-9.0	-1.9	-2.0	-1.9	-0.2							-0.7	-0.5	-0.2
<i>Total Corporate Debt Fund</i>	Absolute Return +6%	May-18	93.2	2.6	2.5	1.5	1.1	11.3	6.0	5.3	11.3	6.0	5.3	6.9	6.0	0.9							9.3	6.1	3.2
Bridgepoint Direct Lending II GBP	Absolute Return + 6.5%	May-18	57.0	1.6	3.3	1.6	1.7	11.6	6.5	5.1	11.6	6.5	5.1	7.0	6.5	0.5							9.3	6.6	2.8
Bridgepoint Direct Lending II EURO	Absolute Return + 6.5%	May-18	64.2	N/A	2.2	1.6	0.6	5.6	6.5	-0.9	5.6	6.5	-0.9	5.2	6.5	-1.3							8.8	6.6	2.2
Bridgepoint Direct Lending III GBP	Absolute Return +6%	Jan-22	36.2	1.0	1.3	1.5	-0.2	11.7	6.0	5.7	11.7	6.0	5.7										9.3	4.8	4.5
Bridgepoint Direct Lending III EURO	Absolute Return +6%	Jan-22	40.8	N/A	0.2	1.5	-1.3	6.6	6.0	0.6	6.6	6.0	0.6										5.3	4.8	0.5
<b>Total Property Fund</b>	<b>60% MSCI UK &amp; 40% Abs Ret +7.5%</b>	<b>Mar-16</b>	<b>305.5</b>	<b>8.6</b>	<b>-2.3</b>	<b>0.8</b>	<b>-3.2</b>	<b>9.9</b>	<b>-6.4</b>	<b>16.3</b>	<b>9.9</b>	<b>-6.4</b>	<b>16.3</b>	<b>4.4</b>	<b>5.5</b>	<b>-1.0</b>	<b>4.5</b>	<b>6.1</b>	<b>-1.6</b>				<b>6.1</b>	<b>6.4</b>	<b>-0.3</b>
<i>Total UK Property Fund</i>	Absolute Return +9%	Jul-18	51.6	1.5	-2.0	2.2	-4.2	11.7	9.0	2.7	11.7	9.0	2.7	7.0	9.0	-2.0							6.6	9.0	-2.4
Invesco UK Property Fund	Absolute Return +9%	Oct-18	46.6	1.3	-1.9	2.2	-4.1	15.2	9.0	6.2	15.2	9.0	6.2	6.8	9.0	-2.2							3.8	9.0	-5.2
Venn UK Property Fund	Absolute Return +9%	Jul-15	5.0	0.1	-2.8	2.2	-4.9	-1.3	9.0	-10.3	-1.3	9.0	-10.3	3.4	9.0	-5.6	5.7	9.0	-3.4				8.8	9.1	-0.3
Walton Street US Property Fund - GBP	Absolute Return +6.5%	Feb-16	1.4	0.0	-6.2	1.6	-7.8	23.2	6.5	16.7	23.2	6.5	16.7	7.4	6.5	0.9	6.7	6.5	0.2				10.8	6.3	4.4
Walton Street US Property Fund - USD	Absolute Return +6.5%	Feb-16	1.7	N/A	1.0	1.6	-0.6	9.7	6.5	3.2	9.7	6.5	3.2	4.0	6.5	-2.5	4.3	6.5	-2.2				7.4	6.3	1.1
Walton Street US Property Fund II - GBP	Absolute Return +7%	Jun-19	9.8	0.3	-5.1	1.7	-6.8	22.8	7.0	15.8	22.8	7.0	15.8	10.6	7.0	3.6							9.3	7.0	2.3
Walton Street US Property Fund II - USD	Absolute Return +7%	Jun-19	11.8	N/A	2.1	1.7	0.4	9.6	7.0	2.6	9.6	7.0	2.6	7.4	7.0	0.4							7.1	7.0	0.1
Invesco European Property Fund - GBP	Absolute Return +6.5%	Feb-16	66.4	1.9	-2.1	1.6	-3.6	1.8	6.5	-4.7	1.8	6.5	-4.7	1.3	6.5	-5.2	1.9	6.5	-4.6				4.5	6.4	-1.9
Invesco European Property Fund - EURO	Absolute Return +6.5%	Feb-16	75.6	N/A	-1.1	1.6	-2.7	0.9	6.5	-5.6	0.9	6.5	-5.6	2.5	6.5	-4.0	2.6	6.5	-3.9				3.5	6.4	-2.9
Venn Property Debt Fund II - GBP	Absolute Return +6%	Aug-20	15.9	0.4	4.7	1.5	3.2	10.2	6.0	4.2	10.2	6.0	4.2										-62.0	5.6	-67.7
Venn Property Debt Fund II - EURO	Absolute Return +6%	Aug-20	18.0	N/A	1.6	1.5	0.1	5.0	6.0	-1.0	5.0	6.0	-1.0										-61.4	5.6	-67.0
Gresham House Forestry Growth & Sustainability Fund	Absolute Return +6%	Dec-21	56.8	0.5	-9.3	1.5	-10.8	-9.8	6.0	-15.8	-9.8	6.0	-15.8										-11.4	5.0	-16.4
Gresham House Forestry Fund VI	Absolute Return +5.5%	Oct-22	84.7	1.6	0.0	1.3	-1.3																-0.4	2.7	-3.1
AEW Property Fund	UK RPI +4%	Oct-17	18.9	0.5	-1.5	2.8	-4.3	-4.6	17.5	-22.1	-4.6	17.5	-22.1	1.6	11.9	-10.3	3.2	9.7	-6.5				3.1	9.4	-6.3
<b>Total Infrastructure Fund</b>	<b>70% UK CPI +5.5% &amp; 30% Abs Return +10%</b>	<b>Mar-16</b>	<b>535.8</b>	<b>15.1</b>	<b>-1.8</b>	<b>2.2</b>	<b>-4.0</b>	<b>12.8</b>	<b>13.0</b>	<b>-0.3</b>	<b>12.8</b>	<b>13.0</b>	<b>-0.3</b>	<b>10.6</b>	<b>10.9</b>	<b>-0.3</b>	<b>8.5</b>	<b>10.0</b>	<b>-1.5</b>				<b>8.6</b>	<b>9.4</b>	<b>-0.8</b>
Green UK Infrastructure Fund	Absolute Return +7.6%	Apr-15	48.6	1.4	2.9	1.8	1.1	16.2	7.6	8.6	16.2	7.6	8.6	12.0	7.6	4.4							7.9	7.6	0.3
Gresham House BSIF Housing and Infrastructure	Absolute Return +8%	May-20	49.7	1.4	-4.5	1.9	-6.5	6.4	8.0	-1.6	6.4	8.0	-1.6										8.2	8.0	0.2
Gresham House BSIF II Infrastructure Fund	Absolute Return +9%	Jan-22	37.1	0.7	3.4	2.2	1.2	-6.3	6.7	-12.9	-6.3	6.7	-12.9										-5.1	5.3	-10.4
Hermes UK Infrastructure Core Fund	Absolute Return +8.4%	May-15	46.6	1.3	-5.8	2.0	-7.8	-5.9	8.4	-14.3	-5.9	8.4	-14.3	-0.9	8.4	-9.3	0.9	8.4	-7.5				4.0	8.4	-4.4
Hermes UK Infrastructure Fund II	Absolute Return +8.5%	Jun-18	45.4	1.3	-10.4	2.1	-12.4	-5.6	8.5	-14.0	-5.6	8.5	-14.0	-4.7	8.5	-13.2							-2.2	8.6	-10.7
Stonepeak Infrastructure Core Fund III - GBP	Absolute Return +12%	Jan-18	134.9	3.8	-6.7	2.9	-9.6	20.4	12.0	8.4	20.4	12.0	8.4	17.4	12.0	5.4	19.2	12.0	7.2				15.0	12.0	3.0
Stonepeak Infrastructure Core Fund III - USD	Absolute Return +12%	Jan-18	162.2	N/A	0.5	2.9	-2.4	7.8	12.0	-4.2	7.8	12.0	-4.2	14.1	12.0	2.1	16.9	12.0	4.9				13.0	12.0	1.0

Stonepeak Infrastructure Core Fund IV - GBP	Absolute Return +12%	Jan-22	34.2	1.0	10.1	2.9	7.2	24.2	12.0	12.2	24.2	12.0	12.2						19.0	9.5	9.5				
Stonepeak Infrastructure Core Fund IV - USD	Absolute Return +12%	Jan-22	38.1	N/A	1.3	2.9	-1.5	0.6	12.0	-11.4	0.6	12.0	-11.4						0.5	9.5	-9.1				
First Sentier EDIF II GBP	Absolute Return +9%	Jun-18	131.9	3.7	3.7	2.2	1.5	16.1	9.0	7.1	16.1	9.0	7.1	16.5	9.0	7.5			11.3	9.1	2.2				
First Sentier EDIF II EURO	Absolute Return +9%	Jun-18	150.1	N/A	4.6	2.2	2.5	12.1	9.0	3.1	12.1	9.0	3.1	16.8	9.0	7.8			11.0	9.1	1.9				
First Sentier EDIF III GBP	Absolute Return +8%	Nov-22	7.5	0.2	-2.0	1.9	-3.9												3.7	3.3	0.5				
First Sentier EDIF III EURO	Absolute Return +8%	Nov-22	8.5	N/A	-1.0	1.9	-3.0												3.4	3.3	0.1				
<b>Worcestershire CC Total Fund ex Overlay</b>		<b>Mar-87</b>	<b>3,553.2</b>	<b>100.0</b>	<b>2.7</b>	<b>3.2</b>	<b>-0.5</b>	<b>0.9</b>	<b>1.4</b>	<b>-0.5</b>	<b>0.9</b>	<b>1.4</b>	<b>-0.5</b>	<b>9.9</b>	<b>11.8</b>	<b>-1.8</b>	<b>5.8</b>	<b>6.8</b>	<b>-1.0</b>	<b>7.4</b>	<b>7.7</b>	<b>-0.3</b>	<b>7.8</b>	<b>8.3</b>	<b>-0.5</b>
<b>Worcestershire CC Total Fund</b>		<b>Mar-87</b>	<b>3,553.2</b>	<b>100.0</b>	<b>2.7</b>	<b>3.2</b>	<b>-0.5</b>	<b>1.2</b>	<b>1.7</b>	<b>-0.5</b>	<b>1.2</b>	<b>1.7</b>	<b>-0.5</b>	<b>9.6</b>	<b>11.0</b>	<b>-1.4</b>	<b>5.8</b>	<b>6.3</b>	<b>-0.6</b>	<b>7.5</b>	<b>7.4</b>	<b>0.0</b>	<b>7.8</b>	<b>8.2</b>	<b>-0.4</b>

PF = Portfolio Return BM = Benchmark Return ER = Excess Return

<b>Total Fund Benchmark</b>	<b>CLIENT SPECIFIC BENCHMARK:</b>	<b>Notes:</b>
	<p>17% FTSE All Share - % Dependant upon actual drawdowns of Infra &amp; Prop</p> <p>5.5% FTSE Developed Europe Ex UK</p> <p>10% FTSE All World Emerging Markets</p> <p>15% 60% MSCI World Quality Total Return NET &amp; 40% LGPSC All World Climate Index</p> <p>6.5% FTSE All World North America</p> <p>6% FTSE All World</p> <p>10% 5.5% FTSE All World Asia Pacific ex Japan &amp; 4.5% FTSE All World Japan</p> <p>6% Corp Bonds: LGPS Central Specific Index</p> <p>4% Corporate Private Debt @ Absolute Return +10%</p> <p>Infrastructure: 70% UK CPI +5.5%, 30% Absolute Return 10%</p> <p>Property: 60% MSCI UK Monthly Property Index, 40% Absolute Return +7.5%</p>	<p><b>Q4 2022:</b> Disinvested from River &amp; Mercantile Equity Protection Fund from 10th November 2022. Invested into First Sentier EDIF III from 15th November 2022.</p> <p><b>Q2 2022:</b> Investment into LGPSC Global Sustainable Equity Active Targeted Fund and LGPSC Global Sustainable Equity Active Thematic Fund from 04.05.2022. Total Fund Benchmark updated. The attribution for Total Active/Total Equity/Total Fund will not add up due to the transition.</p> <p><b>Q4 2021:</b> Total Fund Benchmark updated and backdated from 01.04.2021. Total Fixed Income Fund created from 01.04.21. New investments were made on 24.11.2021 into LGPSC All World Passive Climate Factor Fund, and Stonepeak Fund IV Infrastructure Core Fund (data is 'lagged'). A new investment was also made with Gresham House Forestry Growth &amp; Sustainability Fund from 10.12.2021 (data is produced annually in February). Full disinvestments were made from L&amp;G RAFI Fundamental Developed Reduced Carbon Pathway Index Fund on 22.10.2021 and from L&amp;G MSCI World Minimum Volatility Fund on 24.11.2021.</p> <p>Historic data up to and including 31.03.2016 has been provided by the WM Co and L&amp;G.</p>

**Total Fund Reconciliation Analysis**  
**Worcestershire County Council Pension**  
**Fund for Quarter Ended 31st March 2023**

Market Value: £3.6bn

	31st December 2022		Net Investment (£000s)	Total Income (£000s)	Total Gain/Loss (£000s)	31st March 2023	
	Market Val (£000s)	Exposure (%)				Market Val (£000s)	Exposure (%)
<b>Total Equity Fund</b>	<b>2,333,617</b>	<b>67.9</b>	<b>-36</b>	<b>0</b>	<b>101,142</b>	<b>2,434,723</b>	<b>68.5</b>
<b>Total Equity Fund ex Overlay</b>	<b>2,333,617</b>	<b>67.9</b>	<b>-36</b>	<b>0</b>	<b>101,142</b>	<b>2,434,723</b>	<b>68.5</b>
<i>Total Active Equity Fund</i>	832,927	24.3	0	0	26,251	859,178	24.2
Nomura Far East Developed Equity Fund	347,328	10.1	0	0	10,506	357,834	10.1
LGPSC Emerging Markets Fund	302,613	8.8	0	0	4,263	306,876	8.6
LGPSC Global Sustainable Equity Active Targeted Fund	72,034	2.1	0	0	5,322	77,356	2.2
LGPSC Global Sustainable Equity Active Thematic Fund	110,953	3.2	0	0	6,159	117,113	3.3
<i>Total Passive Equity Fund</i>	968,765	28.2	0	0	44,291	1,013,056	28.5
L&G UK Equity Fund	590,057	17.2	0	0	18,311	608,367	17.1
L&G North American Equity Fund	174,659	5.1	0	0	8,126	182,786	5.1
L&G Europe Ex UK Equity Fund	204,049	5.9	0	0	17,854	221,903	6.2
<i>Total Alternatives Fund</i>	531,888	15.5	0	0	30,600	562,488	15.8
L&G MSCI World Quality Fund	329,189	9.6	0	0	25,075	354,263	10.0
LGPSC All World Passive Climate Factor Fund	202,699	5.9	0	0	5,526	208,225	5.9
<i>River &amp; Mercantile Equity Protection Fund</i>	36	0.0	-36	0	0	0	0.0
<i>River &amp; Mercantile Equity Protection Fund ex Overlay</i>	36	0.0	-36	0	0	0	0.0
<b>Total Fixed Income Fund</b>	<b>273,355</b>	<b>8.0</b>	<b>-1,844</b>	<b>0</b>	<b>5,654</b>	<b>277,166</b>	<b>7.8</b>
<i>Total Corporate Bond Fund</i>	179,681	5.2	0	0	4,299	183,980	5.2
LGPSC Corporate Bond Fund	179,681	5.2	0	0	4,299	183,980	5.2
<i>Total Corporate Debt Fund</i>	93,674	2.7	-1,844	0	1,355	93,186	2.6
Bridgepoint Direct Lending II	57,887	1.7	-2,177	0	1,285	56,995	1.6
Bridgepoint Direct Lending III	35,787	1.0	333	0	71	36,191	1.0
<b>Total Property Fund</b>	<b>294,155</b>	<b>8.6</b>	<b>18,560</b>	<b>1,391</b>	<b>-7,246</b>	<b>305,469</b>	<b>8.6</b>
<i>Total UK Property Fund</i>	54,506	1.6	0	0	-2,929	51,578	1.5
Invesco UK Property Fund	47,682	1.4	0	199	-1,098	46,585	1.3
Venn UK Property Fund	6,824	0.2	-1,737	-94	-94	4,993	0.1
Walton US Property Fund	1,540	0.0	0	0	-96	1,444	0.0
Walton US Property Fund II	9,893	0.3	0	532	-102	9,792	0.3
Invesco European Property Fund	68,357	2.0	0	569	-1,973	66,385	1.9
Venn Property Debt Fund II	12,887	0.4	2,451	0	602	15,940	0.4
Gresham House Forestry Growth & Sustainability Fund	42,969	1.3	17,846	0	-4,013	56,802	1.6
Gresham House Forestry Fund VI	0	0.0	0	0	84,670	84,670	2.4
AEW Property Fund	19,332	0.6	0	186	-472	18,860	0.5
<b>Total Infrastructure Fund</b>	<b>533,334</b>	<b>15.5</b>	<b>17,562</b>	<b>1,518</b>	<b>-15,097</b>	<b>535,800</b>	<b>15.1</b>
Green UK Infrastructure Fund	48,187	1.4	-982	0	1,419	48,624	1.4
Gresham House BSIF Housing and Infrastructure	49,818	1.5	2,156	0	-2,259	49,715	1.4
Gresham House BSIF II Infrastructure Fund	21,834	0.6	14,528	0	746	37,107	1.0
Hermes UK Infrastructure Core Fund	49,446	1.4	0	0	-2,860	46,586	1.3
Hermes UK Infrastructure Fund II	50,599	1.5	0	0	-5,241	45,358	1.3
Stonepeak Infrastructure Core Fund III	144,709	4.2	1,212	931	-11,068	134,854	3.8
Stonepeak Infrastructure Core Fund IV	34,100	1.0	648	277	-596	34,153	1.0
First Sentier EDIF II	126,993	3.7	0	310	4,915	131,908	3.7
First Sentier EDIF III	7,648	0.2	0	0	-153	7,495	0.2
<b>Cash Fund</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>
<b>Worcestershire CC Total Fund ex Overlay</b>	<b>3,434,462</b>	<b>100.0</b>	<b>34,243</b>	<b>2,909</b>	<b>84,453</b>	<b>3,553,157</b>	<b>100.0</b>
<b>Worcestershire CC Total Fund</b>	<b>3,434,462</b>	<b>100.0</b>	<b>34,243</b>	<b>2,909</b>	<b>84,453</b>	<b>3,553,157</b>	<b>100.0</b>

Note: Cashflow into cash reflects sum of portfolio contributions minus net investments. It is assumed that cash for the Fund is held outside of the invested assets and is therefore withdrawn from the Total Fund