

# London Borough of Haringey Pension Fund

Report on the actuarial valuation at 31 March 2022

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**03 March 2023**

**For and on behalf of Hymans Robertson LLP**

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# Executive Summary

We have been commissioned by Haringey Council (the Administering Authority) to carry out a valuation of the London Borough of Haringey Pension Fund (the Fund) as at 31 March 2022. This fulfils Regulation 62 of the Local Government Pension Scheme Regulations 2013. This report is a summary of the valuation.

## Contribution rates

The contribution rates for individual employers set at this valuation can be found in the [Rates & Adjustments certificate](#). Table 1 shows the combined individual employer rates set at this valuation and the last valuation (31 March 2019).

Table 1: Whole fund contribution rates compared with the previous valuation

	This valuation 31 March 2022		Last valuation 31 March 2019	
<b>Primary Rate</b>	17.5% of pay		18.6% of pay	
<b>Secondary Rate</b>	2023/2024	£3,460,000	2020/2021	£6,204,000
	2024/2025	£4,242,000	2021/2022	£5,849,000
	2025/2026	£5,077,000	2022/2023	£5,452,000

- The Primary rate has reduced mainly due to higher expected returns
- The Secondary rate has decreased due to good investment performance since the last valuation

## Funding position

At 31 March 2022, the past service funding position has improved from the last valuation at 31 March 2019. Table 2 shows the single reported funding position at the current and previous valuation.

Table 2: Single reported funding position at 31 March 2022 compared with 31 March 2019

Valuation Date	31 March 2022	31 March 2019
<b>Past Service Liabilities</b>	<b>(£m)</b>	<b>(£m)</b>
Employees	464	376
Deferred Pensioners	410	361
Pensioners	722	640
<b>Total Liabilities</b>	<b>1,596</b>	<b>1,378</b>
<b>Assets</b>	<b>1,803</b>	<b>1,384</b>
<b>Surplus/(Deficit)</b>	<b>207</b>	<b>6</b>
<b>Funding Level</b>	<b>113%</b>	<b>100%</b>

The required investment return to be 100% funded is now 3.6% pa (4.2% pa at 2019). The likelihood of the Fund's investment strategy achieving the required return is 78% (70% at 2019).



# Approach to valuation

# Valuation Purpose

The triennial actuarial valuation is an important part of the Fund's risk management framework. Its main purpose is to ensure the Fund continues to have a contribution plan and investment strategy that will achieve the objectives set out in the Funding Strategy Statement.

We have been commissioned by Haringey Council (the Administering Authority) to carry out a valuation of the London Borough of Haringey Pension Fund (the Fund) as at 31 March 2022. This fulfils Regulation 62 of the Local Government Pension Scheme Regulations 2013. This report marks the culmination of the valuation process and contains its two key outcomes:

**1** Employer contribution rates for the period 1 April 2023 to 31 March 2026.

**2** The funding level of the Fund at 31 March 2022.

Further information on the valuation process, methodology and strategy is set out in the publicly available Funding Strategy Statement, Investment Strategy Statement and published papers and minutes of the Fund's Pensions Committee and Board. Additional material is also contained in [Hymans Robertson's LGPS 2022 valuation toolkit](#)<sup>1</sup>.

# Setting employer contribution rates

Employer contributions need to be set at a level which ensures the Fund has a reasonable likelihood of having enough money to pay members' benefits. Identifying the amount of benefits that may be paid is complex as those earned today might only start being paid in 50 years' time. Over that time period, there is significant uncertainty over factors which affect the cost of benefits, eg inflation, investment returns. These uncertainties are allowed for by taking a risk-based approach to setting employer contribution rates. This approach is built around three key funding decisions set by the Fund and asset-liability modelling.

## Key funding decisions

For each employer, the Fund determines the most appropriate choice for the following three funding decisions. Further detail is set out in the Funding Strategy Statement.



### What is the funding target for each employer?

Will the employer remain in the Fund for the long-term or exit at some point



### What is the funding time horizon?

How long will the employer participate in the Fund



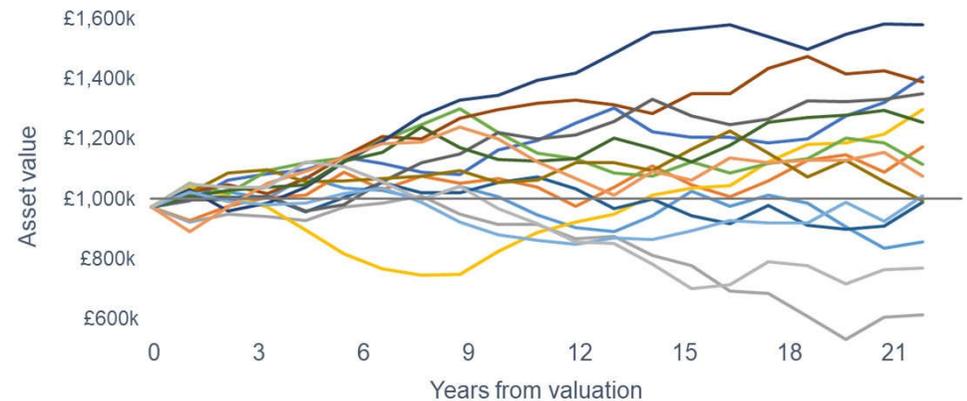
### What is the required likelihood?

How much funding risk can the employer's covenant support

## Modelling approach

Asset-liability modelling is used to project each employer's assets and benefit payments into the future using 5,000 different economic scenarios. The economic scenarios are generated using Hymans Robertson's Economic Scenario Service (ESS) (further information in [Appendix 2](#)).

Picture 1: sample progression of employer asset values under different economic scenarios



# Measuring the funding level

The past service funding level is measured at the valuation. Whilst it is limited in providing insight into a funding plan, it is a useful high-level summary statistic. To measure the funding level, a market-related approach is taken to calculating both the assets and the liabilities (so they are consistent with each other).

- The market value of the Fund's assets at the valuation date have been used.
- The liabilities have been valued using assumptions based on market indicators at the valuation date (these assumptions are detailed in [Appendix 2](#)).

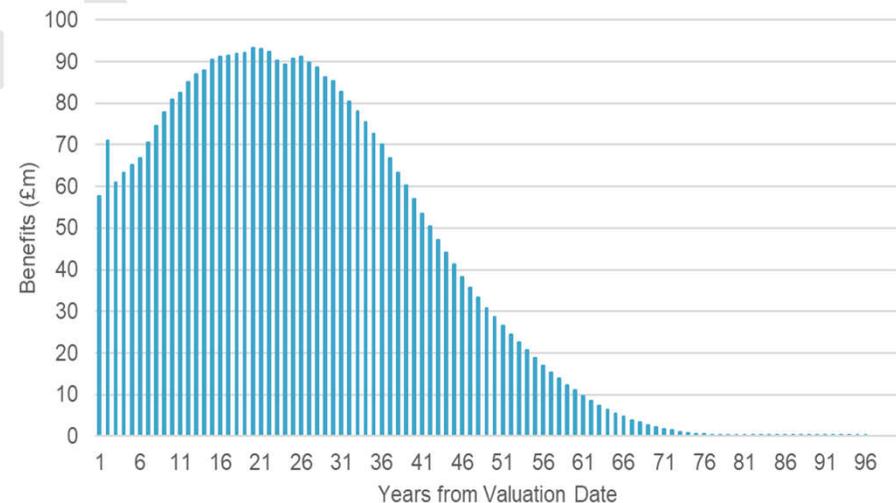
## Further detail on the liabilities

The liabilities are the value of all future payments to members based on all benefits earned up to the valuation date, expressed in today's money.

Chart 1 shows the projected payments for all members in the Fund at the valuation date. The projections are based on the membership data provided for the valuation ([Appendix 1](#)), the assumptions ([Appendix 2](#)) and our understanding of the LGPS benefit structure as at 31 March 2022 (details at [www.lgpsregs.org](http://www.lgpsregs.org)).

To express the future payments in today's money, the projections are discounted with an assumed future investment return on the Fund's assets (the discount rate).

Chart 1: projected benefit payments for all service earned up to 31 March 2022



# Valuation results

# Employer contribution rates

The primary objective of the Fund is to set employer contribution rates that will adequately cover the cost of benefits which will accrue in the future and any costs related to benefits already earned. A secondary objective is to ensure the rates are as stable as possible. The risk-based approach detailed earlier is used to meet both these objectives.

The employer contribution rate is made up of two components.

1. A primary rate: the level sufficient to cover all new benefits.
2. A secondary rate: the costs associated with sufficiently funding benefits accrued up to the valuation date.

**Each employer has a contribution rate which is appropriate to their circumstances and these can be found in the [Rates & Adjustments Certificate](#).** Broadly speaking:

- Primary rates have reduced overall, mainly due to higher expected returns.
- Secondary rates have decreased due to strong investment performance since the previous valuation.

However all employers will be different and the contribution rate will reflect the membership and experiences of each employer.

Table 3 shows the total of all employer contribution rates to be paid into the Fund over the period 1 April 2023 to 31 March 2026.

Table 3: Whole-fund contribution rate, compared with the previous valuation

	This valuation 31 March 2022		Last valuation 31 March 2019	
<b>Primary Rate</b>	17.5% of pay		18.6% of pay	
<b>Secondary Rate</b>	2023/2024	£3,460,000	2020/2021	£6,204,000
	2024/2025	£4,424,000	2021/2022	£5,849,000
	2025/2026	£5,077,000	2022/2023	£5,452,000

The primary rate includes an allowance of 0.8% of pensionable pay for the Fund's expenses.

Employees pay a contribution to the Fund in addition to these rates. These rates are set by the LGPS Regulations. The average employee contribution rate at 31 March 2022 is 6.8% of pay (6.8% at 31 March 2019).

# Funding level

The funding level is the ratio of assets to liabilities. The market value of the assets at the valuation date are known. The value of the liabilities is uncertain given that the level of future investment returns are unknown.

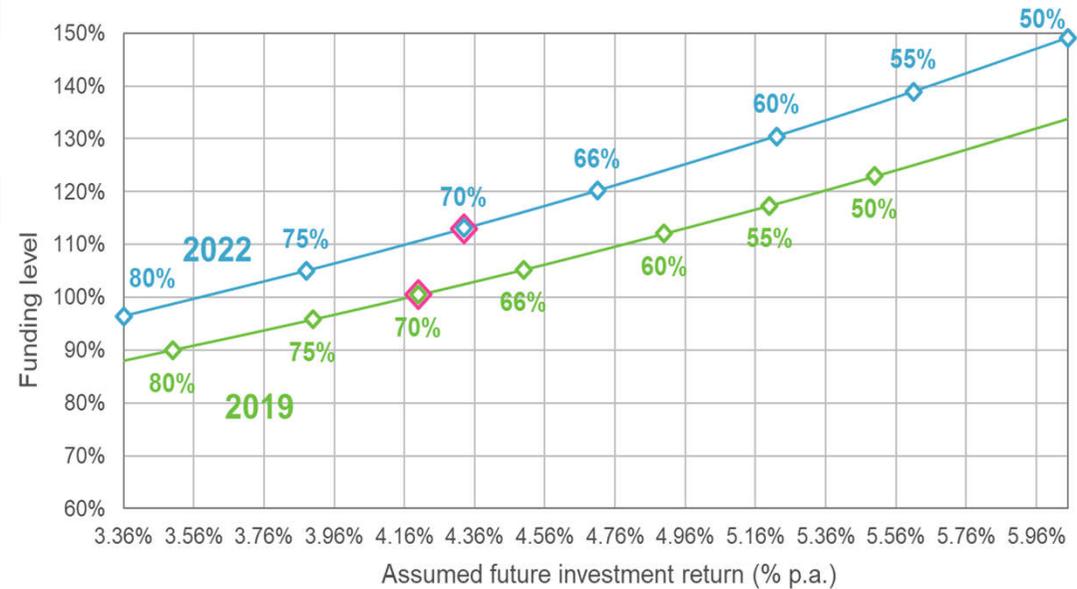
Therefore, the liabilities and funding level have been calculated across a range of different investment returns (the discount rate).

To help better understand funding risk, the likelihood of the Fund's investment strategy (detailed in [Appendix 1](#)) achieving certain levels of return has also been calculated.

Chart 2 shows how the funding level varies with future investment return assumptions at 31 March 2022 (blue line). The green line shows the same analysis at 31 March 2019.

- The funding position at 2022 is stronger than 2019.
- The funding level is 100% if future investment returns are c.3.6% pa. The likelihood of the Fund's assets yielding at least this return is around 78%.
- The comparator at 2019 was a return of 4.2% pa which had a likelihood of 70%.
- There is a 50% likelihood of an investment return of 6.0% pa. So the best-estimate funding level is 150% at 31 March 2022 (120% at 2019).

Chart 2: funding level across a range of future investment returns



Figures on each line show the likelihood of the Fund's assets exceeding that level of return over the next 20 years

# Single funding level as at 31 March 2022

Whilst the chart on the previous page provides a better understanding of the past service funding position, there is still a requirement to report a single funding level at 31 March 2022.

To report a single funding level and funding surplus/deficit for the 2022 valuation, a discount rate of 4.3% pa has been used. There is a 70% likelihood associated with a future investment return of 4.3% pa.

Table 4 details the liabilities, split by member status and the market value of assets at the valuation date. The results at the 2019 formal valuation are shown for comparison.

The funding level and surplus/deficit figures provide a high-level snapshot of the funding position of the Fund as at 31 March 2022, however there are limitations:

- The liabilities are calculated using a single set of assumptions about the future and so are very sensitive to the choice of assumptions.
- The market value of assets held by the Fund will change on a daily basis.

The future progression of the funding position is uncertain. If the financial and demographic assumptions made at this valuation actually occur, employers pay contributions in line with the R&A certificate and there are no other changes in the financial or demographic environment, we project that the funding level at the next valuation (31 March 2025) will be approximately 110%.

Table 4: single reported funding level

Valuation Date	31 March 2022	31 March 2019
<b>Past Service Liabilities</b>	<b>(£m)</b>	<b>(£m)</b>
Employees	464	376
Deferred Pensioners	410	361
Pensioners	722	640
<b>Total Liabilities</b>	<b>1,596</b>	<b>1,378</b>
<b>Assets</b>	<b>1,803</b>	<b>1,384</b>
<b>Surplus/(Deficit)</b>	<b>207</b>	<b>6</b>
<b>Funding Level</b>	<b>113%</b>	<b>100%</b>

**Important:** the reported funding level does not directly drive the contribution rates for employers. The contribution rates consider how assets and liabilities will evolve over time in different economic scenarios and also reflect each employer's funding profile and covenant.

# Changes since the last valuation

## Events between 2019 and 2022

The most significant external event to occur since the last valuation has been the Covid-19 pandemic. The experience analysis below shows that, although there was a terrible human cost in terms of the number of deaths, the impact on the funding position has been small. This is likely due to the age profile of the excess deaths and the level of pension.

Other significant factors occurring which affect the funding strategy of the Fund have been the better than expected investment returns. This has had a material positive impact on the funding position and employers' secondary contribution rates.

## Financial

Table 5: analysis of financial experience between 2019 and 2022 valuations

	Expected	Actual	Difference	Impact on funding position
3 year period	13.1%	30.0%	16.8%	+£246m
Annual	4.2% pa	9.1% pa	4.9% pa	

## Membership

Table 6: analysis of membership experience between 2019 and 2022 valuations

	Expected	Actual	Difference	Impact on funding position
Early leavers	1,814	2,289	475	+£1m
Ill-health retirements	39	53	14	-£1m
Salary increases	3.8% pa	6.4% pa	2.5% pa	-£18m
Benefit increases	2.3% pa	1.8% pa	-0.6% pa	+£21m
Pension ceasing	£3.5m	£3.3m	-£0.1m	+£2m

# Changes since the last valuation

## Future outlook

Expectations about the future, which inform the assumptions used to value the liabilities, have changed since the last valuation. The most significant changes are:

- Future inflation: this is expected to be on average higher than at 2019 due to the current level of high inflation.
- Investment returns: due to change in the Fund's investment strategy and financial markets, future investment returns are now expected to be higher than at the last valuation.

Table 7: summary of change in future outlook

Factor	What does it affect?	What's changed?	Impact on liabilities
Future investment returns	The rate at which future benefit payments are discounted back, ie the discount rate assumption	Future investment returns slightly higher at 2022 than at 2019. The required return is now 4.3% pa vs. 4.2% pa at 2019.	Decrease of £34m
Inflation	The rate at which pensions in payment and deferment and CARE pots increase	Significant increase in short-term future inflation expectations.	Increase of £98m
Salary increases	The rate at which future salaries increase. This affects benefits that are still linked to final salary, ie accrued before 1 April 2014	No material change since last valuation given competing factors e.g. tighter budgetary conditions vs. strong job market and pressure from National Living Wage increases.	£nil
Current life expectancy	How long we expect people to live for based on today's current observed mortality rates.	Slight reduction in life expectancy based on current observed data (not allowing for Covid-related excess deaths)	Decrease of £1m
Future improvements in life expectancy	How we expect life expectancies to change (increase) in the future.	Uncertainty about effectiveness of mitigations against life expectancy increases in the LGPS i.e. State Pension Age increases and Cost Cap. Need to better reflect wider pension and insurance industry long-term expectations.	Increase of £9m

# Reconciling the overall change in funding position

The tables below provide insight into the funding position change between 31 March 2019 and 31 March 2022. Firstly, the changes we expect to happen (Table 8), which relate mostly to items on the asset side. Then the impact of actual experience (Table 9), which mainly affects the liabilities.

## Expected development

Table 8: expected development of funding position between 2019 and 2022 valuations

Change in the surplus/deficit position	Surplus / Deficit
	£m
<b>Last valuation at 31 March 2019</b>	<b>6</b>
<b>Cashflows</b>	
Employer contributions paid in	112
Employee contributions paid in	32
Benefits paid out	0
Net transfers into / out of the Fund	
Other cashflows (e.g. Fund expenses)	(5)
<b>Expected changes</b>	
Expected investment returns	192
Interest on benefits already accrued	(179)
Accrual of new benefits	(134)
<b>Expected position at 31 March 2022</b>	<b>24</b>

\* We have insufficient data to value the impact on the liabilities as a result of transfers in/out

## Impact of actual events

Table 9: impact of actual events on the funding position at 31 March 2022

Change in the surplus/deficit position	Surplus / Deficit
	£m
<b>Expected position at 31 March 2022</b>	<b>24</b>
<b>Events between 2019 and 2022</b>	
Salary increases greater than expected	(18)
Benefit increases greater than expected	21
Early retirement strain (and contributions)	(3)
Ill health retirement strain	(1)
Early leavers less than expected	1
Commutation less than expected	(1)
Pensions ceasing less than expected	2
McCloud remedy	(2)
Other membership experience	18
Higher than expected investment returns	246
<b>Changes in future expectations</b>	
Investment returns	34
Inflation	(98)
Salary increases	0
Longevity	(8)
Other demographic assumptions	(6)
<b>Actual position at 31 March 2022</b>	<b>207</b>

Numbers may not sum due to rounding

# Sensitivity & risk analysis

# Sensitivity and risk analysis: assumptions

There is risk and uncertainty inherent with funding benefit payments that will be paid out many years in the future. The Fund is aware of these and has in place a risk register which is regularly reviewed. Additionally, as part of the valuation, the Fund reviews sources of risk that may impact its funding position and the contribution rates payable by employers.

This section discusses some of the most significant sources of funding risk (assumptions, regulatory, administration and governance and climate change). Further information of the Fund's approach to funding risk management, including monitoring, mitigation and management, is set out in the Funding Strategy Statement.

The valuation results depend on the actuarial assumptions made about the future. By their nature, these assumptions are uncertain which means its important to understand their sensitivity and risk levels.

## Contribution rates

The risk-based approach to setting employer contribution rates mitigates the limitation of relying on one set of assumptions. Therefore, there is no need to carry out additional analysis of the sensitivity of contribution rates to changes in financial assumptions. The contribution rates are sensitive to changes in demographic assumptions. The results in this section in relation to the funding position can be broadly applied to the contribution rates.

## Funding level

### Financial assumptions

On page 10, we have already set out how the results vary with the assumed future investment return. The table below considers inflation.

Table 10: sensitivity of funding position to inflation assumption

CPI Assumption	Surplus/ (Deficit)	Funding Level
% pa	(£m)	%
2.5%	254	116%
2.7%	207	113%
2.9%	160	110%

### Demographic assumptions

The main area of demographic risk is if people live longer than expected. The table below shows the impact of longer term longevity rates improving at a faster rate (1.75% pa vs 1.5% pa used in the results)

Table 11: sensitivity of funding position to longevity assumption

Long term rate of improvement	Surplus/ (Deficit)	Funding Level
% pa	(£m)	%
1.5%	207	113%
1.75%	196	112%

# Sensitivity and risk analysis: other risks

## Regulatory, Administration and Governance risks

Potential risks in this area include change in central government legislation which changes the future cost of the LGPS and failures in administration processes leading to incorrect data and inaccuracies in actuarial calculations. At this valuation, specific risks include:

- **McCloud:** the remedy to resolve the McCloud case is yet to be formalised in regulations. However, an allowance has been included for this expected benefit change at the 2022 valuation as directed by the Department of Levelling Up, Housing and Communities [in their letter dated March 2022](#)<sup>1</sup>.
- **Goodwin:** the remedy to this issue is still uncertain, it is difficult to identify who it would apply to and its impact is estimated to be very small for a LGPS fund (0.1-0.2% of liabilities). Therefore, no allowance has been made for this case at the 2022 valuation.
- **Cost Cap:** a legal challenge is ongoing in relation to the 2016 cost cap valuation and no information is known about the outcome of the 2020 cost cap valuation. At this valuation, no allowance has been made for any changes to the benefit structure that may occur as a result of a cost cap valuation.
- **GMP indexation:** it is assumed that all increases on GMPs for members reaching State Pension Age after 6 April 2016 will be paid for by LGPS employers. This is the same approach that was taken for the 2019 valuation.

## Post valuation events

Since 31 March 2022, there has been significant volatility in the financial markets, short-term inflation expectations and rises in interest rates by central banks. These events affect the value of the Fund's assets and liabilities.

- The Fund's investment return since 31 March 2022 is estimated to be somewhere between -5% and -10%.
- Liability valuations are likely to be lower now than at 31 March 2022 due to rises in expected future investment returns more than offsetting the higher than expected (10.1%) pension increase at April 2023.

As an open scheme, with a strong covenant, the Fund takes a long-term view when considering the funding impact of such events. For employers who have a very short time horizon, recent volatility may be more immediately impactful, and the Fund has engaged with these employers as appropriate.

No explicit allowance has been made for this volatility in the valuation results or contribution rates detailed in the Rates & Adjustments Certificate. The Fund will continue to monitor changes in the financial and demographic environment as part of its ongoing risk management approach.

# Sensitivity and risk analysis: climate change

## Background

Climate change is a major source of uncertainty which could affect future investment returns, inflation and life expectancies. Therefore, the Fund has explicitly explored the resilience of its funding and investment strategy to future potential climate change outcomes.

It is impossible to confidently quantify the effect of climate risk given the significant uncertainty over the impact of different possible climate outcomes. Instead, three different climate change scenarios have been considered as a stress-test (instead of trying to predict how climate change affects the funding level in the future).

All the scenarios assume that there will be a period of disruption linked either to the response to climate risk (transition risks) or the effect of it (physical risks). This disruption will lead to high volatility in financial markets, and the later the disruption, the more pronounced it will be.

Further detail on the scenarios is shown on the next page and in our guide 10 of [Hymans Robertson's LGPS 2022 valuation toolkit](#)<sup>1</sup>

## Outcome of analysis

The Fund has set its funding and investment strategy using asset-liability modelling and considering two main risk metrics:

- Likelihood of success – the chance of being fully funded in 20 years' time
- Downside risk – the average worst 5% of funding levels in 20 years' time

When exploring the potential impact of climate change, the Fund has compared how these risk metrics change under each climate change scenario (against the 'Core' model used when setting the funding and investment strategy). The stress test results for the Fund are shown in Table 12 below.

Table 12: sensitivity of funding position to climate scenario

Scenario	Likelihood of success	Downside risk
<b>Core</b>	<b>75%</b>	<b>46%</b>
Green Revolution	73%	41%
Delayed Transition	71%	45%
Head in the Sand	72%	48%

The results are worse in the climate scenarios. This is to be expected given that they are purposefully stress-tests and all the scenarios are bad outcomes. Whilst the risk metrics are generally weaker, they are not materially so and not enough to suggest that the funding and investment strategy are unduly exposed to climate change risk. The Fund will continue to monitor this risk as more information emerges and climate change modelling techniques evolve.



# Final comments

# Final comments

The Fund's valuation operates within a broader framework, and this document should be considered alongside the following:

- The Funding Strategy Statement, which in particular highlights how different types of employer in different circumstances have their contributions calculated
- The Investment Strategy Statement, which sets out the investment strategy for the Fund
- The general governance of the Fund, such as meetings of the Pensions Committee and Board, decisions delegated to officers, the Fund's business plan, etc
- The Fund's risk register.

## New employers joining the Fund

Any new employers or admission bodies joining the Fund should be referred to the Fund Actuary to assess the required level of contribution. Depending on the number of transferring members the ceding employer's rate may also need to be reviewed.

## Cessations and bulk transfers

Any employer who ceases to participate in the Fund should be referred to the Fund Actuary in accordance with Regulation 64 of the LGPS regulations.

Any bulk movement of scheme members:

- involving 10 or more scheme members being transferred from or to another LGPS fund
- involving 2 or more scheme members being transferred from or to a non-LGPS pension arrangement

should be referred to the Fund Actuary to consider the impact on the Fund.

## Valuation frequency

Under the LGPS regulations, the next formal valuation of the Fund is due to be carried out as at 31 March 2025 where contribution rates payable from 1 April 2026 will be set.

**SIGNATURE**

Douglas Green FFA

03 March 2023

For and on behalf of Hymans Robertson LLP

**SIGNATURE**

Julie Baillie FFA



# Appendices

## APPENDIX 1

## Data

**Membership data**

A summary of the membership data provided by the Fund for the 2022 valuation is set out in Table 13. The corresponding membership data from the previous valuation is also shown for reference.

The results of the valuation are dependent on the quality of the data used. We have carried out a series of validation checks on the data supplied to us by the Administering Authority to ensure that it is fit for purpose.

**Asset data**

To check the membership data and derive employer asset values, we have used asset and accounting data and employer level cashflow data provided by the Fund.

Table 13: Whole fund membership data as at 31 March 2022 and 31 March 2019

Whole Fund Membership Data	This Valuation 31 March 2022	Last Valuation 31 March 2019
<b>Employee members</b>		
Number	6,318	6,008
Total actual pay (£000)	160,433	142,356
Total accrued pension (£000)	27,795	23,580
Average age (liability weighted)	54.6	53.2
Future working lifetime (years)	5.1	8.3
<b>Deferred pensioners (including undecideds)</b>		
Number	10,809	10,147
Total accrued pension (£000)	23,064	21,317
Average age (liability weighted)	54.3	53.4
<b>Pensioners and dependants</b>		
Number	8,340	7,746
Total pensions in payment (£000)	46,816	41,908
Average age (liability weighted)	68.9	68.1

## APPENDIX 1

## Data

**Investment strategy**

A summary of the investment strategy allocation used for the calculation of employer contribution rates and to derive the future assumed investment return is set out in Table 14.

This information is as set out in the Fund's Investment Strategy Statement.

Table 14: Investment strategy used for the 2022 valuation

Asset class	Allocation
UK equities	5.6%
Global equities (unhedged)	41.9%
Private equity	5.0%
Property	15.5%
Infrastructure equity (listed)	5.0%
Index linked gilt (14 yr maturity)	7.0%
Multi Asset Credit (sub investment grade)	10.0%
High yield credit (unhedged)	7.5%
Infrastructure Debt	2.5%
<b>Total</b>	<b>100.0%</b>

APPENDIX 2

# Assumptions

To set and agree assumptions for the valuation, the Fund carried out in-depth analysis and review as per our advice paper dated 7 July 2022, with the final set agreed by the Pensions Committee and Board on 12 September 2022.

## Financial assumptions

### Setting employer contribution rates

An asset-liability model is used to set employer contributions at the 2022 valuation. This model relies on Hymans Robertson's proprietary economic model, the Economic Scenario Service (ESS). The ESS reflects the uncertainty associated with future levels of inflation and asset returns and the interactions and correlations between different asset classes and wider economic variables. In the short term (first few years), the models are fitted with current financial market expectations. Over the longer term, models are built around views of fundamental economic parameters, for example equity risk premium, credit spreads and long term inflation. The table below shows the calibration of the ESS at 31 March 2022. Further information on the assumptions used for contribution rate setting is included in the Funding Strategy Statement.

Table 15: ESS individual asset class return distributions at 31 March 2022

		Annualised total returns									Inflation (CPI)	17 year real yield (CPI)	17 year yield
		Index Linked Gilts (medium)	UK Equity	Private Equity	Property	Credit Overlay	UK Infrastructure Debt	Listed Infrastructure Equity	Multi Asset Credit (sub inv grade)	All World ex UK Equity in GBP Unhedged			
10 years	16th %ile	-1.9%	-0.4%	-1.2%	-0.6%	-0.6%	-0.3%	-1.1%	1.7%	-0.4%	1.6%	-1.7%	1.1%
	50th %ile	0.2%	5.7%	9.4%	4.4%	0.6%	2.2%	4.9%	3.5%	5.8%	3.3%	-0.5%	2.5%
	84th %ile	2.4%	11.6%	20.1%	9.5%	1.5%	4.3%	10.9%	5.2%	11.9%	4.9%	0.7%	4.3%
20 years	16th %ile	-1.5%	1.7%	2.4%	1.4%	-0.1%	1.2%	1.2%	2.8%	1.8%	1.2%	-0.7%	1.3%
	50th %ile	0.1%	6.2%	10.0%	5.0%	0.7%	2.7%	5.6%	4.4%	6.3%	2.7%	1.1%	3.2%
	84th %ile	1.9%	10.6%	17.6%	8.9%	1.3%	4.2%	10.1%	6.0%	11.1%	4.3%	2.7%	5.7%
40 years	16th %ile	-0.3%	3.2%	4.7%	2.6%	0.2%	2.3%	2.6%	3.6%	3.4%	0.9%	-0.6%	1.1%
	50th %ile	1.2%	6.7%	10.3%	5.5%	0.7%	3.7%	6.1%	5.3%	6.8%	2.2%	1.3%	3.3%
	84th %ile	3.1%	10.2%	16.1%	8.8%	1.2%	5.1%	9.8%	7.1%	10.4%	3.7%	3.2%	6.1%
	<b>Volatility (Disp) (5 yr)</b>	7%	18%	30%	15%	4%	8%	18%	6%	18%	3%		

## APPENDIX 2

# Assumptions

## Financial assumptions

### Calculating the funding level

The table below summarises the assumptions used to calculate the funding level at 31 March 2022, along with a comparison at the last valuation.

Table 16: Summary of assumptions used for measuring the funding level, compared to last valuation on 31 March 2019

Assumption	31 March 2022	Required for	31 March 2019
Discount rate	4.3% pa	To place a present value on all the benefits promised to scheme members at the valuation date. The Fund's assets are estimated to have a 70% likelihood of returning above the discount rate.	4.2% pa (based on a 70% likelihood)
Benefit increases/CARE revaluation	2.7% pa	To determine the size of future benefit payments.	2.3% pa
Salary increases	3.7% pa	To determine the size of future final-salary linked benefit payments.	3.3% pa

### Allowing for the McCloud remedy

Allowance has been included for this expected benefit change at the 2022 valuation as directed by the Department of Levelling Up, Housing and Communities [in their letter dated March 2022](#)<sup>1</sup>. Further technical detail about this assumption is set out in guide 13 of [Hymans Robertson's LGPS 2022 valuation toolkit](#)<sup>2</sup>

APPENDIX 2

# Assumptions

## Demographic assumptions

The same demographic assumptions are used in setting contribution rates and assessing the current funding level.

## Longevity

Table 17: Summary of longevity assumptions

	This valuation 31 March 2022	Last valuation 31 March 2019
Baseline assumption	VitaCurves based on member-level lifestyle factors	VitaCurves based on member-level lifestyle factors
Future improvements	<b>CMI 2021 model</b> Initial addition = <b>0.25% (both Female and Male)</b> Smoothing factor = <b>7.0</b> <b>1.5% pa</b> long-term rate of improvement	<b>CMI 2018 model</b> Initial addition = <b>0.25% (Female), 0.5% (Male)</b> Smoothing factor = <b>7.0</b> <b>1.25% pa</b> long-term rate of improvement

Further information on these assumptions can be provided upon request. Sample rates are included on the next page.

## Other demographic assumptions

Table 18: Summary of other demographic assumptions

Death in service	See sample rates in Tables 19 & 20
Retirements in ill health	See sample rates in Tables 19 & 20
Withdrawals	See sample rates in Tables 19 & 20
Promotional salary increases	See sample rates in Tables 19 & 20
Commutation	52% of future retirements elect to exchange pension for additional tax free cash up to HMRC limits
50:50 option	1.0% of members (uniformly distributed across the age, service and salary range) will choose the 50:50 option
Retirement age	The earliest age at which a member can retire with their benefits unreduced
Family details	A varying proportion of members are assumed to have a dependant at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. The dependant of a male member is assumed to be 3 years younger than him and the dependent of a female member is assumed to be 3 years older than her.

APPENDIX 2

# Assumptions

## Sample rates for demographic assumptions

### Males

Table 19: Sample rates of male demographic assumptions

Age	Salary Scale	Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
			FT	PT	FT	PT	FT	PT
			FT & PT					
20	105	0.14	586.25	1,000	0.00	0.00	0.00	0.00
25	117	0.14	387.24	671.28	0.00	0.00	0.00	0.00
30	131	0.16	274.76	476.22	0.00	0.00	0.00	0.00
35	144	0.19	214.67	372.03	0.10	0.07	0.02	0.01
40	150	0.33	172.83	299.43	0.16	0.12	0.03	0.02
45	157	0.54	162.35	281.20	0.35	0.27	0.07	0.05
50	162	0.87	133.82	231.53	0.90	0.68	0.23	0.17
55	162	1.36	105.38	182.42	3.54	2.65	0.51	0.38
60	162	2.45	93.93	162.52	6.23	4.67	0.44	0.33
65	162	4.08	0.00	0.00	11.83	8.87	0.00	0.00

### Females

Table 20: Sample rates of female demographic assumptions

Age	Salary Scale	Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
			FT	PT	FT	PT	FT	PT
			FT & PT					
20	105	0.08	528.64	514.11	0.00	0.00	0.00	0.00
25	117	0.08	355.71	345.88	0.10	0.07	0.02	0.01
30	131	0.11	298.17	289.90	0.13	0.10	0.03	0.02
35	144	0.19	257.35	250.12	0.26	0.19	0.05	0.04
40	150	0.30	214.19	208.09	0.39	0.29	0.08	0.06
45	157	0.50	199.88	194.16	0.52	0.39	0.10	0.08
50	162	0.72	168.51	163.52	0.97	0.73	0.24	0.18
55	162	0.95	125.74	122.13	3.59	2.69	0.52	0.39
60	162	1.22	101.33	98.31	5.71	4.28	0.54	0.40
65	162	1.56	0.00	0.00	10.26	7.69	0.00	0.00

Figures are incidence rates per 1,000 members except salary scale. FT and PT denoted full-time and part-time members respectively.

## APPENDIX 3

# Reliances and limitations

We have been commissioned by Haringey Council (“the Administering Authority”) to carry out a full actuarial valuation of the London Borough of Haringey Pension Fund (“the Fund”) as at 31 March 2022 as required under Regulation 62 of the Local Government Pension Scheme Regulations 2013 (“the Regulations”).

This report is addressed to the Administering Authority. It has been prepared by us as actuaries to the Fund and is solely for the purpose of summarising the main outcomes of the 2022 actuarial valuation. It has not been prepared for any other third party or for any other purpose. We make no representation or warranties to any third party as to the accuracy or completeness of this report, no reliance should be placed on this report by any third party and we accept no responsibility or liability to any third party in respect of it.

Hymans Robertson LLP is the owner of all intellectual property rights in this report. All such rights are reserved.

This summary report is the culmination of other communications in relation to the valuation, in particular:

- Our [2022 valuation toolkit](#) which sets out the methodology used when reviewing funding plans
- Our paper to the Fund’s Pension Committee and Board dated 12 September 2022 which discusses the funding strategy for the Fund’s Council
- Our paper to the Fund’s Pension Committee and Board dated 12 September 2022 which discusses the valuation assumptions
- Our initial results report dated 14 November 2022 which outlines the whole fund results and inter-valuation experience

- Our data report dated XXXX which summarises the data used for the valuation, the approach to ensuring it is fit for purpose and any adjustments made to it during the course of the valuation
- The Funding Strategy Statement which details the approach taken to adequately fund the current and future benefits due to members

The totality of our advice complies with the Regulations as they relate to actuarial valuations.

The following Technical Actuarial Standards apply to this advice, and have been complied with where material and to a proportionate degree. They are:

- TAS100 – Principles for technical actuarial work
- TAS300 – Pensions

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## APPENDIX 4

## Glossary

Term	Explanation
<b>50:50 option</b>	An option for LGPS members to pay half contributions and earn half the retirement benefit (pre-retirement protection benefits are unreduced).
<b>Asset-liability modelling</b>	An approach to modelling and understanding risk for a pension fund. The assets and liabilities are projected forward into the future under many different future scenarios of inflation, investment returns and interest rates. The future scenarios are then analysed to understand the risk associated with a particular combination of contribution rates and investment strategy. Different combinations of contribution rates and/or investment strategies may be tested.
<b>Baseline longevity</b>	The rates of death (by age and sex) in a given group of people based on current observed data.
<b>Club Vita</b>	A firm of longevity experts we partner with for longevity analysis. They combine data from thousands of pension schemes and use it to create detailed baseline longevity assumptions at member-level, as well as insight on general longevity trends and future improvements.
<b>Commutation</b>	The option for members to exchange part of their annual pension for a one-off lump sum at retirement. In the LGPS, every £1 of pension exchanged gives the member £12 of lump sum. The amounts that members commute is heavily influenced by tax rules which set an upper limit on how much lump sum can be taken tax-free.
<b>CPI inflation</b>	The annual rate of change of the Consumer Prices Index (CPI). The CPI is the UK government's preferred measure of inflation and is the measure used to increase LGPS (and all other public sector pension scheme) benefits each year.
<b>Deferred pensioners</b>	A former employee who has left employment (or opted out of the pension fund) but is not yet in receipt of their benefits from the fund.
<b>Demographic assumptions</b>	Assumptions concerned with member and employer choices rather than macroeconomic or financial factors. For example, retirement age or promotional salary scales. Demographic assumptions typically determine the timing of benefit payments.

## APPENDIX 4

## Glossary

Term	Explanation
<b>Discount rate</b>	A number used to place a single value on a stream of future payments, allowing for expected future investment returns.
<b>Employee members</b>	Members who are currently employed by employers who participate in the fund and paying contributions into the fund.
<b>ESS</b>	Economic Scenario Service - Hymans Robertson's proprietary economic scenario generator used to create thousands of simulations of future inflation, asset class returns and interest rates.
<b>Funding position</b>	The extent to which the assets held by the fund at 31 March 2022 cover the accrued benefits ie the liabilities. The two measures of the funding position are: <ul style="list-style-type: none"> <li>• the funding level - the ratio of assets to liabilities; and</li> <li>• the funding surplus/deficit - the difference between the asset and liabilities values.</li> </ul>
<b>Inflation</b>	Prices tend to increase over time, which is called inflation. Inflation is measured in different ways, using a different 'basket' of goods and mathematical formulas.
<b>Liabilities</b>	An employer's liability value is the single value at a given point in time of all the benefit payments expected to be made in future to all members. Benefit payments are projected using demographic and financial assumptions and the liability is calculated using a discount rate.
<b>Longevity improvements</b>	An assumption about how rates of death will change in future. Typically we assume that death rates will fall and life expectancies will improve over time, continuing the long-running trend.
<b>Pensioners</b>	A former employee who is in receipt of their benefits from the fund. This category includes eligible dependants of the former employee.

## APPENDIX 4

# Glossary

Term	Explanation
<b>Primary rate</b>	The estimated cost of future benefits, expressed in percentage of pay terms. The primary rate will include an allowance to cover the fund's expenses.
<b>Prudence</b>	To be prudent means to err on the side of caution in the overall set of assumptions. We build prudence into the choice of discount rate by choosing an assumption with a prudence Level of more than 50%. All other assumptions aim to be best estimate.
<b>Prudence Level</b>	A percentage indicating the likelihood that a discount rate assumption will be achieved in practice, based on the ESS model. The higher the prudence level, the more prudent the discount rate is.
<b>Secondary rate</b>	An adjustment to the primary rate, generally to reflect costs associated with benefits that have already been earned up to the valuation date. This may be expressed as a percentage of pay and/or monetary amount.
<b>Withdrawal</b>	Refers to members leaving the scheme before retirement. These members retain an entitlement to an LGPS pension when they retire, but are no longer earning new benefits.